

Swan Bay Environment Association Inc.



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Planning Panels Victoria,
Committee
GPO Box 2392,
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25 January 2008

Dear Panel Members,

**Submission Re Proposed Point Lonsdale Residential and Waterways Development
Environmental Effects Statement, City of Greater Geelong Planning Scheme Amendment
C150 and Planning Permit Application No. 673/2007**

Swan Bay Environment Association makes the following submission with regard to the Proposed Point Lonsdale Residential and Waterways Development.

The Swan Bay Environment Association recognises the significance of Swan Bay as a wetland of national and international importance and is actively working to ensure the area remains in a natural and unspoilt state.

The Swan Bay Environment Association objects to the proposed Residential and Waterways Development on the following grounds:

- it is too large a development for such an environmentally sensitive site
- it is too close to the existing wetland area
- the proposed alterations to the topography will threaten the natural ecology of the site
- there is not a sufficient setback from the wetland area
- it is a significant disturbance of a natural ephemeral wetland area that connects two important water bodies.

We have a number of concerns regarding the impact on the health of Swan Bay of a housing estate of 768 residential dwellings. These concerns are based on the impact that the proposed development will have on

- indigenous flora
- indigenous fauna
- water quality in Swan Bay
- current topography of the site.

We have outlined each of these concerns in more detail below.

Indigenous Flora

The flora in and around Swan Bay is unique. The proposed development threatens the indigenous plant communities in this area.

Establishment of a housing development will inevitably result in the introduction of invasive plant species through garden plantings. Once introduced, these species have the potential to move into relatively unspoilt areas of native vegetation, as can already be observed along the shores of Swan Bay closer to Queenscliff. Invasive species often compete with local plants and destroy or drastically alter the composition of these populations.

Even if a plant species is not invasive, it is often an inappropriate choice for a certain area. Stockland have already planted an indigenous species of *Poa* which is of non-local provenance that was sourced from outside the region. This will mean that as these *Poa* spread they will cross pollinate with local *Poa* and result in a genetic variant of the local provenance.

Many of the plants listed for planting in the public spaces in the *Point Lonsdale Residential and Waterways Development Landscape Architect Report* are not indigenous to the area and two are known as environmental weeds. The trees selected for the Access Streets includes species not indigenous to the area (*Melaleuca linariifolia* and *M. squarrosa*). Of these two, *Melaleuca linariifolia* is generally found in swampy areas and *M. squarrosa* is found in damp places (Greig, D, 1999). The two *Callistemon* species are native to NSW and Queensland and the *Eucalyptus forrestiana* is a WA species.

None of the species on the list of plants for Open Space are indigenous to the area, and the *Melaleuca armillaris* and *Hakea Laurina* are well known weed species which should not be planted on the site. Trees such as *Ficus Macrophylla*, *Cupressus macrocarpa* and *Araucaria heterophylla* are large, striking trees that dominate the skyline and strongly influence the character of the area. These trees are not sympathetic to the vegetation communities found in the area which, apart from the Moonah, are predominantly low shrubs, grasses and wetland-dominated vegetation. Plantings of trees in this area should reflect these vegetation types and larger tree species should be limited to those that are indigenous to the Point Lonsdale/Queenscliff area.

Indigenous plantings must be employed in all public spaces to maintain the natural bio-integrity of this area. These species are well-suited to the area and are appropriate for this site.

Any planting undertaken on the site must be of indigenous plants sourced locally to ensure local provenance. Planting public spaces with indigenous species may influence people to continue this type of planting in their own gardens or at least to plant in a sympathetic manner.

We are even more concerned about some of the plants on the Wetlands and Saline Wetlands lists as they not indigenous to the area and have the potential to spread throughout the wetland areas. *Baumea tetragona*, *Carex appressa*, *Goodenia humilis*, *Melaleuca ericifolia* and *Melaleuca halmaturorum* are not indigenous to Swan Bay and should not be planted. *Goodenia humilis* is described as a “very adaptable, suckering matting plant” (Australian Plants Society Maroondah inc, 2001) and it would be risky to introduce such a plant to a wetland area where it has the potential to spread into the surrounding wetland. Appropriate planting should be indigenous and sourced locally to ensure local provenance.

Indigenous Fauna

Swan Bay is internationally recognised as a very significant habitat for waterbirds and is listed under the Ramsar Convention as a Wetland of International Importance.

While the EES points out that “many birds, including shorebirds, have been shown to habituate to the disturbance regime... (t)hus, it can be expected that some species will acclimatise to new disturbance regimes” (p. 50), this is only the case for “many” birds and “some species” and

mitigation measures to ensure this involves controlling lighting, public access and domestic animals, all of which will be very difficult to manage in a housing estate .

There is certainly evidence (Traut, A.H. & M.E. Hostetler 2003) to suggest that urban developments negatively impact on native birds and in some cases will change the composition of bird populations with some species thriving in urban development to the detriment of more vulnerable species.

In addition to birds, other significant fauna inhabit the Swan Bay area. One of these is the Rakali (*Hydromys chrysogaster*) or Native Water Rat. A number of these were trapped in the saltmarsh area at the western end of Swan Bay between McDonalds and Fellows Roads as part of a doctoral study and their breeding and feeding habits studied. Although not the focus of this study, Bush Rats were also trapped during the course of this work in the dune system between the Point Lonsdale lighthouse and Ocean Grove.

Swan Bay is a vital breeding ground for many species of fish in Port Phillip Bay, and in particular Lakers Cutting is a nursery for Bream. It is not known what effect the constant movement of water in and out of Lakers Cutting will have as it is currently a sheltered shallow area with relatively undisturbed water movement. The influx of water that not only contains nutrients and contaminants but will also at times contain more fresh water could alter the habitat irrecoverably for this species.

The creation of a housing development in such an environmentally area sensitive will bring with it a number of threats to the local fauna population.

Cats will inevitably take up residence in and around the housing development because of the prospects of readily available food and shelter and will threaten local fauna populations. The Environmental Management Framework includes the activity to “Establish bylaws or property covenants for the residential development to exclude keeping cats as pets” (Section 13.4). This is an unrealistic activity, and no agent is listed as having responsibility for such an activity that cannot be enforced.

Dogs living in the housing development area will also threaten indigenous fauna by barking, chasing and swimming after them in the new waterways. While this possibility is acknowledged, with the activity in the Environmental Management Framework to “Ensure, as much as practicable, that dogs and cats are excluded from the areas of retained native vegetation”, again no one is listed as being responsible for this, and we are concerned that “as much as practicable” may not be sufficient to protect fauna and flora.

This proposed development is planned for a long-established corridor for birds moving between Lake Victoria and Swan Bay. Such a development will not only displace indigenous flora and fauna communities, it will also generate noise (music, cars) and light pollution which will negatively impact on bird movements and their feeding and breeding patterns.

Water quality

The EES seems to regard Lakers Cutting as a ‘buffer’ to Swan Bay and not part of it. This is certainly not the case. Proposals have been made for Lakers Cutting to be incorporated into the Swan Bay Marine National Park. The inevitable consequence of viewing Lakers Cutting as a ‘buffer’ is to encourage a view that a certain level of pollution moving into the Cutting is acceptable because it will protect the water of Swan Bay.

The EES acknowledges that at times the movement of water through the system cannot be guaranteed to circulate all water in the system: “under certain weather conditions where strong winds are prevalent water circulation can stop and over time the quality of water in these areas

can deteriorate” (p.42). Strong winds are often prevalent in this area, and we are concerned that a lack of water circulation in embayments may result in the problems like algal blooms or mosquito infestations.

While extensive modelling has been carried out to attempt to predict water flow through the lake system and into Lakers Cutting and Swan Bay, such modelling is, at best, an attempt to replicate a situation which is not accurately replicable. The Swan Bay Environment Association is concerned that the need, at times, for higher flow through the canal system will not always coincide with the rate of tidal flow in and out of Lakers Cutting. At times of heavy rain, large volumes of water will move through the estate and enter the lake system. This will introduce not only a large volume of fresh water into Swan Bay but also contaminants that are an inevitable result of intensive urban occupation.

Stormwater is a significant cause of pollution in our major water bodies such as Port Phillip Bay. The stormwater from the proposed development will flow initially into the artificial lake system and will then make its way into Swan Bay. Sources of pollution from the development include garden fertilizers, herbicides and pesticides, detergents (car washing etc), dog faeces and substances from cars such as heavy metals and hazardous chemicals (oil and degreasing agents). While a reed bed system is proposed to remove pollutants, it has been shown that even well-designed and maintained reed bed systems still cannot remove all contaminants, thus levels of heavy metals and other contaminants will move into Swan Bay over time (Hares, R.J. & N.I. Ward, 2004).

The Seagrass in Swan Bay is the main food source of our local emblem, the Black Swan. It also provides shelter for small fish, hence the desirability of Swan Bay as a breeding ground for many of the fish in Port Phillip Bay. Seagrass appears to grow better in periods of drought and calm weather when the movement of sediment and nutrients into Swan Bay is low (Longmore, 2002). High levels of hard surfaces such as roads, paving and concreting that will result from a development will substantially increase the flow of nutrients into Swan Bay at times of heavy rain and the constant flow of water in and out of Swan Bay will disturb sedimentation, compromising the health of the Seagrass. Extensive movement of soil on the site as well as the remodelling of the topography may also result in sediment moving into Swan Bay which will impact negatively on the Seagrass.

The health of the proposed waterway depends on the movement of water in and out of Lakers Cutting. No evidence has been given of the reliability of the proposed valves and no details given of their type or size. Our understanding of these valves is that the size of the opening is dependent on the pressure i.e. the flow on the upside of the valve.

Current Topography

Swan Bay Environment Association is extremely concerned about the amount of soil movement and disturbance and topographic reconfiguration that will occur during the construction process given that this will not be confined to the residential area.

The movement of soil around the site and flattening of dunes will destroy many niche habitats completely while upsetting the balance of others. The changed topography will result in new sets of conditions (soil, water runoff) under which the original vegetation and fauna may not survive, such as in the northern pasture.

Alteration of the dunes will affect wind movement across the site and may expose the whole of the area to the north of the dunes to stronger winds. This will potentially have a negative effect on flora and fauna communities and it may alter the microclimates on the site.

Concluding Remarks

In summary, we believe this development should not proceed. Swan Bay is a water body of national and international importance and no development should be located on the strategic wetland corridor that leads into it. Swan Bay's continued health has huge economic and ecological significance. We believe that the EES greatly underestimates the impact that the proposed development will have on the health of Swan Bay and so jeopardises its future.

Finally, will you please notify the Swan Bay Environment Association's President of the Public Hearing regarding the proposed development.

Yours sincerely,

President
Swan Bay Environment Association

References

Australian Plants Society Maroondah inc (2001). *Flora of Melbourne*, Hyland House, Melbourne.

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Hares, R.J. & N.I. Ward (2004). "Sediment Accumulation in Newly Constructed Vegetative Treatment Facilities along a New Major Road" in *Science of the Total Environment*, Science Direct, <http://www.sciencedirect.com/>.

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Traut, A.H. & M.E. Hostetler (2003). "Urban Lakes and Waterbirds: effects of shoreline development on avian distribution" in *Landscape and Urban Planning* Science Direct, <http://www.sciencedirect.com/>.