

Our Reference : FIL07/3575 -
Contact : Craig Jones

Ms Jacqueline Ingham
Senior Environmental Planning Officer
Major Development Assessment
Department of Planning
GPO Box 39
SYDNEY NSW 2001

RE: Environmental Assessment Requirements – Shoalhaven Starches Short Mill – Major Project 07_021

I refer to your request for the Department of Environment and Conservation (DEC) requirements for the environmental assessment (EA) in regard to the above proposal received by the DEC on 14 March 2007.

DEC has considered the details of the project as provided by the Department of Planning (DoP) and has identified the information it requires to assess the project in Attachment A. The proponent should ensure that the EA is sufficiently comprehensive and detailed to allow DEC to determine the extent of the impacts of the proposal. In summary, the DEC's key information requirements for the project are:

- the environmental impacts of the project;
- the impacts of the project on threatened species and their habitat;
- the impacts of the project on Aboriginal cultural heritage values;
- the actions that will be taken to avoid or mitigate impacts or compensate to prevent unavoidable impacts identified above;

In carrying out the assessment the Applicant should refer to the relevant guidelines as described in Attachment B.

DEC requests that 3 hard copies and 1 CD of the EA are provided for assessment. These documents should be lodged at the DEC's South East Regional Office, PO Box 622, Queanbeyan, NSW 2620.

If you have any queries regarding this matter please contact Mr Craig Jones on 02 6122 3100.

Yours sincerely,

DAVID BAXTER
Acting Head of Operations
South East Region

Attachment A – Department of Environment and Conservation's Environmental Assessment Requirements

Environmental impacts of the project

The following environmental impacts of the project need to be assessed, quantified and reported on:

- Water quality
- Air quality
- Contaminated land
- Noise
- Threatened species
- Aboriginal cultural heritage

These should be assessed in accordance with the relevant guidelines listed in Attachment B.

Details are required on the location of the proposed development, including the affected environment, to place the proposal in its local and regional environmental context including surrounding landuses, planning zonings and potential sensitive receptors.

Describe mitigation and management options that will be used to prevent, control, abate or mitigate identified environmental impacts associated with the project and to reduce risks to human health and prevent the degradation of the environment. This should include an assessment of the effectiveness and reliability of the measures and any residual impacts after these measures are implemented.

Based on the information provided to the Department of Environment and Conservation (DEC), the applicant will not require an Environment Protection Licence because the activity is not scheduled under the Protection of the Environment Operations Act 1997.

Water quality

The environmental outcomes for the project in relation to water should be:

- There is no pollution of waters (including surface and groundwater) during construction or occupation of the site by the final users;
- There is no inconsistency with any relevant Statement of Joint Intent established by the Healthy Rivers Commission; and
- It is acceptable in terms of the achievement or protection of the River Flow Objectives and Water Quality Objectives.

The EA should document the measures that will achieve the above outcomes. In addition, the EA must:

- Take into account and complement Shoalhaven City Council's Integrated Water Cycle Management Plan which is currently being developed.
- Demonstrate that there is sufficient capacity to convey, treat and manage the sewage that is generated by this development. Evidence must be sought from Shoalhaven City Council that demonstrates capacity exists within Councils sewerage infrastructure to support this development.

Air quality

Contaminated Land

The EA must document the assessment and management of any land contamination to ensure that the land is not allowed to be put to a use that is inappropriate because of the presence of contamination. Under the Contaminated Land Management Act there is a responsibility to notify the DEC of sites that pose a significant risk of harm to human health or the environment.

Noise

The proposal must be designed, constructed, operated and maintained so that there are no adverse impacts from noise (including traffic noise).

Impacts of the project on threatened species and their habitat

The EA must describe what actions will be undertaken to avoid or mitigate impacts caused by the development on all threatened species described at the site

Impacts of the project on Aboriginal cultural heritage values

The EA should address and document the information requirements set out in the draft “Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation” involving surveys and consultation with the Aboriginal community.

The EA must identify the nature and extent of impacts on Aboriginal cultural heritage values across the project area.

Should the site be found to have significant Aboriginal cultural heritage values, the EA must describe the actions that will be taken to avoid or mitigate impacts or compensate to prevent unavoidable impacts of the project on Aboriginal cultural heritage values. This should include an assessment of the effectiveness and reliability of the measures and any residual impacts after these measures are implemented.

The EA needs to clearly demonstrate that effective community consultation with Aboriginal communities has been undertaken in determining and assessing impacts, developing options and making final recommendations.

Attachment B - Guidance Material Assessing Environmental Impacts

Water quality

- National Water Quality Management Strategy: Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC 2000)
- NWQMS Australian Guidelines for Water Quality Monitoring and Reporting (ANZECC 2000)
- Healthy Rivers Commission Report into Coastal Lakes and Statement of Joint Intent
- NSW Government Interim Water Quality and River Flow Environmental Objectives for Clyde River and Jervis Bay
- The relevant targets within the State Water Management Outcomes Plan
- *NSW Guidelines for Urban & Residential Use of Reclaimed Water* (NSW Water Recycling Coordination Committee, 1993).

Air quality

- Protection of the Environment Operations (Clean Air) Regulation 2002
- Approved Methods for the Sampling and Analysis of Air Pollutants in NSW
- Approved Methods and Guidance for the Modelling and Assessment of Air Pollutants in New South Wales
- (Draft) Assessment and Management of Odour from Stationery Sources in NSW
- Action for Air (EPA, 1998)

Wastewater

- National Water Quality Management Strategy: Guidelines for Sewerage Systems - Effluent Management (ARMCANZ/ANZECC 1997)
- National Water Quality Management Strategy: Guidelines for Sewerage Systems – Use of Reclaimed Water (ARMCANZ/ANZECC 2000)
- Environmental Guidelines for the Utilisation of Treated Effluent by Irrigation (NSW DEC 2004)
- Environment and Health Protection Guidelines: 'Onsite Sewage Management for Single Households', February 1998 (Silver Book).

Stormwater

- Managing Urban Stormwater: Soils and Construction (NSW Landcom, 2004)
- Managing Urban Stormwater: Source Control (EPA 1998)
- Managing Urban Stormwater: Treatment Techniques (EPA 1998).

(Note: some of these documents will be revised in 2006)

Contaminated Land

- Managing Land Contamination: Planning Guidelines - SEPP55 - Remediation of Land, Department of Urban Affairs and Planning and NSW EPA, 1998:
- Contaminated Sites – Guidelines for Consultants Reporting on Contaminated Sites (Environment Protection Authority (EPA) 1997);
- Contaminated Sites – Guidelines on Significant Risk of Harm and Duty to Report (EPA, 1999).

Noise and vibration

- NSW Industrial Noise Policy (EPA, 1999)
- NSW Environmental Criteria for Road Traffic Noise (EPA, 1999)
- Chapter 171 Noise Control Guideline, *Construction Site Noise, Environmental Noise Control Manual*, 1994.

Assessing Threatened Species Impacts

- Draft Guidelines for Threatened Species Assessment - Available from Department of Planning.

Assessing Aboriginal Cultural Heritage Impacts

- Draft Guidelines For Aboriginal Cultural Heritage Impact Assessment and Community Consultation - Available from Dept of Planning
- Interim Community Consultation Requirements for Applicants
- <http://www3.environment.nsw.gov.au/npws.nsf/Content/Protecting+Aboriginal+objects+and+places>
- Aboriginal Cultural Heritage Standards and Guidelines Kit - Available shortly on-line through DEC's webpage.

Attachment C

GUIDELINES for DEVELOPMENTS ADJOINING DEPARTMENT of ENVIRONMENT and CONSERVATION LAND

These guidelines have been prepared by the NSW Department of Environment and Conservation (DEC) for use by Councils and other consent authorities when assessing development applications that may impact on land managed by the DEC. It is anticipated that the application of these guidelines will mean that Councils will need to refer fewer Development Applications that adjoin conservation reserves to the DEC for comment as part of the Council assessment process.

The DEC manages land reserved or dedicated under the *National Parks and Wildlife Act 1974*. This includes areas such as National Parks, Historic Sites, Nature Reserves, Aboriginal Places, Regional Parks and State Conservation Areas. Some of these parks occur within World Heritage Areas. Together these reserves play an important role in protecting native flora and fauna (including threatened species, migratory fauna and endangered ecological communities), and natural features such as wetlands, estuaries, and caves. They also play a role in the protection of natural and cultural landscapes that support numerous Aboriginal sites and cultural heritage values, and also European heritage. Direct benefits of this reserved land are provided to the community through opportunities for recreation, education and scientific research, and also via the services they provide in the form of clean water catchments, improved amenity and settings for tourism.

The goal of these guidelines is to prevent adjoining development from causing any direct or indirect adverse impact on the values of land managed by the DEC.

Councils and other consent authorities should consider the following issues when assessing proposals adjoining DEC land, particularly how they could impact on the reserve:

- Erosion and Sediment Control,
- Stormwater Runoff,
- Management Implications, Pets, Weeds, Edge Effects,
- Fire and the Location of Asset Protection Zones,
- Boundary Encroachments,
- Visual, Odour, Noise, Air Quality Impacts and Amenity, and
- Threats to Ecological Connectivity.

The potential for **cumulative impacts** from developments along DEC boundaries should be considered in addition to case-by-case considerations.

1. Erosion and Sediment Control

Aim: No detrimental change in hydrological regimes, minimisation of erosion and prevention of sediment movement into DEC land during the construction and post-construction phases of development.

Removal of vegetation and disturbance of groundcover from construction activities will expose the soil and increase the risk of erosion. Erosion of sediments may subsequently be transported downstream into DEC land and deposited onto vegetation and into creeks, rivers, wetlands and other aquatic habitats.

Changes to the hydrological behaviour of streams outside the reserve system can impact on lands managed by the DEC. Developments may change the hydrology by increasing the intensity and frequency of flows as a result of clearing vegetation, and increasing the area of impermeable surfaces. This can result in damage to downstream aquatic habitat by scouring the bed and banks of watercourses. Developments may also cause a concentration of flows thereby increasing erosion potential downstream. Some developments may interrupt natural flows.

Erosion can affect the landscape values assigned to a location by Aboriginal people as well as impact on any Aboriginal objects present through both the removal and subsequent displacement of sediments. Changes to an Aboriginal site caused by erosion will affect its natural setting in the landscape, which is of importance to Aboriginal people. The natural setting of a place is often as important to Aboriginal people as the Aboriginal objects it may contain.

Furthermore, erosion can affect any Aboriginal object including stone artefacts, shell, rock art etc. that may be present. The removal of sediments caused by erosion may expose Aboriginal objects to increased weathering and other impacts as well as a greater chance of displacement from their original location. Sediment accumulation caused by erosion can result in Aboriginal objects being covered by sediment, which can cause further damage if the objects are brought into contact with acidic soils.

Similarly, many parks support significant historic heritage values including convict built roads, cemeteries, buildings, bridges and other infrastructure that are vulnerable to the impacts of erosion.

Accordingly, appropriate erosion and sedimentation control measures should be implemented prior to construction, and be maintained for the duration of construction and until soil is stabilised post construction. In some cases, it will be necessary to prepare detailed sediment and erosion control plans (soil and water management plans) for the proposed development.

As a general erosion and sediment control measure, the DEC recommends that clearance of native vegetation be kept to a minimum, areas of vegetation be fenced off during construction, and disturbed areas be rehabilitated and appropriately stabilised as soon as possible following construction.

Sedimentation control shall comply with the guidelines 'Managing Urban Stormwater – Soils and Construction, Volume I' (Landcom, 2004) to prevent sediment flowing from adjacent property onto the DEC estate. In addition, reference should be made to 'A Resource Guide for Local Councils: Erosion and Sediment Control' (Department of Environment and Conservation NSW, May 2006).

2. Stormwater Runoff

Aim: Minimise nutrient levels and flow regimes/patterns to mimic natural levels prior to reaching DEC land.

The DEC considers that the discharge of stormwater to areas of DEC land poses a threat to downstream environments by dispersing weed propagules, altering the nutrient composition and

pollutant levels, and potentially causing erosion and sedimentation within watercourses. Raised nutrient levels can destroy some native plants and also promote weed growth, putting further pressure on native vegetation. The discharge of stormwater may also impact on Aboriginal sites, which are frequently located in close proximity to watercourses, and historic heritage sites. These potential impacts from stormwater have a range of implications for management of DEC land, including weed eradication and site rehabilitation.

The design of the stormwater treatment measures should be based on treatment objectives that are commensurate with the values of the downstream environment. Where stormwater does enter DEC lands 'best practice' stormwater treatment measures should be utilised to maximise on-site pollutant retention, and removal and infiltration and sub-surface discharge of stormwater. In some cases it may be necessary to prepare a stormwater management plan for the proposed development.

The DEC advises that the stormwater detention requirements of the Council shall apply, unless those requirements allow a higher rate of discharge than that calculated using the following criterion:

Stormwater detention systems shall be designed to ensure there is no increase in pre development peak flows from rainfall events having a 1 in 5 year and 1 in 100 year average recurrence interval (ARI).

The DEC is currently finalising a new series of *Managing Urban Stormwater* documents that will include guidance on setting stormwater management objectives for all receiving environments, including bushland, and how to achieve these objectives. Reference should be made to 'Managing urban stormwater: harvesting and reuse' (Department of Environment and Conservation, April 2006), which has been released as part of this series. Further information on how to plan, design and manage stormwater from urban development adjacent to bushland will be provided in subsequent documents.

The DEC recommends that:

- development proposals for areas adjacent to DEC land should incorporate stormwater detention systems (with appropriately managed buffer areas) within the development area to minimise stormwater discharge rates and prevent localised erosion; and
- the discharge of polluted stormwater to DEC lands must be avoided as a high priority.

Infrastructure associated with stormwater treatment **must not be located on DEC land** and any stormwater outlets should disperse the flow to pre-development levels. Proposals where stormwater treatment measures are proposed within DEC land are subject to approval by the DEC and assessment under Part 5 of the *Environmental Planning and Assessment Act, 1979*. An approval cannot be assumed and it is important that any proposal that is dependent upon a DEC approval is discussed at the design stage, prior to any other development approval being obtained.

3. Management Implications, Pets, Weeds, Edge Effects

Aims: The development does not:

- *lead to increases in weeds or access by domestic pets;*
- *facilitate informal tracks, negative impacts on cultural or natural heritage values or other impacts of higher visitation;*
- *compromise natural fire regimes;*
- *result in encroachments or inappropriate fencing; or*
- *impede DEC access for management purposes.*

Development adjoining DEC land has the potential to affect the operation or management of DEC land. Adjoining development may place additional pressure on maintenance of access,

management of Aboriginal sites and historic heritage, weed management and pest control. Development may result in increased informal and inappropriate access (eg trail bikes), disturbance from domestic pets, predation by pets, the spread of weeds, and associated impacts to the amenity of DEC lands. These impacts may have significant conservation and resource implications for the management of DEC land.

In assessing proposals, consent authorities should consider the impacts associated with development adjoining DEC land. The Department considers that site layout and design should seek to minimise any adverse environmental impacts on DEC land.

In addition, consent authorities should consider the potential sensitivity of a place to the Aboriginal community in terms of the cultural value of a place, including its natural setting.

Adjoining developments should not compromise public and DEC staff access to DEC land.

The DEC recommends consideration of the establishment of an appropriate buffer between any development and DEC land. Where managed effectively, a buffer may minimise the impact to the natural and cultural values of DEC land.

Where a buffer is not available, consideration should be given to developing appropriate conditions that minimise the potential edge effects from development or building. This might mean planning the development around a particular stand of vegetation, siting a building back from the DEC boundary, or recommending a suitable type of boundary fencing.

4. Fire and the Location of Asset Protection Zones

Aim: All asset protection mechanisms are within the development area, and there is no expectation for DEC to change its fire management regime for the land it manages.

For any proposals adjoining DEC land, consent authorities will need to undertake an assessment of the fire risk, in accordance with the bushfire guidelines (*Planning for Bushfire Protection: A Guide for Councils, Planners, Fire Authorities, Developers and Home Owners, NSW Rural Fire Service and PlanningNSW December 2001*). The assessment should address appropriate fire management practices for the area. Councils should also ensure that the provisions of the *Rural Fires and Environmental Assessment Legislation Act 2002* and the *Rural Fires Act 1997* are implemented within the area proposed for development. Further consultation with the NSW Rural Fire Service may be required regarding this particular matter.

Consistent with the bushfire guidelines, any APZ's should be provided within the development site and not extend into the DEC reserve, or rely on actions being undertaken by the DEC. Accordingly, appropriately designed fire protection zones and fire fighting access tracks should be located on the land where development is proposed.

5. Boundary Encroachments

Aim: No pre-construction, construction or post-construction activity is to occur on DEC managed land.

Consent authorities should ensure that where a proposal shares a common boundary with DEC land, the subject boundary has been accurately surveyed to ensure there is no encroachment to

DEC land as a result of the proposed development. DEC land is not to be used: to access development sites, to store materials, equipment, workers' vehicles, machinery, etc, or for maintenance access post-development. Measures, such as temporary fencing of 'no-go' areas during construction, or installation of permanent, wildlife-compatible fencing could be considered, and would be subject to DEC approval if they are proposed to be located on DEC land.

6. Visual, Odour, Noise, Air Quality Impacts and Amenity

Aim: No diminution of amenity on DEC land due to adjacent development.

Consent authorities should take into account the visual, noise, odour, and air quality impacts of development adjacent to DEC land to ensure that it is sympathetic with the bushland, park, and/or cultural surrounds, and does not impact upon the amenity of park users. This may include measures such as landscaping with local native plant species, implementing buffer areas, and use of appropriate colours, building materials and height controls.

7. Threats to Ecological Connectivity

Aims: Maintenance (and where possible, enhancement) of vegetation and other flora and fauna habitats, that provide a linkage, buffer, home range and/or refuge role on land that is adjacent to park.

Protection of Aboriginal heritage values in these corridors.

Vegetated areas adjoining DEC land play a complementary role in providing essential linkages for the maintenance of biodiversity and minimise potential edge effects on DEC land. Vegetated areas may have a role in maintaining the viability of local populations and form an important component of home ranges of mobile species, as well as providing valuable wildlife refuge areas (including during periods of stress). Likewise, streams, rivers and other water bodies adjacent to reserves may play similar roles.

In addition, these corridors may also contain Aboriginal heritage values.

Development in areas of native vegetation, or along water bodies that adjoin DEC land can often result in fragmentation of habitat corridors and isolation from other areas of habitat in the locality. Such development may also compromise Aboriginal objects and other Aboriginal heritage values.

The corridor values, or connective importance, of any vegetation (not only trees) and waterways or water bodies on the proposed development area should be considered. In addition, consultation should occur with the Aboriginal community to ensure that Aboriginal heritage values are not compromised in these areas.

The DEC recommends that vegetation, waterways and water bodies adjoining DEC land that exhibit ecological connectivity and/or cultural heritage values should be retained and protected, and where necessary, rehabilitated.