

Cattle Feedlots

E I S G u i d e l i n e

**New South Wales
Department of Urban Affairs and Planning**

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Executive summary

This guideline identifies some important factors to be considered when preparing an environmental impact statement (EIS).

The preparation of the EIS should be preceded by early effective consultation and technical discussions with relevant government agencies and councils.

A high priority should be given to:

- considering environmental factors in site selection
- evaluating alternative sites
- ascertaining the suitability of the intended location.

There should be an early evaluation of alternatives, taking into consideration the factors in Part 4 of this guideline.

The analysis of alternative design, processing and management practices should consider the environmental implications of options. The justification for the selection of the preferred options should consider biophysical, social and economic factors, and the consistency with ecological sustainability principles.

The assessment process should focus on key environmental issues. These issues should be identified early in the environmental impact assessment (EIA) process, usually at a planning focus meeting and through consultation with the community. The assessment process should clearly identify the environmental (including biophysical, social and economic) costs and benefits of the proposal.

Key issues for cattle feedlots usually include:

- effluent disposal
- soil degradation
- surface and groundwater quality issues
- air quality issues
- noise
- traffic.

The EIS should outline commitments to the ongoing environmental management of the proposal, including monitoring.

The level of analysis of individual issues in the EIS should reflect the level of significance of their impacts. The analysis should focus on key issues. The information in the EIS should be accurate and presented clearly and concisely. There should be emphasis on quality and not quantity. The EIS need not be long.

Contents

1. Purpose and scope of the guideline

- 1.1 Background
- 1.2 When is an EIS required?

2. Factors to consider when preparing an EIS

- 2.1 Early consideration of the strategic context
- 2.2 Early assessment of options
- 2.3 Identifying issues
- 2.4 Prioritising issues
- 2.5 Impact analysis, prediction and presentation
- 2.6 A question of adequacy
- 2.7 Ecologically sustainable development

3. Consultation

- 3.1 Consultation with government agencies
- 3.2 Formal consultation required under legislation
- 3.3 Consultation with the community

4. Site selection procedures

- 4.1 Site selection

5. Summary of EIS requirements

6. Specific requirements for an EIS

- A. Executive summary
- B. The proposal and the location
- C. Identification and prioritisation of issues
- D. The environmental issues
- E. List of approvals and licences
- F. Compilation of mitigation measures
- G. Justification for the proposal

Appendices

- 1. Schedule 2 — Environmental Impact Statements
- 2. EIA procedures under the EP&A Act
- 3. Threatened Species Conservation Act
- 4. Consultation and approvals
- 5. References
- 6. Schedule 3 — Designated development

1. Purpose and scope of the guideline

1.1 Background

Cattle feedlots can provoke considerable public controversy. They can generate significant problems with their effluent disposal and their potential for soil, water, noise, air pollution and traffic generation.

This guideline has been prepared to guide proponents of cattle feedlot developments in:

- site selection using key environmental criteria; and
- assessing impacts, to help them prepare an environmental impact statement.

It is also intended for use by consent authorities which deal with cattle feedlot proposals.

Applicants should be aware of further information and support available through the Feedlot Advisory Unit, which has been established by NSW Agriculture, to assist with the orderly development of the commercial feedlot industry. The Unit aims to coordinate the activities of the various government departments involved with considering applications for development consent, licensing and operational monitoring.

The Feedlot Advisory Unit should be contacted early, during the feasibility stage of any major proposal. The Unit may help organise planning focus meetings to help the consent authority and other interested parties to review:

- the major issues associated with the proposal; and
- areas of concern that will need to be addressed in the application.

The local livestock officer with NSW Agriculture is the first point of contact for the Feedlot Advisory Unit.

A *Feedlot Manual* (published by NSW Agriculture, 1995) is also available for purchase. The manual contains detailed information on the development of the industry in NSW, with a range of guidelines on matters of particular environmental concern and details of the pollution control and resource management responsibilities of various public authorities.

1.2 When is an EIS required?

State Environmental Planning Policy No. 30 — Cattle Feedlots and Piggeries (SEPP 30) was introduced to ensure that impacts associated with cattle feedlots were adequately considered. SEPP 30 makes it compulsory to obtain development consent before establishing cattle feedlots exceeding 50 head capacity.

For feedlot proposals ranging from 50 to 1 000 head capacity, a statement of environmental effects (SEE) (formerly known as an environmental impact report (EIR)) must accompany the development application to the relevant council. Guidelines for preparing an SEE/EIR are contained in the *Feedlot Manual* (published by NSW Agriculture, 1995). These guidelines also offer assistance in preparing a SEE.

Cattle feedlots which exceed 1 000 head capacity are designated development under Schedule 3 of the Environmental Planning and Assessment Regulation 1994 and therefore require a full environmental impact statement (EIS) to accompany the application. An extract from Schedule 3 is contained in Appendix 6.

An EIS may also be needed when development consent is not required but other approvals are. The determining authority giving that approval must take into account Part 5 of the *Environmental Planning and Assessment Act, 1979* and judge whether the proposal is likely to significantly affect the environment. If so, an EIS must be prepared.

The purpose of the EIS is to enable members of the public, the consent authority (usually council) and relevant government agencies to properly understand and consider the environmental consequences of the proposed development. It is also important that the EIS is treated as a guide to the future management of the development.

A diagram of the planning approval process is provided in Appendix 2.

2. Factors to consider when preparing an EIS

The aim of environmental impact assessment (EIA) is to enable the approving authority, the public, the local council, government authorities and the proponent to properly consider the potential environmental consequences of a proposal. It is important to provide sufficient information for the approving authority to make a decision on whether to approve a proposal and if so, under what conditions. The EIS provides the basis for sound ongoing environmental management.

It is the proponent's responsibility to identify and address, as fully as possible, the matters relevant to the specific proposal and to comply with the statutory requirements for EIS preparation. The following factors are important when preparing an EIS.

2.1 Early consideration of the strategic context

The need for the proposal should be clearly identified along with its relationship to broader strategic plans and goals. Consideration of the strategic context is essential when selecting options for the proposal. Strategic mechanisms such as policies and plans which illustrate how the proposal has been developed, should be discussed in the EIS so that the information is available and relevant. It is not the role of the project EIS to undertake an environmental assessment of strategic mechanisms related to the proposal. However the EIS should report upon and apply them to the proposal.

Any existing relevant cumulative or strategic environmental studies should be considered when formulating and justifying undertaking a proposal. Air and water quality studies, state of the environment reports and local and regional environmental studies should also be taken into consideration as applicable.

2.2 Early assessment of options

The objectives for the proposal should be developed to fulfil any identified need and should encompass the principles of ecologically sustainable development (ESD). ESD principles (outlined in Appendix 1) should be considered when identifying options for all aspects of the proposal. All feasible alternatives that could satisfy the objectives of the proposal should be considered. When weighing up options, the biophysical, economic and social costs and benefits throughout the whole life cycle of the proposal should be considered. The 'do nothing' option should also be included in these considerations.

Careful option selection can lower community concerns and reduce potential costs of mitigation and management required to control environmental (including social) impacts. Early adoption of ecologically sustainable strategies can reduce possible conflicts, and additional costs and delays at later stages of the approval process.

2.3 Identifying issues

The general framework for an EIS is prescribed in Schedule 2 of the EP&A Regulation (see Appendix 1). The Director-General's requirements provide specific matters to be addressed in an EIS. In addition to the specific legal requirements, the proponent has a broader responsibility to consider all potential environmental issues in relation to the proposal.

As a precursor to identifying potential environmental issues, the proponent must be able to outline:

- the important characteristics of the project which will determine the scope of the potential impacts
- the proposed site and a preliminary assessment of the sensitivity of the site.

If either the project characteristics or the site should change, then the potential impacts may also change. If at any time changes occur, the scoping process for the EIS should be reviewed. If major changes occur, the Director-General may need to be reconsulted to amend their requirements.

In addition to the issues outlined in this guideline, other sources of information which may assist in the identification of potential issues include:

- any relevant guidelines produced by other NSW government authorities, e.g. *Environmental Noise Control Manual* (EPA, 1994), other States or overseas
- EISs for similar projects, and any relevant commission of inquiry report, determination report and conditions of approval
- relevant research and reference material on similar proposals.

There are a number of approaches or mechanisms which help identify issues relating to a particular proposal in a particular location. They may involve fairly unstructured mechanisms with a low level of consultation or a structured process with a high level of consultation with all stakeholders. The choice of the approach should depend on the scale and type of proposal and the sensitivity of the environment. These may include:

- consultation outlined in Part 3
- checklist, matrix, network, GIS or overlay methods or similar approaches such as the tables in *Is an EIS required?* (Department of Planning, 1995)

2.4 Prioritising issues

The EIA process generally will benefit from focusing attention on key issues of concern. Not all issues identified will have the same degree of relevance for all proposals. The relative importance placed on different issues will vary from case to case, and is a function of the type and size of the proposal and the sensitivity of the receiving environment. Issues should therefore be prioritised according to their importance in the decision-making process.

When prioritising issues, consideration should be given to the potential severity, temporal and spatial extent of any beneficial and adverse

effects; their direct impacts as well as any indirect, secondary, tertiary or cumulative impacts; and whether the effects are continuous or intermittent, temporary and reversible or permanent and irreversible.

The outcome of the identification and prioritisation process should result in:

1. a list of all issues with a preliminary estimate of the relative significance of their impacts
2. identification of the key issues
3. an explanation as to why other issues are not considered to be key.

The EIS should address the key issues as fully as practicable. However the level of analysis should reflect the level of significance of the impacts and their importance for the proposal. Lesser attention should be given to those issues which have lesser significance. For these latter issues, there should be sufficient analysis to develop a sustainable mitigation strategy for any potential adverse impacts.

2.5 Impact analysis, prediction and presentation

Discussion of likely impacts should include predictions of the nature and extent of potential impacts and the effectiveness of mitigation strategies. This information is fundamental to deciding the potential ecological sustainability and hence the acceptability of a particular proposal.

a) Presentation

Information provided should be clear, succinct, objective and where appropriate, supported by maps or other descriptive detail. Repetitive or general non-specific data is distracting and is not relevant to the decision-making process. The use of jargon should be avoided. It is recommended that the EIS be edited to ensure consistency of style and accuracy of transference of information from any appendices to the main document. External review of technical analysis will help ensure that the information to be included is relevant.

The EIS should make reference to all relevant studies and investigations that have been carried out in support of the proposal or other studies, reports or literature used in the EIS. These should be made available during the public display of the EIS.

b) Baseline information

Where baseline data is to be collected first-hand, careful consideration must be given to the design of the sampling program. Matters to consider include:

- the degree of understanding of the processes in question
- the reasons for the data collection program
- sampling program design
- data collection procedures
- data analysis methodologies
- relevant quality assurance procedures.

The need for long-term sampling to discern the variability of the environment should also be assessed as early as possible so that it is not overlooked or avoided due to time constraints. Assumptions and extrapolations used to draw conclusions from the data should be justified.

In some circumstances, there may be sufficient existing data available for assessment purposes without the need for additional data collection. Where existing data is used, its adequacy and appropriateness for impact assessment of the proposal should be reviewed and discussed, taking into consideration the above points for first-hand data collection. Shortfalls or uncertainty in knowledge should be clearly identified.

In all cases, sampling programs and analysis procedures should reflect current scientific approaches. Peer review of study design, sampling methodology, data analysis and interpretation of results may help identify inadequacies.

c) Predictions of impacts and mitigation

Impact prediction should consider magnitude, duration, extent, direct and indirect effects, beneficial and adverse effects and whether impacts are reversible or permanent. All predictions of impacts and the likely success of mitigation strategies have an element of uncertainty associated with them. The proponent should identify and, where possible, indicate the

level of uncertainty associated with these predictions and mitigation measures. This information is fundamental in developing appropriate management strategies and informs the proponent, community, government agencies and the decision-maker of the degree of risk associated with the proposal and the importance of that risk.

When predicting impacts, a clear distinction must be made between those impacts which can be assessed quantitatively and those for which only a qualitative assessment can be made. Predictive models used should be justified in terms of appropriateness for the task, outlining its strengths and weaknesses. Whenever conclusions and recommendations have been made based substantially on judgements instead of facts or objective analytical results, the basis of the judgements should be clearly identified. A precautionary approach should be adopted where there is a significant chance a proposal may lead to irreversible consequences.

d) Reference to standards or indicators

Where possible, discussion of impact assessment and mitigation measures should make reference to recognised standards or indicators for sustainability. Standards such as the *Australian Water Quality Guidelines for Fresh and Marine Waters* (ANZECC, 1992) will provide a useful reference against which to measure the acceptability of potential outcomes. In some cases, indicators may have been developed for a region or area, for instance by the Healthy Rivers Commission for specific catchments. In other cases they may be developed as a result of regional strategic environmental or cumulative studies. Some indicators for sustainability may relate to the specific characteristics of the location and can only be developed as a result of the analysis undertaken in the EIS.

e) Mitigation strategies

Mitigation strategies must be considered both in relation to individual impacts and collectively for all impacts. This helps to avoid conflict between mitigation strategies and ensures that measures applied with respect to one (or more) potential impacts do not increase the magnitude or significance of other likely impacts. The mitigation strategy should include the

environmental management principles which would be followed in the planning, design, construction and operation of the proposal and include:

- a compilation of locational, layout, design or technology features described in the EIS
- an outline of ongoing environmental management and monitoring plans.

Predictions made in the EIS should be monitored in an environmental management plan (EMP). With projects with potentially controversial environmental impacts, it may be appropriate to:

- consult with government authorities, council and the community when preparing the EMP
- establish a community committee to consult in relation to the ongoing management of the proposal
- exhibit an annual environmental management report outlining the environmental performance of the proposal.

It is not expected that a detailed EMP be prepared for the EIS. However an outline of the content and structure and commitment to prepare an EMP is required.

2.6 A question of adequacy

The NSW Land and Environment Court has made a number of observations about the adequacy of EISs during its judgements (see Gilpin, 1995). Gilpin's summary of the Court's observations includes:

- The purpose of an EIS is to bring matters to the attention of members of the public, the decision-maker, and the Department of Urban Affairs and Planning so the environmental consequences of a proposal can be properly understood
- The purpose of the EIS is to assist the decision-maker. An EIS is not a decision-making end in itself, but a means to a decision-making end

- The EIS must be sufficiently specific to direct a reasonably intelligent and informed mind to possible or potential environmental consequences
- The EIS should be written in understandable language
- The EIS should contain material which would alert both lay persons and specialists to potential problems
- An EIS would be unacceptable if it was superficial, subjective or non-informative
- An EIS would be acceptable if it was objective in its approach and alerted relevant parties to the environmental effects and community consequences of carrying out or not carrying out the proposal.

2.7 Ecologically sustainable development

Under the EP&A Regulation, it is necessary to justify the proposal having regard to biophysical, economic and social considerations and the principles of ecologically sustainable development (ESD).

Ecological sustainability requires a combination of good planning and an effective and environmentally sound approach to design, operation and management. The proponent should have regard to the principles of ESD throughout the whole project life cycle, and especially:

- when developing the objectives for the project
- during project formulation, planning and design
- when considering project options and alternatives
- during construction
- for the operational life of the proposal
- afterwards during decommissioning, site rehabilitation and reuse.

Continual reference should be made to the question 'Is this proposal ecologically sustainable?'

3. Consultation

Early consultation with the local community, industry, councils and government agencies can be of great assistance in making a preliminary assessment of the potential viability of a proposal at a particular site. It can also assist in ensuring that the EIS is focused on those matters which will add value to the decision-making process.

Effective consultation should enable an applicant to:

- clarify the objectives for the proposal in terms of community needs and concerns, and the relationship of the proposal to any relevant strategic plans, government policy directions and statutory or planning constraints
- identify feasible alternatives (in particular alternative sites) and clarify their relative merits in terms of biophysical, social and economic factors
- identify environmental issues to:
 - prioritise the issues and identify those key to the decision-making process
 - establish the scope of the studies for key issues so that there will be adequate information for the decision-making process
 - where possible, identify performance objectives or indicators for key issues
 - when appropriate, identify experts (in government agencies or from other sources) who can assist in guiding the assessment of a key issue or peer review the assessment
- if appropriate, identify processes for continued community involvement.

The following consultation procedures are recommended:

3.1 Consultation with government agencies

It is intended that this guideline should replace the need to undertake routine consultation with government agencies on general matters to be included in an EIS, statement of environmental effects (SEE) or review of environmental factors (REF).

However, consultation with councils and relevant government agencies is recommended to help identify alternatives and to provide a preliminary view on their acceptability within the strategic context. To maximise the benefits of consultation with government authorities, requests for advice should be accompanied by adequate information on the proposal and proposed locations. The consultation request should be targeted towards identifying key issues, and should specifically relate to the particulars of the location, design and operation of the proposed facility.

To facilitate consultation with relevant government agencies, it may be appropriate to hold a planning focus meeting (PFM). The Department recommends that PFMs be held for all major or potentially controversial proposals. The principal approval authority would usually be responsible for organising the PFM. In addition to including government authorities which have an approval role, other agencies with expertise in the area, catchment management committees or independent technical experts may also need to be included depending on the location, site characteristics and management options.

For a cattle feedlot proposal, the following organisations should be invited to a PFM or otherwise consulted:

- relevant local councils
- NSW Agriculture
- Environment Protection Authority
- Department of Land and Water Conservation
- Roads and Traffic Authority.

Appendix 4 lists other organisations who may need to be consulted to identify key issues for particular proposals.

For smaller projects, less formal meetings or discussions with relevant authorities, particularly the local council, should be undertaken. Issues such as whether a proposal is consistent with the council's strategic plan for the area and is permissible at the particular site should be clarified at the outset.

3.2 Formal consultation required under legislation

Under the provisions of the EP&A Regulation, an applicant or proponent must formally consult the Director-General of the Department of Urban Affairs and Planning (DUAP) regarding the content of an EIS. It is recommended that the PFM or preliminary discussions with council occur before the proponent consults the Director-General and that the minutes of the PFM or issues canvassed in the discussions be forwarded to DUAP when the Director-General's requirements are requested.

If a proposal is on land that contains a 'critical habitat' or is likely to significantly affect threatened species, populations or ecological communities or their habitats, the Director-General of National Parks and Wildlife should be consulted regarding the contents of a species impact statement (see Appendix 3 for further information).

3.3 Consultation with the community

The community likely to be affected, whether directly or indirectly, should be informed of the proposal and consulted early in the EIA process. Consultation should aim to include affected individuals, community groups and groups with special interests such as local Aboriginal Land Councils.

For major or controversial projects, a program of community consultation may need to be undertaken as part of the preparation of the EIS. This program would usually include two phases, one seeking to inform the community (for instance involving public meetings, public displays or newsletters) and one seeking to gain input on issues of community concern, to identify community values and to identify and evaluate alternatives (for instance involving community focus meetings, 'issues' workshops and community surveys).

4. Site selection procedures

Principles of site selection for cattle feedlot proposals

Consideration must be given to whether:

- the land use is permissible
- environmentally sensitive areas are avoided
- the use is compatible with nearby land uses
- initial site investigations indicate the site is fundamentally suitable for cattle feedlots.

4.1 Site selection

Site selection is considered to be a critical environmental issue for cattle feedlots. When selecting a site, the impact of the proposed feedlot on local communities, the natural environment, and existing land uses should be considered.

The potential for feedlot proposals to impact upon the environment, especially surface and groundwater resources, requires that a conservative approach to site selection be adopted. For example, a selected site must be able to efficiently and effectively sustain waste disposal or utilisation.

This precautionary approach will help minimise the environmental impacts, preserve water resources and reduce the need for expensive infrastructure or technically complex treatment facilities.

The approach is also consistent with the principles and objectives of the National Water Quality Management Strategy prepared by the Australian Water Resources Council (AWRC) and the Australian and New Zealand Environment and Conservation Council (ANZECC).

The following key environmental considerations are a guide to appropriate site selection. The *Feedlot Manual* (published by NSW Agriculture, 1995) or *National Guidelines for Beef Cattle Feedlots in Australia* (Standing Committee on Agriculture, 1992) should be consulted for more detailed information.

a) Separation distances

Details will need to be given of the site's:

- proximity to existing and proposed residential development, rural-residential development, rural residences or other land uses, and
- compatibility with the proposed feedlot.

It should also be demonstrated that a proposal has the capability for sustained compliance with relevant dust, noise and odour requirements.

b) Surface water and flooding

The development should be located well away from any watercourses to minimise potential pollution and any impacts associated with flooding. Any proposed development not complying with recommended guidelines will need to clearly demonstrate that adequate controls can be put in place.

c) Groundwater

Location and consideration of groundwater aquifers or recharge areas likely to be polluted by the movement of effluent below the root zone of crops or pastures must be considered. Feedlots should not be established where there are existing shallow or rising groundwater watertables, perched watertables or groundwater recharge areas, or where groundwater is already seriously polluted.

d) Climate/microclimate

Cattle feedlots are best located in areas with relatively high evaporation rates and low rainfall which falls mainly in summer. The effect of precipitation and evaporation rates on runoff generation and how this relates to effluent management should be considered. In particular, consideration must be given to how effluent holding and disposal will be effectively managed in wet conditions. Consideration should also be given to the local climatic and microclimatic features of the site, particularly katabatic air movements and their dispersal and effect on odour distribution.

e) Land capability

Sufficient land area for the sustained utilisation of liquid effluent is a major consideration. In recognition of the potential of cattle feedlots to degrade water resources, a conservative approach to waste management is essential. The site must be able to cope with variations in the quantity and quality of the liquid waste produced. Site topography and soil chemical and physical analysis will need to demonstrate suitable capability for drainage, sediment transport, infiltration, runoff, utilisation of effluent constituents (nutrients, salts, hydraulic and organic loading) and other relevant characteristics.

f) Water supply

Cattle must have access to an adequate supply of clean drinking water. Water requirements depend on age, bodyweight, production level, air temperature, humidity, dry matter intake, and dry matter content of the food eaten.

g) Transport

Local road networks need to be considered, both their construction and their capacity to accommodate additional traffic which may be generated by the development. (Also, special consideration may be required at main road junctions).

h) Socio-economic issues

A major feedlot proposal will have the potential to have both positive and negative social and economic impacts on the locality and region in which it is to be sited, including changes to existing markets, lifestyle, public infrastructure and demands for new services and ancillary or supporting activities. The initial costs and benefits of these should be taken into account when considering site location.

Note: The site selection process, including an assessment of the relative advantages and disadvantages of both the selected and alternative sites, will need to be included in an EIS for a cattle feedlot proposal.

5. Summary of EIS requirements

The statutory requirements for an EIS are prescribed in Schedule 2 of the EP&A Regulation (Appendix 1).

A summary of the specific requirements for an EIS for a cattle feedlot are provided in the box on the right. These requirements are discussed in detail in Part 6. All issues nominated will not have the same degree of relevance for all proposals. Depending on the characteristics of the proposal, some of the requirements may be more relevant than others, while others will not be applicable at all. The EIS should be tailored to the specific proposal and should focus on the key issues.

Summary of requirements

A. Executive summary

B. The proposal and the location

C. Identification and prioritisation of issues

1. Overview of the methodology
2. Outcomes of the process

D. The environmental issues

1. Water management
2. Waste water and solid waste management
3. Odour
4. Land protection
5. Noise
6. Dust
7. Heritage
8. Flora and fauna
9. Hazardous chemicals
10. Insects

E. List of approvals and licences

F. Compilation of mitigation measures

G. Justification for the proposal

6. Specific requirements for an EIS

A. Executive summary

An executive summary should be provided in the EIS and be available separately for public information. This should give a short overview of the proposal and the potential environmental impacts, and be written in non-technical language to facilitate understanding of the assessment by the general public.

B. The proposal and the location

Consideration should be given to:

- a) the provisions of *State Environmental Planning Policy No. 30 — Cattle Feedlots and Piggeries*; any other environmental planning instruments, such as state environmental planning policies (SEPPs), regional environmental plans (REPs) or local environmental plans (LEPs), applying to the subject site — information on the applicability of any of these instruments can be obtained from the relevant local council or the Department of Urban Affairs and Planning
- b) the proposal, including earthworks, pens, effluent disposal areas, ponds, type of machinery to be used (i.e. in feedmills and pen cleaning, and for manure spreading and irrigation of effluent), storage areas and sheds, including a topographic map of the subject property and surrounding land, indicating all drainage lines, waterways and levees, neighbouring dwellings and public buildings and places
- c) the scale of operation in terms of cattle numbers (stocking program) and hours of operation — any staging of development must be identified to enable appropriate consent details to be determined
- d) the existing environment including dimensions, flows, quality and use of watercourses, drainage patterns, geology of the local area, soils, particularly type, depth, hydrology and climate — surrounding land use patterns (existing and proposed) should also be indicated
- e) the suitability of the site for a cattle feedlot — give details of proximity to residences, climate, geography, surface water and groundwater resources, the potential for land degradation and any other advantages or disadvantages; this justification should also include the consideration of any alternative sites
- f) the flood liability of the site and potential flood impacts on pens, effluent disposal areas and ponds; measures and management plans to mitigate impacts of floods should be identified; levees constructed to Department of Land and Water Conservation specifications should be indicated
- g) a full identification and assessment of traffic impacts (both during and after construction) including truck movements, frequency, times, site access, transport routes and on-site parking provisions; road user safety and the impact of noise and dust on residences adjacent to the site and located along transport routes; any access or road upgrading requirements
- h) the relevant sections of the *Feedlot Manual* (published by NSW Agriculture, 1995), especially criteria relating to feedlot design — criteria should be adhered to where possible and any departures from the manual should be adequately justified
- i) relevant animal welfare issues — a draft Animal Care Statement will need to be lodged with NSW Agriculture at the same time the development application and EIS are lodged
- j) visual impacts such as scale, relationship to topography, appearance and measures to ameliorate these
- k) where a proposal is an expansion, the relationship of the proposal to the existing operation — this should also include a review of the environmental performance of the existing operation including compliance reports relating to development consent and environmental protection legislation
- l) the potential impact of the operation on the water quality and quantity of watercourses or groundwater associated with the site.

C. Identification and prioritisation of issues

1. Overview of the methodology

Outline the procedures or methodology used to identify and prioritise issues. Factors to consider may include:

- a) the outcome of a review of relevant sources of information on potential issues including:
 - i) any relevant guideline by government authorities
 - ii) the provisions of any relevant environment protection legislation
 - iii) any industry guidelines
 - iv) EISs for similar projects, any relevant commissions of inquiry reports, determination reports and conditions of approval
 - v) relevant research or reference material
 - vi) relevant strategic plans or policies
 - vii) relevant preliminary studies
- b) the outcome of consultation with stakeholders including:
 - i) planning focus meetings, community focus meetings, community workshops or issues groups
 - ii) meetings with stakeholders (e.g. government agencies, particularly EPA, councils, major market representatives)
- c) the use of methodology such as *Is an EIS required* (Department of Planning, 1995), checklists or similar approaches.

2. Outcomes of the process

Summarise the outcome of the identification and prioritisation process, including:

- a) all the issues identified
- b) the key issues which will need a full analysis in the EIS (including comprehensive baseline assessment)
- c) the issues which will not need a full analysis in the EIS though they may be addressed in the mitigation strategy; the justification for the proposed level of analysis.

D. The environmental issues

The following specific issues are nominated as being potentially important when assessing impacts, and for decision-making in relation to cattle feedlots. The outline of the issues is not

exhaustive and the degree of relevance of each will vary. The EIS should only deal with relevant issues as applicable to the particular proposal.

Assessment of potential impacts

The following should be included for any potential impact which is relevant for the assessment of a specific proposal:

- a description of the existing environmental conditions (baseline conditions)
- a detailed analysis of the potential impacts of the proposal on the environment; the analysis should indicate the level of confidence in the predicted outcomes and the resilience of the environment to cope with impacts
- the proposed mitigation, management and monitoring program, including the level of confidence that the measures will effectively mitigate or manage the impacts.

With each issue, the level of detail should match the level of importance of the issue in decision-making.

1. Water management

Provide a description of:

- a) total water requirements, including a breakdown of requirements for the feedlot (including drinking water and water for dust suppression), effluent dilution and other uses such as toilets
- b) water supply (including potable water) showing quantity, quality and treatment processes, and indicating all sources from which the water will be derived and how
- c) proposals for stormwater management on site, including design criteria.

2. Waste water and solid waste management

Provide details of:

- a) the volume and chemical characteristics of both solid and liquid waste, and methods proposed to minimise the generation of waste from the feedlot
- b) methods of liquid waste management and utilisation including collection, storage, treatments, dilution levels and application

rates for land disposal (including design parameters and special mitigation measures, (e.g. sealing); cropping, harvesting and rotations should be discussed and wet and winter periods in relation to the rate of application, storage requirements and dilution of effluent considered

- c) methods of solid waste management and utilisation including methods of collection, stockpiling and composting procedures both on- and off-site
- d) the dimensions of storage ponds, and justification of their size in terms of ability to hold effluent; seasonal variations and assumptions of meteorological conditions should be considered in design formulation
- e) the ability of soils to accommodate the proposal, including an assessment of soils in existing effluent utilisation areas (if relevant); the chemical and physical attributes of soils must be shown
- f) soil impacts in the effluent utilisation areas such as salt accumulation, nutrient imbalance, waterlogging, potential for leaching to groundwater and soil erosion potential; management techniques (i.e. cropping and rotation) to control or mitigate potential impacts should also be identified
- g) the existing levels and quality of groundwater and if necessary, measures to prevent the accession of effluent to groundwater, particularly from beneath pens, holding ponds and effluent utilisation areas
- h) the impact of irrigation on the watertable and the effect of any existing groundwater trends such as rising watertables on the sustainability of irrigation practices
- i) carcass disposal methods, including the identification of any off-site disposal
- j) alternative waste utilisation strategies in the event that the proposed method of utilisation is not in use (i.e. through failure or maintenance)
- k) any landfill sites proposed for waste disposal.

3. Odour

- a) All sources of odour generation and sensitive receptor sites should be identified. The relative strengths of odour under normal and odour event conditions should be identified (e.g. wet weather, manure spreading, pond desludging).
- b) An odour dispersion study for the entire site should be prepared incorporating the feedlot,

waste storage areas and waste utilisation areas and other major sources of odour. Where possible, site specific data should be used and the influence of topography and microclimate on odour dispersion assessed. Prevailing wind conditions are to be identified.

- c) Design features and management practices to limit and minimise the impact of odours should be outlined and assessed for their adequacy, e.g. frequency of cleaning pens, machinery used, frequency of manure stockpiling, destocking.

4. Land protection

- a) Describe measures proposed to minimise land degradation, including means to prevent ingress of uncontaminated overland flows, channel design criteria, and soil erosion and sedimentation impacts resulting from the operation of the feedlot.
- b) Describe ongoing measures proposed to monitor and manage soil erosion and sedimentation impacts resulting from the operation of the feedlot.

5. Noise

- a) Assess expected noise levels (both day and night) resulting from the operation of the proposed feedlot, and impacts on adjoining or adjacent occupiers. The assessment should also include the impact of traffic noise.

6. Dust

- a) Indicate proposed dust suppression measures for the site.

7. Heritage

If land clearing, earthworks, disturbance of existing items (buildings, works, relics or places) or reduction of the heritage curtilage will occur as a result of the proposal, issues to consider include:

- a) identifying items of Aboriginal, non-Aboriginal and natural heritage significance on the site (including underwater) and in the area affected by the proposal — surveys should be supported by reference to existing studies, plans, registers and groups such as Aboriginal Land Councils and local historical societies

- b) assessing the significance of items identified with reference to appropriate sources (e.g. Aboriginal Land Councils, National Parks and Wildlife Service, NSW Heritage Manual 1996)
- c) assessing the potential impacts of the proposal on the heritage significance and determining if approval for this disturbance will be required (e.g. from councils, the Director-General of National Parks and Wildlife, the Heritage Council or the Director of the NSW Heritage Office)
- d) proposing measures to mitigate impacts or to conserve the heritage significance — if items of significance are to be disturbed, a conservation management plan may need to be prepared in consultation with the Heritage Office
- e) considering the acceptability of impacts on heritage significance and assessing the adequacy of the measures to mitigate impacts during all stages of the proposal.

8. Flora and fauna

Where flora or fauna or their habitat are likely to be disturbed, issues to consider include:

- a) identifying habitats, ecological communities and where appropriate, populations and species in areas to be directly or indirectly affected by the proposal
- b) the local and regional scarcity of these habitats, ecological communities, populations and species
- c) the extent of disturbance, the sensitivity of species or communities to disturbance, the potential impacts of disturbance on biodiversity and the potential for recolonisation after disturbance
- d) the significance of flora and fauna for other biota, including biota not directly affected by the proposal but which interact with potentially disturbed flora and fauna
- e) details of proposed mitigation methods such as compensatory planting of indigenous species and provision of new habitat
- f) describing of any proposed tree planting program for visual screening, water uptake, groundwater interception or shade, and any proposals to use indigenous species in landscaping.

Note: Appendix 3 provides guidance on determining when a species impact statement (SIS) is required. A SIS must accompany any proposal in critical habitat or where there is

likely to be a significant effect on threatened species, populations or ecological communities or their habitats.

9. Hazardous chemicals

- a) The type and quantity of any chemical substances (i.e. pesticides, insecticides, and veterinary chemicals) to be used or stored should be identified, and arrangements for their safe use and storage, including measures to prevent contamination, outlined.

10. Insects

- a) Measures to mitigate or control impacts associated with insect populations affected by the feedlot need to be fully assessed.

E. List of approvals and licences

All approvals and licences required under any legislation must be identified. This is to alert other relevant authorities as early as possible to their potential involvement in the project, and to ensure an integrated approach to the granting of approvals. This list also identifies for the community, the relevant authorities involved in the assessment and regulation of the proposal.

F. Compilation of mitigation measures

This section should describe the mitigation strategy outlined in previous sections to demonstrate how the proposal and its environmental safeguards would be implemented and managed in an integrated and feasible manner. This section should also demonstrate that the proposal is capable of complying with statutory obligations under other licences or approvals.

The mitigation strategy should outline the environmental management principles which would be followed in the planning, design, establishment and operation of the proposal and include:

- specific locational, layout, design or technology features; and
- an outline of ongoing management and monitoring plans.

In some circumstances, separate environmental management strategies should be outlined for the construction and operational stages of the project.

An environmental management plan (EMP)

An environmental management plan (EMP) is a document designed to ensure that the commitments in the EIS, subsequent assessment reports, approval or licence conditions are fully implemented. It is a comprehensive technical document which is usually finalised during or following detailed design of the proposal after approval of the development application. It should provide a framework for managing or mitigating environmental impacts for the life of the proposal. It should also make provisions for auditing the effectiveness of the proposed environmental protection measures and procedures.

With major or controversial projects, it may be appropriate to:

- establish a community committee to consult in relation to the ongoing management and monitoring of the proposal
- plan to exhibit an annual environmental management report outlining the environmental performance of the proposal.

Although the level of detail required in an EMP is usually not considered necessary for the EIS or SEE, a comprehensive outline of the structure of the EMP with a summary of the environmental management principles which would be followed in the planning, design, construction and operation of the proposal should be provided. It should be noted that with key issues, where there are high levels of risk or uncertainty, it may be essential to present details of how these issues would be managed in the EIS.

At the development approval stage, it is essential that the applicant can establish that the environmental impacts can be managed in an integrated and feasible manner. Two sections should be included, one setting out the program for managing the proposal (section a. below), and the other outlining the monitoring program with a feedback loop to the management program (section b. below).

a) Environmental management outline

The management strategy should provide an outline to demonstrate that sound environmental practice will be followed during the

establishment, operation, rehabilitation and end use of the proposal, including:

- i) management of construction impacts; if appropriate include erosion and sedimentation management and revegetation plans for areas disturbed by construction activities
- ii) management of operational impacts and solid wastes
- iii) strategies to feed information from the monitoring program back into the management practices, and action plans to improve the environmental performance and sustainability of all components of the scheme
- iv) training programs for operational staff and incentives for environmentally sound performance
- v) an indication of how compliance with licensing and approval requirements will be achieved and due diligence attained
- vi) if applicable, a reporting mechanism on environmental performance and performance bonds and relevant performance parameters.

b) Monitoring outline

This program should be carefully designed and related to the predictions made in the EIS and the key environmental indicators which would demonstrate the potential ecological sustainability of the proposal. The EIS should outline the need for and use of any proposed monitoring, monitoring intervals and reporting procedures.

The program outline should describe the following monitoring details:

- i) the key information that will be monitored, its criteria and the reasons for monitoring (which may be compliance with regulatory requirements)
- ii) the monitoring locations, intervals and duration
- iii) procedures to be undertaken if the monitoring indicates a non-compliance or abnormality
- iv) internal reporting and link to management practices and action plans
- v) reporting procedures to relevant authorities and, if appropriate, to the consent authority and the community.

G. Justification for the proposal

Reasons should be included which justify undertaking the proposal in the manner proposed, having regard to the potential environmental

impacts and compliance with the principles of ecologically sustainable development.

The principles of ecologically sustainable development are:

- 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.

Appendix 1. Schedule 2 — Environmental Impact Statements

This appendix contains an extract from the *Environmental Planning and Assessment Regulation 1994*. Schedule 2 outlines the matters that must be addressed in an EIS pursuant to clauses 51 and 84 of the EP&A Regulation.

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. A 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.

Note: For the purposes of this Schedule, “the principles of ecologically sustainable development” are as follows:

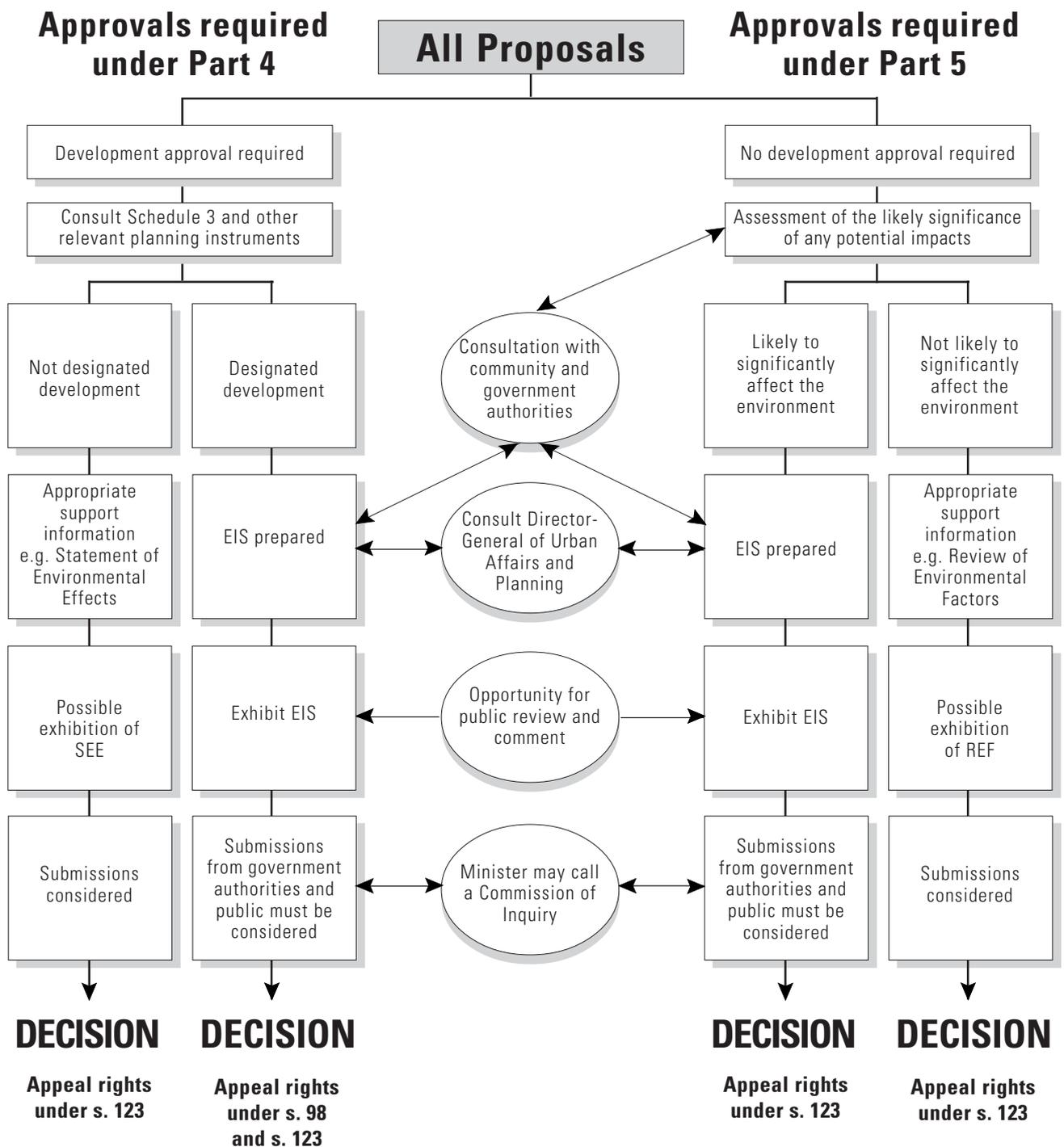
- a) the precautionary principle — namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.
- b) inter-generational equity — namely, that the present 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.

Appendix 2. EIA procedures under the EP&A Act



Appendix 3. Threatened Species Conservation Act

This appendix contains an extract from the *Threatened Species Conservation Act 1995* and the provisions for assessing impacts on the conservation of critical habitats and threatened species, populations or ecological communities and their habitats.

What are critical habitats, threatened species, populations or ecological communities and threatening processes?

Critical habitats are prescribed in Part 3 of the *Threatened Species Conservation (TSC) Act 1995*. Threatened species, populations or ecological communities and threatening processes are prescribed in Part 2 and Schedules 1 and 2 of the TSC Act.

When is a Species Impact Statement required?

Under section 77 (3) (d1) and section 112 (1B) of the EP&A Act, if a proposal:

- is on land that contains a "critical habitat" or
- is likely to significantly affect threatened species, populations or ecological communities, or their habitats,

a species impact statement (SIS) must be prepared in accordance with Division 2 of Part 6 of the *TSC Act*.

Factors when deciding if an SIS is required

The following factors must be taken into account in deciding whether there is likely to be a significant effect on threatened species, populations or ecological communities, or their habitats:

- a) in the case of a threatened species, whether the life cycle of the species is likely to be

disrupted such that a viable local population of the species is likely to be placed at risk of extinction,

- b) in the case of an endangered population, whether the life cycle of the species that constitutes the endangered population is likely to be disrupted such that the viability of the population is likely to be significantly compromised,
- c) in relation to the regional distribution of the habitat of a threatened species, population or ecological community, whether a significant area of known habitat is to be modified or removed,
- d) whether an area of known habitat is likely to become isolated from currently interconnecting or proximate areas of habitat for a threatened species, population or ecological community,
- e) whether critical habitat will be affected,
- f) whether a threatened species, population or ecological community, or their habitats, are adequately represented in conservation reserves (or other similar protected areas) in the region,
- g) whether the development or activity proposed is of a class of development or activity that is recognised as a threatening process,
- h) whether any threatened species, population or ecological community is at the limit of its known distribution.

Form and content of an SIS

Under section 110 of the TSC Act, the general requirements on the form and content of an SIS are as follows.

General information

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.

Information on threatened species and populations

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.

Information on ecological communities

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.

Credentials of persons undertaking an SIS

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.

State-wide conservation status

5. The requirements of subsections (2) and (3) [above] 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 NPWS, which information that Service is by this subsection authorised and required to provide.

Procedures for preparing an SIS

Under Section 111 of the TSC Act, the Director-General of National Parks and Wildlife must be consulted in writing for the requirements for an SIS. These requirements must be provided within 28 days from when a request is made.

Because of the circumstances of the case, the Director-General of National Parks and Wildlife may limit or modify the extent of matters prescribed in section 110. In other cases if the impacts are considered to be trivial or negligible, the Director-General of National Parks and Wildlife may dispense with the requirement for an SIS to be prepared.

An SIS may be prepared as a separate document or incorporated in an EIS. If the SIS is separate to the EIS, it must be exhibited concurrently with the EIS.

The SIS must be in writing and be signed by the principal author of the document and the applicant/proponent.

Appendix 4. Consultation and approvals

It is the responsibility of the person preparing the EIS to determine what approvals will be required as a result of the proposal and to demonstrate that the proposal can meet all approval and licensing requirements. In preparing the EIS, consultation with relevant parties should be undertaken early in the EIA process and their comments taken into account in the EIS.

Approvals or consultation which may be required include:

local councils for development approvals under Part 4 of the EP&A Act and any building approval under the *Local Government Act 1993*, also for any alteration to local roads or buildings or trees of local heritage significance

Department of Urban Affairs and Planning for concurrence if the proposal impacts on SEPP 14 — Coastal Wetlands, SEPP 26 — Littoral Rainforest, potential or actual koala habitat under SEPP 44 — Koala Habitat Protection

Environment Protection Authority for air, water and noise licences, approvals and certificates of registration under relevant pollution control legislation; regulation of waste generation, transportation and disposal; licences for transport of dangerous goods under the Dangerous Goods Act; licences for chemicals subject to chemical control orders under the Environmentally Hazardous Chemicals Act

Department of Land and Water Conservation Soil and Vegetation Management for information on soils; design and construction of erosion and sediment controls and rehabilitation; approvals on protected lands; State Lands Services regarding effect of development on any Crown land; for leasing, licence, or purchase; whether the land is subject to Aboriginal land claim or Native Title legislation; if Crown Reserves and dedicated lands exist, whether the proposal is compatible with the stated public purpose; State Water Management regarding impact on ground or surface water resources; clearing riparian vegetation; works within 40 metres of a stream;

Coastal and Rivers Management regarding flooding and coastal areas; Water Services Policy regarding approvals under the *Local Government Act 1993*

relevant service authorities such as water, electricity, gas, telecommunication, drainage, flood mitigation, sewerage or other utility organisations

National Parks and Wildlife Service if land clearing or impacts on natural vegetation are likely, particularly in relation to the provisions of the Threatened Species Conservation Act; or if sites of Aboriginal heritage significance or land managed by the Service are likely to be affected

NSW Fisheries if fish or fish habitat is affected (including dredging or reclamation works, impeding fish passage, damaging marine vegetation, desnagging, use of explosives or other dangerous substances in or adjacent to a waterway which may result in fish kills)

NSW Agriculture if the proposal is on land with high agricultural value or will cause dislocation to the agricultural industry

NSW Health Department with regard to the potential health hazard caused by the operation and siting of the facility

WorkCover for responsibilities regarding handling of dangerous goods and hazardous substances

Heritage Council of NSW if the proposal is likely to affect any place or building having State heritage significance or if the proposal is affected by Interim Conservation Orders (ICO) or Permanent Conservation Orders (PCO)

Department of Aboriginal Affairs if the proposal is in an area of significance to the Aboriginal community

Department of Mineral Resources if a resource management plan applies or if the proposal is in an area of important mineral resources, concerning its responsibilities under Sydney REP No 9 — Extractive Industry, and for safety and blasting

Mining Subsidence Board if the proposal is in an underground mining area

State Rail Authority (SRA) if the proposal impacts on SRA operations

Office of Marine Safety and Port Strategy on any activities on navigable waters

Roads and Traffic Authority if the proposal is likely to result in significant traffic impacts

State Forests of NSW in relation to impacts on State Forests

Department of Bushfire Services if the area is in a location of bushfire hazard

Catchment Management Committees or Trusts

Local Aboriginal Land Councils

relevant industry organisations

Commonwealth EPA, if Commonwealth land is likely to be affected or if Commonwealth funding applies

the owner or operator of any nearby airports and airport safety organisations.

Appendix 5. References

- Australian and New Zealand Environment and Conservation Council (ANZECC) (1992) *Australian Water Quality Guidelines for Fresh and Marine Waters*
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- National Health and Medical Research Council (1994) *National Framework for Environmental and Health Impact Assessment*, AGPS, Canberra
- Northcote, K. H. (1979) *A Factual Key to the Recognition of Australian Soils*, CSIRO, Rellim Technical Publications, Glenside, SA
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- Standing Committee on Agriculture, Animal Health Committee (1992) *Australian Model Code of Practice for the Welfare of Animals*, CSIRO Publications, East Melbourne
- Standing Committee on Agriculture (1992) *National Guidelines for Beef Cattle Feedlots in Australia*, CSIRO Publications, East Melbourne
- USA Environmental Protection Authority (1991) *Handbook: Groundwater Volume II Methodology (EPA 625/6-90/016b)*, US Government Printing Office

Appendix 6. Schedule 3 — Designated development

This appendix is an extract from Schedule 3 of the *Environmental Planning and Assessment Regulation 1994* and prescribes livestock intensive industries which are designated under Part 4 of the EP&A Act. This designation only applies to proposals which require development consent under the provisions of a planning instrument.

Livestock intensive industries, being:

- 1) **feedlots** that accommodate in a confinement area and rear or fatten (wholly or substantially) on prepared or manufactured feed, more than 1,000 head of cattle, 4,000 sheep or 400 horses (excluding facilities for drought or similar emergency relief); or
- 2) **piggeries** that:
 - a) accommodate more than 200 pigs or 20 breeding sows and are located:
 - i) within 100 metres of a natural waterbody or wetlands; or
 - ii) in an area of:
 - high watertable; or
 - highly permeable soils; or
 - acid sulphate, sodic or saline soils; or
 - iii) on land that slopes at more than 6 degrees to the horizontal; or
 - iv) within a drinking water catchment; or
 - v) on a floodplain; or
 - vi) within 5 kilometres of a residential zone and, in the opinion of the consent authority, having regard to topography and local meteorological conditions, are likely to significantly affect the amenity of the neighbourhood by reason of noise, odour, dust, traffic or waste; or
 - b) accommodate more than 2,000 pigs or 200 breeding sows; or
- 3) **poultry farms** for the commercial production of birds (such as domestic fowls, turkeys, ducks, geese, game birds or emus), whether as meat birds, layers or breeders and whether as free range or shedded birds, that are located:
 - a) within 100 metres of a natural waterbody or wetlands; or
 - b) within a drinking water catchment; or
 - c) within 500 metres of another poultry farm; or
 - d) within 500 metres of a residential zone or 150 metres of a dwelling not associated with the development and, in the opinion of the consent authority, having regard to topography and local meteorological conditions, are likely to significantly affect the amenity of the neighbourhood by reason of noise, odour, dust, lights, traffic or waste.

Are alterations or additions designated development?

Is there a significant increase in the environmental impacts of the total development?

1. Development involving alterations or additions to development (whether existing or approved) is not designated development if, in the opinion of the consent authority, the alterations or additions do not significantly increase the environmental impacts of the total development (that is the development together with the additions or alterations) compared with the existing or approved development.

Factors to be taken into consideration

2. In forming its opinion, a consent authority is to consider:
 - a) the impact of the existing development having regard to factors including:
 - i) previous environmental management performance, including compliance with:
 - conditions of any consents, licences, leases or authorisations by a public authority; and
 - any relevant codes of practice; and
 - ii) rehabilitation or restoration of any disturbed land; and

- iii) the number and nature of all past changes and their cumulative effects; and
- b) the likely impact of the proposed alterations or additions having regard to factors including:
 - i) the scale, character or nature of the proposal in relation to the development; and
 - ii) the existing vegetation, air, noise and water quality, scenic character and special features of the land on which the development is or is to be carried out and the surrounding locality; and
 - iii) the degree to which the potential environmental impacts can be predicted with adequate certainty; and
 - iv) the capacity of the receiving environment to accommodate changes in environmental impacts; and
- c) any proposal:
 - i) to mitigate the environmental impacts and manage any residual risk; and
 - ii) to facilitate compliance with relevant standards, codes of practice or guidelines published by the Department of [Urban Affairs and] Planning or other public authorities.