

APPENDIX C.

DIRECTOR-GENERAL'S REQUIREMENTS



NSW
NATIONAL
PARKS AND
WILDLIFE
SERVICE

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GRIFFITH CITY COUNCIL "Progress with Pride"		
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P. HIGGINS	✓	

Peter Higgins
Civil Infrastructure and Waste Manager
Griffith City Council
PO Box 485
GRIFFITH NSW 2680

Our reference:

Your reference:

23th September 2002

Dear Mr Higgins,

**RE: DIRECTOR-GENERAL'S REQUIREMENTS FOR A SPECIES
IMPACT STATEMENT FOR THE PROPOSED THARBOGANG
LANDFILL AND QUARRY**

Thank you for your letter dated 13 August 2002 requesting the Director-General's requirements for a Species Impact Statement (SIS) for the proposed landfill and quarry development cited above. The NSW National Parks and Wildlife Service (NPWS), Western Directorate office received your letter on 22 August 2002.

Sections 109 and 110 of the *Threatened Species Conservation Act 1995* (TSC Act) describe the form and content of an SIS. For your information I have provided a copy of these sections in Appendix 1. Pursuant to Section 111 of this Act, I have limited and modified these matters and provided additional matters to be addressed, as described below:

Definitions

The definitions given below are relevant to these requirements:

development has the same meaning as in the *Environmental Planning and Assessment Act 1979*.

activity has the same meaning as in the *Environmental Planning and Assessment Act 1979*.

subject site means the area which is proposed for development/activity.

study area is the subject site and any additional areas which are likely to be affected by the proposal, either directly or indirectly.

locality means the area within a 50 km radius of the study area.

region means a biogeographical region that has been recognised and documented such as the Interim Biogeographical Regions of Australia.

subject species means those threatened species, endangered populations or endangered ecological communities which are considered known or likely to occur in the study area.

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All other definitions are the same as those contained in the TSC Act.

Matters which have been limited or modified:

I consider that the following Section 110 matters need not be addressed by your SIS.

- All reference to critical habitat. At the time of printing, the areas of declared critical habitat are not relevant to this proposal.
- Section 110(2)(e). This section is a replication of 110(2)(a);
- Section 110(2)(g). The matters raised in this section of the act have been clarified by the requirements below.

The proponent should be aware that Recovery Plans may be approved, final determinations of threatened species may be made, critical habitat may be declared and key threatening processes may be listed between the issue of these requirements and the granting of consent. If this occurs these additional matters will need to be addressed in the SIS and considered by the consent, determining or concurrence authority.

Matters to be addressed

The SIS must meet all the matters specified in Sections 109 and 110 of the TSC Act with the exception of those matters limited above. In addition to these sections (Appendix 1) I require the matters described below to be addressed. Previous surveys and assessments may be used to assist in addressing these requirements. All references used throughout the SIS must be cited and listed in a bibliography.

1. Description

The SIS must include the information requested below:

The proposal and surrounding areas

- 1.1 A topographic map of the locality at the most detailed scale available should be provided. This map should detail the location of the proposed mine, any locally significant areas for threatened species such as parks and reserves, and areas of high activity such as townships, regional centres and major roads.
- 1.2 The type of action proposed shall be detailed, including the timetable for the carrying out of the proposed clearing and the number of hectares affected. This shall include details of the location of any auxiliary infrastructure such as water storage areas or roads.
- 1.3 A plan of the subject area will be provided. This plan will show the location and type of vegetation communities present within the subject area and the scale of the plan.

- 1.4 A colour aerial photograph of the locality (or reproduction of such a photograph) shall be provided. This aerial photograph should clearly show the subject site and the scale of the photograph.

Initial site assessment

- 1.5 A list of subject species must be provided. In determining these species, consideration must be given to the habitat types present within study area, recent records of threatened species in the locality and the known distribution of threatened species. Databases such as the NPWS Atlas of NSW Wildlife and information from the Royal Botanic Gardens and Australian Museum may be used to assist in compiling the list. The following species must be included in the list of subject species:

Threatened Species

Fauna

<i>Burhinus grallarius</i>	Bush Stone-curlew
<i>Ardeotis australis</i>	Australian Bustard
<i>Falco hypoleucos</i>	Grey Falcon
<i>Lophoictinia isura</i>	Square-tailed Kite
<i>Rostratula beghalensis</i>	Painted Snipe
<i>Grus rubicundus</i>	Brolga
<i>Stictonetta naevosa</i>	Freckled Duck
<i>Oxyura australis</i>	Blue-billed Duck
<i>Anseranus semipalmata</i>	Magpie Goose
<i>Botaurus poiciloptilus</i>	Australasian Bittern
<i>Limosa limosa</i>	Black-tailed Godwit
<i>Cacatua leadbeateri</i>	Pink Cockatoo
<i>Calyptorhynchus lathami</i>	Glossy Black Cockatoo
<i>Polytelis swainsonii</i>	Superb Parrot
<i>Neophema pulchella</i>	Turquoise Parrot
<i>Ninox conniveris</i>	Barking Owl
<i>Tyto novaehollandiae</i>	Masked Owl
<i>Pomatostomus temporalis temporalis</i>	Grey-crowned Babbler (eastern ssp.)
<i>Drymodes brunneopygia</i>	Southern Scrub-robin
<i>Melanodryas cucullata</i>	Hooded Robin
<i>Pachycephala inornata</i>	Gilbert's Whistler
<i>Pachycephala rufogularis</i>	Red-lored Whistler
<i>Cinclösoma castanotus</i>	Chestnut Quail-thrush
<i>Sericornis cautus</i>	Shy Hylacola
<i>Pyrrholaemus sagittatus</i>	Speckled Warbler
<i>Melithreptus gularis</i>	Black-chinned Honeyeater
<i>Grantiella picta</i>	Painted Honeyeater
<i>Certhionyx variegatus</i>	Pied Honeyeater
<i>Stagonopleura guttata</i>	Diamond Firetail
<i>Chalinolobus picatus</i>	Little Pied Bat
<i>Vespadelus baverstocki</i>	Inland Forest Bat
<i>Nyctophilus timoriensis</i>	Greater Long-eared Bat
<i>Socolaimus flaviventris</i>	Yellow-bellied Sheath-tail Bat

Litoria raniformis
Tiliqua occipitalis

Southern Bell Frog
Western Blue-tongued Lizard

Flora

Acacia curranii
Austrostipa (Stipa) metatoris
Austrostipa (Stipa) wakoolica
Brachyscome papillosa
Caladenia arenaria
Diuris tricolor
Lepidium aschersonii
Swainsona murrayana
Swainsona sericea

Endangered Ecological Communities

White Box, Yellow Box, Blakely's Redgum Woodland

Endangered Populations

Glossy Black Cockatoo Riverina Endangered Population

This list is not exhaustive. One of the roles of a SIS is to determine which species may be utilising a development site given the limitations of existing databases.

- 1.6 In defining the study area consideration shall be given to possible indirect effects of the action on the area surrounding the subject site: for example altered hydrology regimes, air pollution or increased traffic.
- 1.7 In describing the study area, consideration shall be given to the previous land uses and the effect of such land uses on the study area. Relevant historical events may include fire history, cropping and other agricultural activities.
- 1.8 A description of fauna habitat components such as the frequency of tree hollows, presence of logs and other groundcover, density and structure of vegetation, soil types and presence of water points etc. shall be given. The condition of the habitat within the study area shall be discussed, including the prevalence of introduced species. Where relevant the habitat of the subject species shall be described with particular reference to the various components of their habitat (i.e., feeding, roosting, nesting etc.).

Subject species survey methods

- 1.9 A fauna and flora survey is to be conducted in the study area. Targeted surveys shall be conducted for all subject species where suitable habitat for these has been identified as occurring within the study area. Species of taxonomic uncertainty shall be confirmed by a recognised authority such as the Australian Museum for animals and the Royal Botanic Gardens for plants.

1.10 A full description of the methodology used in the fauna and flora surveys and habitat assessment shall be provided, including survey techniques and effort employed, number and location of traps, size of survey sites, date/s of surveys, the time spent on surveys and weather conditions. Surveys should be undertaken during seasons and climatic conditions during which the subject species are most likely to be detected. Flora survey will be conducted in the spring and surveys must be preceded by climatic conditions such that the likelihood of the subject species being identifiable is maximised. The subject area will be "spelled" from grazing for a period no less than one month prior to the survey.

1.11 Any areas that may act as corridors or habitat links between the study area and adjacent areas of likely habitat for subject species shall be identified and described.

1.12 A full list of the flora and fauna found during the course of surveys shall be included. Such information is indicative of the habitat quality of the site.

1.13 The effect of the season and weather shall be considered with respect to the results of the survey.

1.14 The methodology of surveys is the responsibility of the consultant and as stated in 1.12 above must be fully documented in the SIS. Suggested methodologies for certain aspects of the field survey are:

- the study area should be stratified to reflect natural variation across the area and the intensity of direct and indirect effects as a result of the proposed development.
- a map of the attributes (e.g. vegetation) used to stratify the study area should be included.
- each unit of land delineated by the stratification should be sampled for flora and fauna.
- survey effort should be concentrated on, but not restricted to, those areas likely to be most impacted on by direct and indirect effects of the development.
- The *Interim Guidelines for Targetted and General Flora and Fauna Surveys under the Native Vegetation Conservation Act 1997* (NSW DLWC 1999) provide a guide as to the minimum survey effort required.

The habitat of threatened species

1.15 The location of any threatened species recorded during the SIS survey shall be represented on a map of the study area.

1.16 A description of the habitats occupied within the region by each of the subject species should be provided. This description should include not only floristic and structural information but also information on the condition of the habitats.

1.17 In the same way a description of the habitats occupied within the study area by each of the subject species should be provided. A comparison of the available habitats within the study area in relation to the region should then be undertaken.

1.18 The habitat of each of the subject species within the study area shall be represented on a map.

1.19 An effort should be made to determine the distribution of the local population of each threatened species recorded from the study area. Targeted surveys within the locality may be necessary to adequately assess the distribution of a local population.

1.20 The condition of the habitats should be determined, described and recorded (e.g., structural complexity of the vegetation, evidence of grazing/browsing damage, presence of flora species susceptible to grazing, fire history). The condition and regional distribution of similar habitats outside the study area should also be recorded.

Matters of social and economic impact

1.21 The economic costs likely to be incurred and the benefits likely to accrue to the proponent as a result of this development shall be addressed in the SIS. This shall include a discussion of the sensitivity of the analysis to any assumptions made in the calculation of the benefits/costs.

1.22 An evaluation of the social consequences of the development shall be carried out. This will consider who gains and who loses from the action and where those people are located, i.e. distributional considerations. Social impacts may include those that affect the net welfare of society and those that impact on the individual or group. With respect to the proponent this analysis may require consideration of the management of other lands under his control.

Matters of ecologically sustainable development

1.23 The principles of ecologically sustainable development are described in section 6(2) of the *Protection of the Environment Administration Act 1991*. The SIS must seek to demonstrate how this development satisfies these principles or how the development could be modified to address these principles.

1.24 The regional context of the effects of this development on the ESD principles i.e. off-site must also be considered.

2. Assessment of likely impacts

The assessment matters listed below shall be addressed:

2.1 For all subject species, the SIS shall state the following:

- the location, nature and extent of habitat removal or modification which may result from the proposed action;
- the potential impact of the removal of habitat on the species, population or ecological community; and
- the likely contribution of the proposed action to the threatening processes acting on populations of those species in the locality.
- measures proposed to ameliorate the impacts of the proposal.

2.2 A discussion of other populations of subject species in the region shall be provided. The long-term security of the other habitats shall be examined as part of this discussion. The relative significance of the subject site for subject species in the local context shall be provided.

2.3 If movement corridors for subject species are present within the subject site, the impact of the proposal on these areas shall be discussed.

2.4 Where an Approved Recovery Plan exists for a subject species, discussion shall be provided as to whether the proposal is consistent with the actions and objectives of the plan.

3. Amelioration

The following issues shall be addressed:

3.1 In discussing alternatives to the proposal, and the measures proposed to mitigate the effect of the proposal, consideration shall be given to developing long-term management strategies to protect areas within the study area which are of particular importance for the subject species. This may include proposals to restore or improve habitat.

3.2 Any proposed on-going monitoring of the effectiveness of the mitigation measures shall be provided.

4. Additional Information

4.1 In providing a list of other approvals the following shall be included;

- any consent required under Part 4 of the *Environmental Planning and Assessment Act 1979* including the name of the consent authority and when it is proposed to make the development application; or
- any approvals required under Part 5 of the *Environmental Planning and Assessment Act 1979* including the name of the determining authority(ies), the basis for the approval and when these approvals are proposed to be obtained.

Should you require any further information on these requirements please contact Matthew Chambers, Threatened Species Officer, on (02) 6883 5358.

Yours sincerely,



MATT CAMERON
Manager, Threatened Species
Western Directorate

25/9/02

Appendix 1

109 Form of species impact statements

- (1) A species impact statement must be in writing.
- (2) A species impact statement must be signed by the principal author of the statement and by:
 - (a) the applicant for the licence, or
 - (b) if the species impact statement is prepared for the purposes of the Environmental Planning and Assessment Act 1979, the applicant for development consent or the proponent of the activity proposed to be carried out (as the case requires).

110 Content of species impact statements

- (1) A species impact statement must include a full description of the action proposed, including its nature, extent, location, timing and layout and, to the fullest extent reasonably practicable, the information referred to in this section.

- (2) A species impact statement must include the following information as to threatened species and populations:

- (a) a general description of the threatened species or populations known or likely to be present in the area that is the subject of the action and in any area that is likely to be affected by the action,

- (b) an assessment of which threatened species or populations known or likely to be present in the area are likely to be affected by the action,

- (c) for each species or population likely to be affected, details of its local, regional and State-wide conservation status, the key threatening processes generally affecting it, its habitat requirements and any recovery plan or threat abatement plan applying to it,

- (d) an estimate of the local and regional abundance of those species or populations,

- (e) a general description of the threatened species or populations known or likely to be present in the area that is the subject of the action and in any area that is likely to be affected by the action,

- (f) a full description of the type, location, size and condition of the habitat (including critical habitat) of those species and populations and details of the distribution and condition of similar habitats in the region,

- (g) a full assessment of the likely effect of the action on those species and populations, including, if possible, the quantitative effect of local populations in the cumulative effect in the region,

- (h) a description of any feasible alternatives to the action that are likely to be of lesser effect and the reasons justifying the carrying out of the action in the manner proposed, having regard to the biophysical, economic and social considerations and the principles of ecologically sustainable development,

- (i) a full description and justification of the measures proposed to mitigate any adverse effect of the action on the species and populations, including a compilation (in a single section of the statement) of those measures,

- (j) a list of any approvals that must be obtained under any other Act or law before the action may be lawfully carried out, including details of the conditions of any existing approvals that are relevant to the species or population.

(3) A species impact statement must include the following information as to ecological communities:

(a) a general description of the ecological community present in the area that is the subject of the action and in any area that is likely to be affected by the action,

(b) for each ecological community present, details of its local, regional and State-wide conservation status, the key threatening processes generally affecting it, its habitat requirements and any recovery plan or any threat abatement plan applying to it,

(c) a full description of the type, location, size and condition of the habitat of the ecological community and details of the distribution and condition of similar habitats in the region,

(d) a full assessment of the likely effect of the action on the ecological community, including, if possible, the quantitative effect of local populations in the cumulative effect in the region,

(e) a description of any feasible alternatives to the action that are likely to be of lesser effect and the reasons justifying the carrying out of the action in the manner proposed, having regard to the biophysical, economic and social considerations and the principles of ecologically sustainable development,

(f) a full description and justification of the measures proposed to mitigate any adverse effect of the action on the ecological community, including a compilation (in a single section of the statement) of those measures,

(g) a list of any approvals that must be obtained under any other Act or law before the action may be lawfully carried out, including details of the conditions of any existing approvals that are relevant to the ecological community.

(4) A species impact statement must include details of the qualifications and experience in threatened species conservation of the person preparing the statement and of any other person who has conducted research or investigations relied on in preparing the statement.

(5) The requirements of subsections (2) and (3) in relation to information concerning the State-wide conservation status of any species or population, or any ecological community, are taken to be satisfied by the information in that regard supplied to the principal author of the species impact statement by the National Parks and Wildlife Service, which information that Service is by this subsection authorised and required to provide.