

## NATIONAL TRUST POSITION PAPER-SAND EXTRACTION

### **Proposal**

The National Trust has had a long-term interest in the impact of sand extraction on the environment, and over many years has called for the cessation of sand mining on the Kurnell Peninsula. The Trust has also made representations regarding extraction in the MacDonald Valley, on the Hawkesbury River and on the Newnes Plateau.

More recently concerns have been raised over extraction on the Somersby Plateau near Gosford where sand is gained by quarrying and crushing sandstone.

Sand is a vital resource for the building and construction industry but the extraction industry is fragmented and uncoordinated. Despite the apparent extent and ubiquity of sand and sandstone, Sydney is facing a looming shortage of building sand. The sand resource on the Kurnell Peninsula is now almost exhausted. The Penrith Lakes scheme is approaching the end of its life.

Sand extraction and processing have a significant impact on scenic landscapes, and habitats. Water consumption and disposal pose threats to wetlands and groundwater. There is substantial energy consumption in extraction, processing and transport and a range of flow-on impacts from transport and transport infrastructure upgrades.

The National Trust urges that every step be taken to minimize both future needs for the sand and the environmental impacts associated with extraction by:

- Adaptive reuse of buildings rather than demolition, thus conserving the material and energy content of existing buildings.
- Greater recycling of materials, including concrete, when buildings are demolished.
- Encouraging greater use of materials other than concrete, particularly in domestic buildings, provided that the environmental costs of alternative materials is less than those of concrete. (Environmental costs should include the lifetime energy consumption associated with use of a building. In some circumstances the heat sink provided by a mass of concrete may allow for considerable reduction of energy use). Consideration should be given to amending BASIX so as to support a change in materials used in housing construction. Where concrete remains a major element in a building then development of new technologies to reduce impacts (such

as greater use of aerated concrete, or use of what would otherwise be industrial waste products such as fly ash) should be encouraged.

- Use of the planning system to promote greater regional rather than metropolitan development (so that more construction is closer to possible alternative sand sources, reducing transport needs) and to provide greater oversight of the assessment and operation of sand extraction.

Nevertheless the National Trust recognizes that there is continuing demand for sand leading to the need for the development of major new resources.

The National Trust calls on the State Government to conduct a full and open enquiry into all aspects of sand supply, as a prelude to the implementation of a comprehensive strategy. Such an inquiry to investigate (but not be limited to) –

- Projected future demands
- Ways of reducing demand
- Environmental, social and economic costs associated with sand extraction and supply
- Reduction of the ecological footprint associated with sand extraction and supply
- Potential new supplies, including evaluation of environmental, social and economic impacts associated with extraction and transport.
- The assessment and approval process for new projects.

This enquiry should invite submissions from all interested parties, and the Government should commit to prompt release of the report upon its completion.

One of the options for new supplies is from offshore resources. The issue of offshore sand mining has been controversial and was rejected by a previous State Government.

Nevertheless the National Trust considers it desirable that there be greater informed public debate about this issue.

If offshore sand mining is to occur the following general principles should be adopted:

- There should be no impact on beaches, in terms of both wave climate and sediment budget.
- There should be no impact on offshore currents.
- Extraction should not be permitted close to rocky reefs or other sites recognized as of high ecological value (the size of appropriate buffer zones would need to be established).
- Extraction should not be permitted close to known wrecks or other culturally significant sites. Appropriate protocols should be in place to ensure that any previously unknown artifacts, encountered during extraction, are immediately identified and assessed and any necessary adaptations made to the extraction plan. This may require cessation of extraction while assessment takes place.
- The depth and area extracted at any one time should be such that there is no impediment to recolonisation by the natural biota of the sea bed.
- There should be no lasting impact on fish and other marine biota, and during extraction, impacts on both commercial and recreational fisheries should be minimized.
- There should be no impacts during exploration and extraction on marine mammals (cetaceans, seals and dugongs). If necessary, work should cease during migration periods or at other times when marine mammals may be at risk. All operations should have an approved marine mammal management plan.
- During extraction there should be management systems in place to limit the release and dispersal of fine sediment into the environment.
- All operations should have an approved incident management plan, dealing with such matters as management of oil spills, collisions between ships etc.
- There should be full and open assessment of each individual project. All relevant operational plans should be available for public input at the application phase and not be developed in response to conditions of consent without opportunity for public scrutiny.

- There should be minimal use of freshwater in sand preparation when offshore sand is landed, and there should be no contamination of surface or groundwater during the treatment phase.
- The onshore facilities for offshore extraction should be sited so as to minimize road transport (options to be explored include utilization of a number of different ports, and greater use of rail transport).

These principles should be applied to the assessment of individual offshore sand mining proposals.

Sand won offshore could be utilized both in the construction industry and for beach nourishment. The assessment by the Trust of the merits of the proposal for offshore extraction would be independent of the proposed use of the sand.

In relation to proposals for beach nourishment the National Trust acknowledges that coastal environments are naturally dynamic, but that human activity may have produced rates and patterns of change outside the natural range. In the future, climate change and sea level rise may result in substantial modification to shorelines.

The National Trust recognizes that there are circumstances where beach nourishment may be an option to protect natural and cultural assets, and will consider proposals for beach nourishment on the merits of each individual case.

The National Trust supports the retention of underdeveloped coast in a natural state, but would particularly oppose proposals for new development which were dependent on beach nourishment or other forms of shoreline modification.

## **FOOT NOTE**

Beaches are naturally variable. Sand may move longitudinally along a beach (longshore drift) and perpendicular to the beach resulting in change to the beach profile. The construction of training walls at the north of the Tweed River mouth interrupted the movement of sand to beaches in southern Queensland. As sand continued to move north from southern Queensland beaches it was not replenished with sand from the south. This situation has now been rectified by the development of a sand-bypassing scheme which permits sand from south of the Tweed to be moved to southern Queensland. The profile of a beach changes in response to storms and periods of relative calm. The volumes of sand moving along a beach and in and out perpendicular to the beach can be measured and an overall budget prepared. In the case of offshore mining or any other offshore

development proposal there is a need to ensure that the development does not “capture” sand resources which would otherwise be involved in balancing the sand budget of beaches.

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