

## **Appendix A – Correspondence from Government Agencies**

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- Department of Planning, 25/11/1994
- NSW National Parks & Wildlife Service, 10/7/1995
- NSW National Parks & Wildlife Service, 31/5/1996
- NSW Fisheries, 13/7/1995
- Environmental Protection Authority, 19/7/1995
- Fire Control Officer, Coffs Harbour City Council, 25/7/1995
- Soil Conservation Service, Department of Land & Water Conservation, 9/8/1995
- Coastal & Rivers Management, Department of Land & Water Conservation, 15/8/1995
- Roads & Traffic Authority, 3/11/1995
- Coffs Harbour City Council, 3/7/1996



# Department of Planning

Gutteridge Haskins & Davey  
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Box 3927 G.P.O. Sydney 2001  
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Contact : M Beveridge

Our Reference : G94/00304

Your Reference :

Dear Sir,

**CONSTRUCTION OF ARTIFICIAL WATERBODY  
LOTS 1 & 2, DP 840016, PACIFIC HIGHWAY  
EMERALD BEACH**

Thank you for your letter of 10 November 1994 indicating that you are consulting with the Director with regard to the preparation of an environmental impact statement (EIS) for the above development.

2 If development consent is required for the proposal and it is a designated development within the meaning of Schedule 3 of the Environmental Planning and Assessment Regulation, 1994, an EIS must accompany the development application to Coffs Harbour City Council. The EIS shall be prepared in accordance with clause 51 of the Regulation (see Attachment No. 1) and shall bear a certificate required by clause 50 of the Regulation.

3. Attachment No. 2 is a guide to the type of information most likely to be relevant to the development you propose; not all of the matters raised therein may be appropriate for consideration in the EIS for your proposal; equally, the guide is not exhaustive.

4. In addition, pursuant to clause 52 of the Regulation, the Director requires that the following matters be specifically addressed in the EIS:

- w.r. • description of the proposal, including the intended use of the waterbody, including its relationship to any future residential development, and the timing of this development.
- w.r. • consideration of relevant matters in the North Coast Regional Environmental Plan;
- p. BAV. • assessment of the proposal's impact on important features of the environment, particularly the Solitary Islands Marine Reserve and nearby SEPP 14 Wetland No. 318;
- p. p.s. • assessment of the impact of any vegetation clearing including the significance of the flora to be cleared, and its habitat significance;

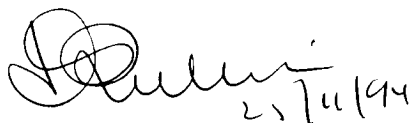
- assessment of the likelihood of disturbing acid sulphate soils, and if necessary, proposed mitigation measures;
- assessment of flood related impacts;
- assessment of traffic and access arrangements including the need for road upgrading works;
- assessment of construction impacts including noise, dust, and traffic impacts, and proposed mitigation measures;
- results of consultation with:
  - NSW Fisheries
  - Department of Conservation and Land Management
  - Environment Protection Authority
  - National Parks and Wildlife Service
  - Department of Bushfire Services

5. In preparing your EIS you should approach Coffs Harbour City Council and take into account any comments Council considers may be relevant to the proposal.

6. You are also advised that there is a Direction issued under section 101 of the Environmental Planning and Assessment Act, 1979 which applies to developments for "artificial waterways", and which may be relevant to this proposal. The extent to which this Direction may affect this proposal is presently being considered by the Department. If the section 101 Direction applies to the proposal, it will be determined by the Minister for Planning. Further advice will be provided on this issue at a later date.

7. Should you require any further information regarding this matter please do not hesitate to contact us again.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'D. Mullins', with the date '25/7/94' written below it.

Dr. D. Mullins  
Acting Manager  
Assessments and Major Hazards Branch  
As Delegate for the Director

Department of Planning

ATTACHMENT NO 1

STATUTORY REQUIREMENTS FOR ENVIRONMENTAL IMPACT STATEMENTS

Pursuant to clauses 51 and 84 of the Environmental Planning and Assessment Regulation, 1994, the contents of an EIS must include:

SCHEDULE 2

1. A summary of the environmental impact statement.
2. A statement of the objectives of the development or activity.
3. An analysis of any feasible alternatives to the carrying out of the development or activity, having regard to its objectives, including:
  - (a) the consequences of not carrying out the development or activity; and
  - (b) the reasons justifying the carrying out of the development or activity.
4. An analysis of the development or activity, including:
  - (a) a full description of the development or activity; and
  - (b) a general description of the environment likely to be affected by the development or activity, together with a detailed description of those aspects of the environment that are likely to be significantly affected; and
  - (c) the likely impact on the environment of the development or activity, having regard to:
    - (i) the nature and extent of the development or activity; and
    - (ii) the nature and extent of any building or work associated with the development or activity; and
    - (iii) the way in which any such building or work is to be designed, constructed and operated; and
    - (iv) any rehabilitation measures to be undertaken in connection with the development or activity; and
  - (d) a full description of the measures proposed to mitigate any adverse effects of the development or activity on the environment.
5. The reasons justifying the carrying out of the development or activity in the manner proposed, having regard to biophysical, economic and social considerations and the principles of ecologically sustainable development.
6. Compilation, (in a single section of the environmental impact statement) of the measures referred to in item 4 (d).
7. A list of any approvals that must be obtained under any other Act or law before the development or activity may lawfully be carried out.
8. For the purposes of this Schedule, **“the principles of ecologically sustainable development”** are as follows:
  - (a) The precautionary principle - namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.
  - (b) Inter-generational equity - namely, that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations.
  - (c) Conservation of biological diversity and ecological integrity.
  - (d) Improved valuation and pricing of environmental resources.

**Note:** The matters to be included in item (4) (c) might include such of the following as are relevant to the development or activity:

- (a) the likelihood of soil contamination arising from the development or activity;
  - (b) the impact of the development or activity on flora and fauna;
  - (c) the likelihood of air, noise or water pollution arising from the development or activity;
  - (d) the impact of the development or activity on the health of people in the neighbourhood of the development or activity;
  - (e) any hazards arising from the development or activity;
  - (f) the impact of the development or activity on traffic in the neighbourhood of the development or activity;
  - (g) the effect of the development or activity on local climate;
  - (h) the social and economic impact of the development or activity;
  - (i) the visual impact of the development or activity on the scenic quality of land in the neighbourhood of the development or activity;
  - (j) the effect of the development or activity on soil erosion and the silting up of rivers or lakes;
  - (k) the effect of the development or activity on the cultural and heritage significance of the land.
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## Department of Planning

### ATTACHMENT NO 2

#### ADVICE ON THE PREPARATION OF AN ENVIRONMENTAL IMPACT STATEMENT (EIS) FOR A CANAL OR ARTIFICIAL WATERWAY DEVELOPMENT

Canal developments have prompted considerable public controversy in the past because of their potential to raise significant issues regarding land capability, loss of wetlands and fishery resources, water quality, availability of public access to foreshores, flood hydrology, hydrodynamics impact on the host estuary, maintenance of canal systems, and overall associated public costs. Under a Section 101 Direction issued on 14 November 1985, councils are required to submit all development applications for canals or other artificial waterways to the Secretary of the Department for determination by the Minister for Planning.

The purpose of this paper is to outline various issues relevant to the preparation and consideration of an EIS for a canal development. It is intended to assist the preparation of the EIS. However, it is the applicant's responsibility to identify and address as fully as possible the matters relevant to the specific development proposal in complying with the requirements for EIS preparation (see Attachment No. 1).

The matters in this paper are not intended as a comprehensive identification of all issues which may arise in respect of canal development. Some of the issues nominated may not be relevant to a specific proposal. On the other hand, there may be other issues, not included, that are appropriate for consideration in the EIS.

Information provided should be clear, succinct and objective and where appropriate be supported by maps, plans, diagrams or other descriptive detail. The purpose of the EIS is to enable members of the public, the consent authority (usually the Council) and the Department of Planning to properly understand the environmental consequences of the proposed development.

#### **1. The Proposal**

##### **1.1. Physical and Environmental Location**

In describing the existing environment, plans should be included showing the location of the proposed development in relation to the present road system, other residential development, natural environmental features such as beaches, sand dune systems, freshwater and estuarine wetlands, creek and river systems; and any other significant environmental features or development should also be indicated.

##### **1.2 The Proposed Development**

Plans of the proposed estate development should be included. If it is the intention of the proponent to extend the canal estate in the future, conceptual information should be provided of the likely program, nature and extent of such expansion, (Should this be the situation, any approval for the initial stage would not be considered as acceptance or approval of any further stage).

## **2. Alternative Proposals**

A proper analytical assessment of alternative proposals and concepts should be included in the impact statement, including firm reasons for rejecting such options in favour of the recommended proposal for which development consent is sought.

## **3. Hydrology of the Development's Waterways**

Hydrology studies of water circulation in the canal system and adjoining waterways should be included. In this regard, of particular importance are the likely effects of the proposed development on flood behaviour and tidal movements including the ability of the proper safeguards to protect the development against inundation from both processes. In this regard specifications for such studies should be sought from the Department of Public Works.

## **4. Flora, Fauna and Archaeological Studies**

The flora and fauna of the estate should be investigated, together with an archaeological study (if relevant) carried out by a qualified archaeologist.

## **5. Impact of Proposal on Wetlands**

The requirements of any environmental planning instrument concerned with wetlands shall be examined in the EIS. A detailed description and mapping of any wetlands to be affected shall be carried out indicating any loss of wetlands, together with an indication of wetlands to be protected.

## **6. Construction Impacts**

A clear discussion and analysis should be provided of all the major components of the proposal, together with the pollution control safeguards to be incorporated therein in relation to water quantity and quality in the canal system, waterways connected thereto, likely noise impacts on adjacent development, and an indication of the likelihood of flood damage.

A detailed description of the methods and equipment to be used, erosion control measures, rehabilitation proposals and proposals for disposal of vegetation and any surplus spoil should be provided, accounting for dredging/filling operations.

## **7. Operational Impacts**

Matters requiring consideration include:

- Potential changes to estuarine processes and any areas where erosion or accretion may result from same should be identified.
- Visual impact of the proposed development and the efficacy of safeguards to mitigate same.
- Impact of the proposed development on the recreational value of the waterways and shores, public access etc.

- . Drainage of storm water from residential areas and water quality of the canals.
- . Future management and maintenance of the canal system.
- . Noise levels.
- . Air quality.
- . Impacts on neighbouring land uses.
- . Traffic control and provisions for parking.

## **8. Flood Impact**

Information on the proposed design, construction and operational safeguards should be provided in this section or elsewhere sufficient to account for the mitigation of the constructional and short and long term operational impacts. In this regard, flood protection measures proposed to meet flooding potential will need to be specially addressed and any public costs involved.

## **9. Dredging/Landfill Impacts**

This section should account for the assessed physical, biological, constructional, and short and long term operational impacts that may arise from excavation, dredging and reclamation works associated with the proposal. Information provided should include but may not necessarily be limited to the following on which impacts of the dredging and landfill proposal should be addressed:

Any proposals to obtain fill from any source other than dredging needs to be fully accounted for at source, as well as at site of deposition.

The extent of dredging and reclamation proposed, including plans showing the depth of dredging and the anticipated final alignment and slope of batters, together with an indication as to whether this work will result in a stable alignment or if recurrent maintenance dredging will be required.

Qualification of the quality and quantity of dredging spoil and/or fill material involved including proposals for adequate disposal of dredged spoil.

Description of the technique proposed for dredging, handling and/or disposing of dredged spoil, including any requirements to meet the water quality standards imposed by the Environment Protection Authority.

Assessment of any anticipated changes in the hydrodynamics of the waterway areas subject to the impact of the construction and operation of the proposal.

## **10. Infrastructure**

The likely infrastructure and community facility requirements to be generated directly and indirectly by the proposal should be identified, together with any infrastructure and community facilities which are being considered by the proponent for subsidy.



Details of proposals for estate roads, power supply, sewage disposal, water supply, and any marine facilities, boat ramps, recreational facilities, or shopping complexes should be included.

## 11. Socio-economic Factors

The need and demand for the overall development in terms of local and regional context should be indicated.

## 12. Acid Sulphate Soils

Acid sulphate soils and potential acid sulphate soils predominantly occur in clay soils through reworking of these clays has resulted in deposition of nodular amorphous pyrite in sands. When the potential acid sulphate soils are exposed to air due to a change in terrain or groundwater conditions, the iron pyrites produce sulphuric acid which leads to the increase levels of aluminium in the water which becomes toxic to fish and plants.

The EIS should establish the location of any potential acid sulphate soils in the area where excavation or drainage works are to be undertaken and assess the severity of the problem. Auger sampling should be undertaken every 150 to 200 metres in the excavation areas with particular emphasis placed on material at or below the water table. Field observations including the colour of profile layers of sands, clays or fines, the presence of organic matter or shells, and the presence of mottles or staining in drains are useful indicators of a potential problem. The peroxide effervescence test is also a quick though not infallible field test to indicate the presence of acid sulphate problems if effervescence occurs and the pH falls to below 4 after two hours. Laboratory analysis could include pH, electrical conductivity, pyretic sulphur, oxidisable sulphur as sulphate, aluminium, pyretic iron and the calculation of net acid generation potential.

Analysis of the groundwater also can provide a information on a pyretic problem in the area. A low pH and elevated sulphate concentrations compared with the chlorine levels in groundwater, streams, springs or seeps can be a good indication of pyretic oxidation.

pH levels	Cl/SO <sub>4</sub>	Potential Problem
low	less than 2	suspect presence of pyrites
neutral	less than 2	suspect presence of pyrites + presence of buffering agent
neutral	about 7	suspect no pyrites presence now or in the past

## 12. Assessment of Environmental Impact and Policy Issues

The EIS should provide a comprehensive analysis of the impact of the construction and operation of both the individual components of the proposal and the development as a whole on those aspects of the environment that are affected. The benefits of the scheme and its

disadvantages both for the short and long term should be suitably addressed. The analysis should cover social and economic aspects as well as the physical environment and should highlight the efficiency of any environmental safeguards incorporated in the design or operation of the proposal to mitigate adverse environmental impacts.

This section should address itself to each of the particular policy issues considered by the Department of Planning to be possible grounds for refusal of development consent by the consent authority.

Development consent may be refused for a canal development, on land where such development is permitted, on the grounds of:

- canal depth, where it does not meet the requirements of the Public Works Department;
- canal layout, where such layout due to canal length and design is likely to result in tidal flushing that may result in adverse environmental impacts;
- market demand and feasibility, where a market demand and feasibility study has not been undertaken by the developer which demonstrated the feasibility of the project;
- the public costs of canal maintenance, where the local council concerned is unwilling to take responsibility for ongoing canal maintenance;
- subdivision design, where the overall resulting road and utility pattern and geometry is inadequate;
- flooding, where subject to an unacceptable flood risk;
- public open space, where the project does not increase public open space and public access to water;
- dredging, where dredging technique is not acceptable to the EPA;
- source of fill, where its removal will cause adverse environmental impact;
- public cost, unless it is demonstrated by the developer that significant public expenditure on flood mitigation works will not be necessary as a direct result of such development;
- net loss of fisheries resources, including nurseries and food sources;
- destruction of wetlands which are regarded by either the Department of Planning, Fisheries or NPWS as significant.

It is considered by the Department that the following matters relating to urban services are further potential grounds for development refusal and should be addressed directly by the proponent in the Environmental Impact Statement:

- whether evidence furnished to the consent authority establishes to its satisfaction that adequate services and utilities are available within a reasonable time, and are or will be able to meet the needs of the residents of the proposed development;
- whether the consent authority is satisfied that the land is zoned for urban uses; the residents of the proposed development will have reasonable access to community facilities and shops of types which, in the opinion of the consent authority, the residents could reasonably require; and, the proposed development will, on completion, be connected to a reticulated water system and have adequate facilities for the removal or disposal of sewage (not including septic tanks) and drainage from the land;

- whether, where such water, sewerage and drainage services will be provided by a public authority other than the consent authority, the consent authority has obtained approval of that public authority.

### **13. Identification of Role of Government Authorities**

In preparing the EIS, it is suggested that authorities such as Council, the Environment Protection Authority, Public Works Department, Department of Water Resources, Maritime Services Board, NSW Fisheries should be consulted and their views and requirements should be outlined in the environmental impact statement. It is the responsibility of the person preparing the EIS to determine those Departments relevant to the proposed development.

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