

## Information Sheet No. 1-3

### Site selection and impact analysis

Information Sheet No. 1-3  
Third Edition 2007

#### Inside This Sheet

**1** Site selection: why's it so important?

**2** Environmentally inappropriate areas for composting facilities

Compatibility with land uses

**3** Definitions

**4** Early consultation with local council

Site selection and requirement for environment impact assessment

**6** Important references

Acknowledgement

#### Site selection: why's it so important?

Appropriate siting of a composting facility is, perhaps, the most effective way of dealing with potential negative impacts on local amenity, followed closely by careful design and selection of process components and equipment and by good operating techniques, procedures and staff training.

While operational and market considerations are important factors when selecting sites, a high priority must be given to the environmental and social characteristics of the location.

Appropriate site selection can avoid or reduce many of the environmental problems inherent with composting proposals, and:

- reduce the need for technically based environmental mitigation

measures and ongoing management measures;

- result in substantial savings in establishment and operation;
- reduce levels of public concern; and
- avoid potential delays in approval processes (NSW DUAP, 1996).

Note that distance from the point of feedstock generation is an important consideration in terms of feedstock transport cost and feedstock security.

Sites that are in close proximity to complimentary activities or sources of feedstock — such as landfills and drop off centres — are ideal for the establishment of composting facilities.

Problems associated with gaining approval for a composting facility

**Plate 1.** Photograph of a rural-zoned site in NSW that is inappropriate for the establishment of a composting facility. The site is located in a water catchment area, has highly permeable soils and has extensive native regrowth vegetation that is an important habitat for wildlife.



can be avoided by observing a few key points during the site selection process:

- the facility should be located as far away from any inhabited areas as possible;
- the site should have good access (preferably a sealed road) that avoids residential areas;
- the site should include a separation distance zone, and if possible, a visual screen;
- the site should be located in a non-environmentally sensitive area; and
- the composting area should be properly sloped and lined with a material having very low permeability (Savage and Diaz, 1994).

Further details regarding facility design are covered in Information Sheet No. 1-6.

### Environmentally inappropriate areas for composting facilities

In some cases, sites classified as sensitive under legislation (e.g. Wilderness Act, 1987; Wildlife Act, 1974), a *Development Control Plan (DCP)*, or an *environmental planning instrument* — a *Local Environmental Plan (LEP)*, a *Regional Environmental Plan (REP)* or *State Environmental Planning Policy (SEPP)* cannot be considered as a site for a composting facility.

“NSW DUAP (1996) recommends that proponents should ensure that areas listed [in Table 1 here] be excluded from consideration for a composting facility early in the site selection process.”

**Table 1.** List of environmentally inappropriate areas for the development of composting facilities (from NSW DUAP, 1996 and NSW EPA, 2000a).

Area	Objective
<p>A site located within an area of significant environmental or conservation value identified under legislation or a planning instrument, including:</p> <ul style="list-style-type: none"> <li>• National Parks;</li> <li>• Historic and heritage areas, buildings or sites;</li> <li>• Any reserves for environmental protection, e.g. aquatic, marine, nature, karsts;</li> <li>• Areas covered by a Conservation Agreement;</li> <li>• Wilderness Areas identified or declared under the Wilderness Act, 1987;</li> <li>• Other areas protected under the National Parks and Wildlife Act, 1974;</li> <li>• World Heritage Areas;</li> <li>• Areas on the Register of the National Estate;</li> <li>• SEPP 14 wetlands, REP 20 wetlands, SEPP 26 Littoral Rainforests;</li> <li>• Areas zoned under a LEP or REP for environmental protection purposes, e.g. high scenic, scientific, cultural or natural heritage.</li> </ul>	To avoid the risk of damaging areas of high environmental value.
Sites within an identified drinking water catchment (surface water or groundwater), e.g. any lands nominated as “Special or Protected Areas” by local water supply authorities (such as Sydney Water, Hunter Water, Council) or in the vicinity of a groundwater bore used as drinking water.	To avoid the risk of polluting drinking water.
Sites located in any area overlying an aquifer that contains drinking water quality groundwater that is vulnerable to pollution (consult Department of Land and Water Conservation for criteria to determine the vulnerability of groundwater).	To protect groundwater and surface water resources.
Sites where the substrata is prone to land slip or subsidence.	To avoid sites which may have unstable substrata.
Sites on floodplains that may be subject to washout during major flood events (councils should be consulted for information about local flooding characteristics).	To avoid washout risk is a significant flood occurs.

These documents are available from local council, and they should be reviewed to identify potentially sensitive or inappropriate sites that cannot be considered for the development of a composting facility.

A summary of the site selection process as recommended by NSW DUAP (1996) is summarised in Figure 1.

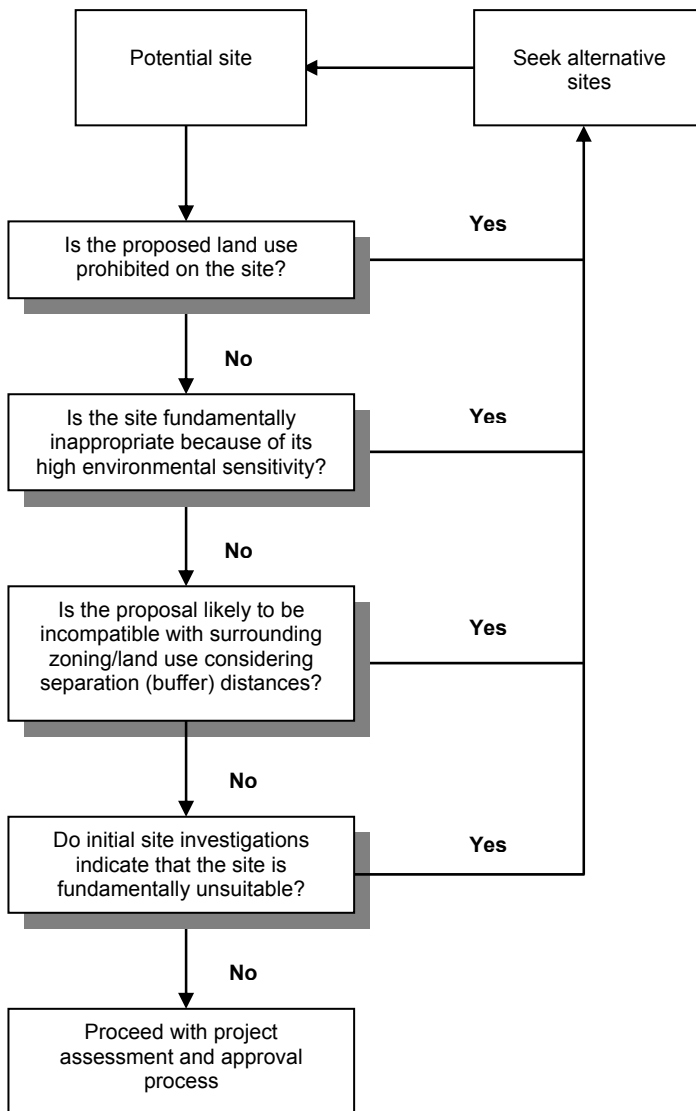
### Compatibility with land uses

An important consideration in site selection is the compatibility of the proposal with existing or proposed surrounding land use.

Conflicts commonly arise when the community’s amenity is threatened by odour, water quality, traffic or noise impacts.

If the proposal is incompatible, consideration should be given to acquiring sufficient land in an

**Figure 1.** Site selection procedure recommended by NSW DUAP (1996) for all composting and like facilities.



appropriate area to provide adequate separation from nearby land uses (NSW DUAP, 1996).

The size of the separation distance between the composting facility and nearby land uses depends on a number of factors:

- the nature of the material being processed (higher the class, the greater potential for odour — see Table 1, Information Sheet No.1-2);
- the composting process and ‘housing’ facilities (in particular,

whether indoor or outdoor composting is to be used);

- the estimated odour emission rate and proposed odour reducing equipment and/or management;
- level of *process control* achievable with the composting technology used;
- the level of expertise with the technology or management;
- the sensitivity of the receiving environment; and

## Definitions

### Environmental Instrument<sup>1</sup>

Means a State Environmental Planning Policy (SEPP), a Regional Environmental Plan (REP), or a Local Environmental Plan (LEP), and except where otherwise expressly provided by the Environmental Planning and Assessment Act (1979), includes a deemed environmental planning instrument.

### Development Control Plan (DCP)<sup>1</sup>

Documents prepared by local council to provide more detailed provisions than are contained in a local environmental plan or a draft local environmental plan in respect of a part or parts of the land to which that plan or draft plan applies.

### Local Environmental Plan (LEP)<sup>2</sup>

A policy document which sets out a strategic planning framework for a part of, or for an entire local government area. A LEP identifies zones land that comprises critical habitat; land in a conservation area; and land of environmental heritage. A LEP also contains zoning for permissible development, and identifies developments that may be carried out within the zone without the need for development consent.

### Regional Environmental Plan (REP)<sup>1</sup>

A policy document which sets out a strategic planning framework for a region. REPs are prepared by the Director of the Department of Urban Affairs and Planning in respect of a region or part of a region and with respect to such matters as are, in the opinion of the Director, of significance for environmental planning for the region to which, or to part of which, that plan is intended to apply.

### State Environmental Planning Policy<sup>1</sup>

A policy document which sets out a strategic planning framework for the State. SEPPs are prepared by the Director of the Department of Urban Affairs and Planning

*Continued on page 4*

- climatic and topographical conditions.

In NSW, site specific performance-based odour dispersion and noise attenuation modelling is required under the (draft) Environmental Guidelines: Composting and Related Facilities (2000) and the NSW Industrial Noise Policy (2000) (NSW EPA, 2000b) to establish required separation distances between a proposed facility and neighbouring land uses. Note that an odour policy is being developed by NSW EPA, and will replace the odour criteria in the draft guideline once released.

The purpose of a separation distance around a composting facility is not for ameliorating impacts on the environment.

Local council can provide assistance in determining whether a site for a proposed composting facility is compatible with surrounding land uses.

“A separation distance should be viewed as a backup measure to ensure the amenity of existing land users can be maintained.”

Further details regarding initial site investigations can be found in Table 4, page 20 of NSW DUAP (1996).

### Early consultation with local council

At an early stage in the site selection process, it is essential to consult local council to ensure that the proposal is a permissible use under relevant planning controls (NSW DUAP, 1996).

Early consultation with council is recommended after the preliminary planning stage has been completed.

That is, the developer of a composting or like facility has:

- evaluated feedstocks to be processed;
- estimated the processing capacity of the facility; and
- identified an appropriate composting technology based on feedstocks composted and initial investigations as to the location of the facility.

If the proposal is not permissible, then discussions should be held with council with a view to identifying an alternative site.

Local council can be invaluable in identifying alternative sites for a composting facility.

NSW DUAP (1996) recommends that all composting facilities go through a systematic and rigorous approach to site selection based on the locational principles shown in Figure 1.

### Site selection and requirement for environment impact assessment

A composting proposal may be subject to assessment under Part 4 of the Environmental Planning and Assessment Act (1979).

Part 4 of the Act applies when a proposal requires *development consent* if it contravenes an environmental planning instrument. This is obtained by submitting a *development application* for a proposed development.

Development consent is required by a *consent authority* in relation to a development application or an application for a complying development certificate.

The consent authority is responsible for determining or assessing the development application.

Continued from page 3

with consultation with such public authorities as the Director determines. The SEPP is prepared with respect to such matters as are, in the opinion of the Director, of significance for environmental planning for the State, and may submit it to the Minister.

### Process Control<sup>3</sup>

Stringent and documented monitoring of all critical control points in a composting operation so as to minimise defects and make products which can be guaranteed to customers.

### Development Consent<sup>1</sup>

Means consent under Part 4 of the Environmental Planning and Assessment Act (1979) to carry out development and includes, unless expressly excluded, a complying development certificate.

### Development Application<sup>1</sup>

An application for consent under Part 4 of the Environmental Planning and Assessment Act (1979) to carry out development but does not include an application for a complying development certificate.

### Consent Authority<sup>1</sup>

In relation to a development application or an application for a complying development certificate, means: the council having the function to determine the application, or if a provision of the Environmental Planning and Assessment Act (1979), the regulations or an environmental planning instrument specifies a Minister or public authority (other than a council) as having the function to determine the application—that Minister or public authority, as the case may be.

### Environmental Impact Assessment (EIA)<sup>4</sup>

The critical appraisal of the likely effects of a policy, plan, program, project, or activity, on the environment. To assist the decision making authority, assessments are carried out independently of the proponent, who may have prepared an EIS (or other document). The decision making authority might be a level of government (local, state or federal) or a government agency (at local, state or federal level).

Continued on page 5

“Depending on the scale of development and the provisions within an environmental planning instrument, the Minister for Environment or a public authority — such as local council or other government authorities can be the consent authority.”

Conditions under which development consent is required is reviewed in detail in Information Sheet No. 1-4.

A form of *Environmental Impact Assessment (EIA)* is required for many composting developments. The objective of EIA is to critically appraise the likely effects of a project, or activity, on the environment.

EIA may take the form of an *Environmental Impact Statement (EIS)* or a *Statement of Environmental Effects (SEE)*, as specified in Part 5 of the Environmental Planning and Assessment Act (1979), or Part 1 of the Environmental Planning and Assessment Regulation (2000).

An EIS or a SEE may be needed depending on the scale of development, sensitivity of the site selected and on the performance based assessment process followed for the development application.

An EIS is a document, prepared by the proponent, describing a proposed activity or development and identifying the possible, probable, or certain effects of the proposal on the environment; examining the alternatives to the proposal; setting out the mitigation measures to be adopted; proposing a program of environmental management; provisions for monitoring, auditing and plans for decommissioning and rehabilitation (Gilpin, 1995).

An SEE has a reduced scope relative to an EIS, and its purpose is to specify: the environmental impacts of the development; how the environmental impacts of the development have been identified; and the steps to be taken to protect the environment or to lessen the expected harm to the environment (Environmental Planning and Assessment Regulation, 2000).

Site selection and impact analysis comprises a significant proportion of an EIS or a SEE.

Following the preparation of an EIS or a SEE, this needs to be submitted with the development application to the consent authority.

Depending on the type of development (see Information Sheet No. 1-1 and 1-4 for the five types of developments specified in the Environmental Planning and Assessment Act, 1979), an *environment protection licence* with conditions may be granted upon issue of development consent during the *integrated development* approvals process.

Information Sheet No. 1-4 reviews when development consent is required, and instances where an EIS or a SEE needs to be prepared and submitted with the development application to the consent authority.

### **Environmental Impact Statement (EIS)<sup>4</sup>**

A document, prepared by the proponent, describing a proposed activity or development and identifying the possible, probable, or certain effects of the proposal on the environment; examining the alternatives to the proposal; setting out the mitigation measures to be adopted; proposing a program of environmental management; provisions for monitoring, auditing and plans for decommissioning and rehabilitation.

### **Statement of Environmental Effects (SEE)<sup>2</sup>**

A document whose purpose is to specify: the environmental impacts of the development; how the environmental impacts of the development have been identified; and the steps to be taken to protect the environment or to lessen the expected harm to the environment.

### **Environment Protection Licence<sup>5</sup>**

Environment protection licence means a licence authorising the carrying out of scheduled development work or scheduled activities or controlling the pollution of water arising from non-scheduled activities, being a licence issued under Chapter 3 (of the POEO Act, 1997) and in force.

### **Integrated Development<sup>1</sup>**

Integrated development is development (not being complying development) that, in order for it to be carried out, requires development consent and one or more of the following approvals: Fisheries Management Act (1994); Heritage Act (1977); Mine Subsidence Compensation Act (1961); National Parks and Wildlife Act (1974); Protection of the Environment Operations Act (1997); Rivers and Foreshores Improvement Act (1948); Roads Act (1993); Water Act, (1912).

<sup>1</sup>Environmental Planning and Assessment Act (1979).

<sup>2</sup>Environmental Planning and Assessment Regulation (2000).

<sup>3</sup>EcoRecycle Victoria (1998).

<sup>4</sup>Gilpin (1995).

<sup>5</sup>Protection of the Environment Operations Act (1997).

