

Environmental Procedures Supplementary Notes

EIA Guidelines

NUS 174B

Version 9, January 2012





Document control

Revision History		
Version	Date	Nature of Revision
8	Nov 2010	Ausgrid rebrand and updated to process to reflect the new electronic form
9	Jan 2012	Updated to reflect the guidance provided in the Environmental Planning website

This document shall remain the property of Ausgrid. The document may only be used for the purposes for which it was commissioned. Unauthorised use of this document in any form whatsoever is prohibited.

Contact: T (02) 9394 6659
F (02) 9394 6662
E: jhart@ausgrid.com.au

Ausgrid ABN 67 505 337 385

570 George Street
Sydney NSW 2000

Contents

GLOSSARY	1
1 PURPOSE	3
2 SCOPE	3
3 ENVIRONMENTAL PLANNING APPROVALS	3
3.1 Incidental/Ancillary Development	3
3.2 Exempt Development	4
3.3 Part 4 Approvals (Development with consent)	4
3.4 Part 5 Approvals (Development without consent)	4
3.5 State Significant Infrastructure or State Significant Development	5
4 OTHER APPROVALS	6
5 NOTIFICATION	6
6 NUS174C ENVIRONMENTAL HANDBOOK	6
7 EIA WORKSHEET – EVALUATION FRAMEWORK	7
8 RESPONSIBILITIES	8
9 REFERENCES	9
APPENDIX A – ROUTE/SITE SELECTION GUIDE	10
STEP 1 – Identify all reasonably feasible site/route options	10
STEP 2 – Identify all issues	10
STEP 3 – Collect data about all criteria	11
STEP 4 – Rank the criteria	11
STEP 5 – Scale the data for each issue (Mathematical adaptation only)	11
STEP 6 – Determine the preferred route/site	12
STEP 7 – Sensitivity analysis	12

Tables

Table 1-1: Environmental approval responsibilities.....	8
---	---

Glossary

Accredited Designer	A designer accredited to undertake contestable design works
ASP	Accredited Service Provider: A contractor accredited under Part 10 of the <i>Electricity Supply (General) Regulation 2001</i> (NSW) for undertaking contestable works
Assessor	Person responsible for preparing the Environmental Impact Assessment and recommending the controls necessary to proceed. Specific responsibilities are defined in Schedule 1.
BCA	Building Code of Australia
Capital Works	New works other than Recoverable Works
CEMP	Construction Environmental Management Plan
Contestable Works	Works (including design), funded by the developer, and required to enable a new or altered connection where the developer may choose the ASP (Designer or Constructor) to carry out the works (e.g. customer substation, URD)
Control Measures	Measures which in addition to the measures defined in the NUS174 series will form all the environmental controls considered necessary to mitigate the impacts to the level described in the EIA Worksheet.
Criteria	A specific objective relating to a particular issue
Criteria Ranking	A number representing the relative weighting given to a particular criteria. The sum of all Criteria Weightings is 1.
DA	Development Application (Part 4 Approval process)
DAD	Director – Area Development at Ausgrid
Determining Authority	A public authority by or on whose behalf the activity is or is to be carried out or a public authority whose approval is required in order to enable the activity to be carried out
Developer	A person who arranges customer connection services for a customer or the reticulation of a subdivision
Distribution Works	Works other than transmission works
EIA	Environmental Impact Assessment
EIA Worksheet	A streamlined version of 'Is an EIS Required' for certain types of works with minor and predictable impacts
EIS	Environmental Impact Statement
EM-PD&A	Executive Manager – Project Development & Approvals at Ausgrid
Environmental Management Plan (EMP)	Details all environmental controls required for the project to comply with the Environmental Impact Assessment (minimum controls required are detailed in NUS 174C – Environmental Handbook)
Environmental Impact	The consequential change in the environment which is both a function of the extent of the impacts and the sensitivity of the environment
Environmental Risk	The environmental risk is calculated by multiplying the likelihood of the impact occurring by the extent of the managed impacts by the sensitivity of the environment to the managed impacts
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	Environmental Planning and Assessment Regulation 2000
EPI	Environmental Planning Instrument
ES Act	<i>Electricity Supply Act 1995</i>
ESU	Ausgrid's Environmental Services section (formerly a Unit)
Extent	A measure of the size, scope, intensity and duration of the impacts
Is an EIS Required?	A document which provides a structured and systematic Environmental Impact Assessment process for use by determining authorities when assessing Part 5 activities
iSEPP	State Environmental Planning Policy (Infrastructure) 2007

Key impacts	Those important environmental impacts which require attention and resources to minimise the project's environmental risk
LEP	Local Environmental Plan
Monopoly Works	Works other than Contestable Works
Normalised	A range of numbers which are relatively scaled between 0 and 1
Option Ranking	A number representing the relative weighting given to a particular option. All Option Weightings are between 0 and 1.
Project Specific Control Measures	Control measures developed specifically for a project
Qualified Consultant	Person(s) with tertiary qualifications specific to the environmental impacts associated with the project which prompted the additional investigations
Recoverable Works	Works on the electricity network undertaken at the request of the developer which are not for the purpose of establishing a new or altered connection to the electricity network (eg RTA road widening)
REF	Review of Environmental Factors
SEE	Statement of Environmental Effects
Sensitivity	A measure of the environment's ability to cope with the impacts including reversibility, public interest and environmental resilience
SEPP	State Environmental Planning Policy
SEPP No. 14	State Environmental Planning Policy No. 14—Coastal Wetlands
SEPP No. 26	State Environmental Planning Policy No. 26—Littoral Rainforests
SIS	Species Impact Statement
SSI	State Significant Infrastructure
SSD	State Significant Development
Transmission	Electricity works greater than 33kV
Trigger Areas	Environmentally sensitive areas which trigger the requirement for referral to Ausgrid's Environmental Services
Verifier	Person who makes a decision on behalf of Ausgrid whether to proceed subject to the environmental controls identified in the EIA Worksheet. Specific responsibilities are defined in section 0.

1 Purpose

The purpose of this document is to provide guidance on when and how to undertake an environmental assessment and obtain environmental approval in accordance with the *Environmental Planning and Assessment Act 1979* (EP&A Act) and the Environmental Planning and Assessment Regulation 2000 (EP&A Regulation) for Ausgrid network related projects.

For scenarios not covered in this document contact **Environmental Services on 9394 6659**.

2 Scope

This procedure is applicable to all Ausgrid staff and Accredited Service Providers (ASPs) undertaking planning work associated with Ausgrid's network.

Environmental Impact Assessment Worksheets must be prepared by competent persons who have undertaken adequate training. Ausgrid reserves the right to require a person who submits an Environmental Impact Assessment (EIA) Worksheet to submit evidence of completing Ausgrid's training or other appropriate accreditation to assess the environmental impact of a project.

3 Environmental Planning Approvals

The New South Wales EP&A Act provides a comprehensive framework for the approval process and assessment of the environmental impact of developments proposed by Ausgrid.

The type of process for gaining approval of the development depends on an interpretation of the Environmental Planning Instruments (EPIs) applicable to the activity and the site.

The five general categories of development include:

- 1) Incidental/Ancillary - do not require planning approval.
- 2) Exempt Development - do not require planning approval.
- 3) Development with Consent - require Part 4 Approval (usually a Statement of Environmental Effects (SEE) submitted with a Development Application (DA) with Council).
- 4) Development without Consent - require a Part 5 Approval (usually a self assessed EIA Worksheet or Review of Environmental Factors (REF)).
- 5) State Significant Infrastructure (SSI) or State Significant Development (SSD) - require Ministerial Approval (assessed using an environmental impact statement (EIS)).

Ausgrid has developed an [Approvals Process Calculator](#) that can be used to determine the appropriate environmental approval process for a project.

3.1 Incidental/Ancillary Development

Works which are incidental, ancillary or have already been assessed and approved and which facilitates the existing use will not need approval. For works to be considered incidental/ancillary they must meet the following criteria:

- they are for the same purpose as the Original Development and
- they are of negligible additional environmental impact to the impact of the Original Development.

Generally 'Incidental/Ancillary Development' includes very minor and routine maintenance and repair works such as replacing lamps, poles or main because they had (or were about to) fail, termite treatment, building maintenance etc.

Works such as extensions, upgrades, expansions and repairs involving deviations in routes/sites/functions are NOT ancillary/incidental. For example, clearing vegetation where no clearing has previously been done, track works beyond the access track, upgrading cables, line diversions, substation upgrades where the impacts are unclear and so on.

3.2 Exempt Development

Works which are defined in the State Environmental Planning Policy (Infrastructure) 2007 (iSEPP) as 'Exempt Development' will not need approval. However, the works must meet certain criteria.

The full list of 'Exempt Development' is contained in Clause 43 of the iSEPP.

It is important to note that for works to be considered 'Exempt Development' they must meet both specific criteria (relevant to the criteria) and general criteria such as the Building Code of Australia (BCA), minimal impact, not in an area of critical habitat or wilderness area etc.

The full list of criteria is contained in Clause 20, Clause 43 and Schedule 1 of the iSEPP.

Generally 'Exempt Development' includes most maintenance/repair works with minimal environmental impact such as street lighting, service lines, realignment of poles, installation of equipment, emergency works, maintenance and repairs, fencing, vegetation management etc.

An assessment is generally needed when it is unclear or the impacts are likely to be substantial - such as re-establishing an access track, abrasive blasting of steel towers, temporary material storage area or repairing an asset in a particularly sensitive area. In these cases, an assessment/approval should be undertaken as a matter of prudence.

Generally most routine maintenance and repair works on Ausgrid's network will be 'Exempt Development'.

3.3 Part 4 Approvals (Development with consent)

Part 4 applies when the works are not covered above and the EPIs deem that the works are 'Development With Consent'.

Part 4 Development must comply with the requirements of the consent authority, usually the local council. Types of Part 4 Development include 'Local', 'Complying', 'Integrated', 'Designated' and 'State Significant'.

3.4 Part 5 Approvals (Development without consent)

Works which are not 'Exempt Development' and are defined in the iSEPP as 'Development Without Consent' will require an assessment (initially at least) under Part 5 of the EP&A Act. However, there are a few exceptions.

The iSEPP does not apply if the works require approval under SEPP No.14, 26 or Major Development. In these cases and when the works are not defined as 'Development Without Consent', an assessment will need to be made of the relevant EPIs to determine the approval process.

The iSEPP defines 'Development Without Consent' works as 'Development for the purpose of an electricity transmission or distribution network'. More information is contained in Clause 41 of the iSEPP.

Part 5 of the EP&A Act requires Ausgrid (as the Determining Authority) when considering the activity, to examine and take into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of that activity. The decision as to whether to proceed with the activity or whether a more detailed assessment of environmental impacts is required remains with the Determining Authority (Ausgrid). Where the Part 5 EIA determines the impact is "likely to significantly affect the environment (including critical habitat) or threatened species, populations or ecological communities, or their habitats" then an EI is required to be prepared. The EIS is then determined by the Minister for the NSW Department for Planning, following an assessment by their department.

Generally most new works for Ausgrid's network will be assessed under Part 5 of the EP&A Act. The assessment will take the form of an EIA Worksheet or an REF.

EIA Worksheet

The document "Is an EIS Required?" (1996) was prepared by the NSW Department for Planning to provide a structured and systematic EIA process for use by determining authorities when assessing Part 5 activities.

"Is an EIS Required?" allows for the EIA process to be streamlined for classes of activities with very predictable impacts. The EIA Worksheet is a streamlined process applying only to:

- those activities and locations which fall within Part 5 of the EP&A Act AND
- works that are likely to have minor and predictable impacts AND
- works which are carried out by, on behalf or for the approval of Ausgrid.

If any of the above criteria do not apply then an alternative assessment may be required.

Further, works involving transmission infrastructure (>33kV) will require referral to Environmental Services.

Where the impacts are demonstrated by the EIA Worksheet to be minor and predictable, no additional documentation would be needed to demonstrate compliance with the requirements of the EP&A Act.

Adequately trained individuals, with a good understanding of the project and the receiving environment, should be able to undertake the evaluation outlined in the EIA Worksheet without the need to consult specialists.

Part 5 Assessments other than the EIA Worksheet

Activities identified as having complex or unpredictable impacts will require further analysis in the form of an REF – a detailed assessment of the environmental factors affecting the decision.

The process for preparing an REF and determining whether a project is likely to significantly affect the environment is detailed in Ausgrid's REF-M300 - REF Manual.

Where the impacts are obviously very significant, the determining authorities may decide that an EIS should be prepared without proceeding through the assessment regimes of the EIA Worksheet or an REF.

3.5 State Significant Infrastructure or State Significant Development

SSI and SSD are assessed by the NSW Department for Planning, with input sought from local government, other NSW Government agencies and the community as part of the assessment process.

State Significant Development (SSD)

A range of development types such as mines and manufacturing plants as well as warehousing, waste, energy, tourist, education and hospital facilities are classed as SSD if they are over a certain size or located in a sensitive environmental area. Electricity network development is not classed as SSD.

Some projects may also be considered SSD because they are located in precincts regarded as important by the NSW Government, including Sydney Olympic Park, Redfern-Waterloo and Barangaroo.

Importantly, SSD does not apply to Part 5 Activities, unless it is part of another development that includes SSD.

State Significant Infrastructure (SSI)

A range of major infrastructure proposals, such as roads, railway lines or pipes are classed as SSI. Electricity network development is not classed as SSI specifically.

However, development is classed as SSI where the Part 5 EIA determines the impact is "likely to significantly affect the environment (including critical habitat) or threatened species, populations or ecological communities, or their habitats". In these cases an EIS is required to be prepared.

The question of a "significant affect" on the environment will depend on the circumstances of each activity and unfortunately there can be no hard and fast rules, because all 'environments' differ as do all projects.

4 Other Approvals

Environmental planning approvals under the EP&A Act do not negate the need to obtain other approvals, licenses and permits that may be required under Federal and State environmental laws. It is important that these approvals, licenses and permits are considered early in the planning process and thereby form an integral part of the EIA Worksheet and REF process. Where possible the assessor is to obtain any licenses, approvals or permits prior to signing the EIA Worksheet.

Ausgrid has developed an [Approvals Process Calculator](#) that can be used to determine the appropriate environmental approval process for a project.

5 Notification

The *Electricity Supply Act 1995* (ES Act) requires 40 days notice to be given to the local council for all works other than routine repairs, maintenance or emergency works. There is also a requirement to give due consideration to any submissions so made.

The iSEPP contains notification requirements in addition to those in the ES Act for certain works in certain areas. In these cases there is also a requirement to take into consideration any response to the notice that is received within 21 days after the notice is given.

The full list of notification requirements is contained in Division 1 and Clause 42 of the iSEPP.

6 NUS174c Environmental Handbook

Ausgrid's Network Standard NUS 174c Environmental Handbook outlines environmental responsibilities, key requirements and minimum standards for all construction and maintenance work on Ausgrid's network.

Project Specific Control Measures will be found in the EIA Worksheet or REF. These controls combined with NUS 174c form the environmental controls considered necessary to mitigate the impacts.

For complex projects or projects assessed by a REF, the processes for complying with these controls will be documented in the form of a Construction Environmental Management Plan (CEMP)

Where there is an inconsistency between the Project Specific Control Measures and NUS174c, the Project Specific Control Measures will prevail.

NOTE: NUS 174c does not absolve the contractor from their responsibility to identify all workplace environmental risks and implement all necessary controls to comply with the law.

NOTE: The Construction Project Manager is responsible for ensuring compliance with NUS 174c and the EIA Worksheet or REF/CEMP.

7 EIA Worksheet – Evaluation Framework

There are twelve steps in the determination of the likely environmental significance of the impacts of each issue associated with a proposed activity:

STEP 1 – Determine If and What Type of Assessment Is Required

See the [Approvals Process Calculator](#) for more information.

STEP 2 – Describe the Project and the Receiving Environment (EIA Worksheet [Table 1](#))

See the Environmental Planning website for more information.

STEP 3 – Determine What Approvals, Licenses Or Permits Required (EIA Worksheet [Table 2A](#) and [Table 2B](#))

See the Environmental Planning website for more information.

STEP 4 – Identify Sensitive Areas or Issues (EIA Worksheet [Table 3A](#) and [Table 3B](#))

See the Environmental Planning website for more information.

STEP 5 – Determine Potential Impacts (EIA Worksheet Table 4)

STEP 6 – Describe Any Project Specific Control Measures (EIA Worksheet Table 4)

STEP 7 – Rate the Likelihood of the Impact Occurring (EIA Worksheet Table 4)

STEP 8 – Rate the Extent of the Managed Impacts (EIA Worksheet Table 4)

STEP 9 – Rate the Sensitivity of the Environment to the Managed Impacts (EIA Worksheet Table 4)

STEP 10 – Quantify the Environmental Risks (EIA Worksheet Table 4)

See the Environmental Planning website for more information on [Table 4](#) – Steps 5-10.

STEP 11 – [Assessor Sign off](#) - See the Environmental Planning website for more information.

STEP 12 – [Verifier Sign off](#) - See the Environmental Planning website for more information.

Assessor and Verifier responsibilities are defined in the next section.

8 Responsibilities

This schedule details responsibilities applicable to Ausgrid staff, contractors and accredited services providers (ASPs) undertaking planning and construction work associated with Ausgrid's network.

Ausgrid's environmental planning process follows a pathway of actions and responsibilities that depend on the type of project, level of consultation and type of environmental assessment. While the responsible person will vary depending on the assessment, the overall responsibilities for the Assessor and Verifier remain the same:

Assessor

I [name and address] have prepared this worksheet on behalf of Ausgrid. I certify to the best of my knowledge and belief that:

- I have completed this worksheet in accordance with NUS 174 Environmental Procedures Supplementary Notes - EIA Guidelines
- The assessment meets the requirements of section 111 of the Environmental Planning and Assessment Act and clause 228 of the EP&A Regulation
- The information contained in the worksheet is neither false nor misleading and
- The project has minor and predictable impacts and can proceed subject to specific controls in the EIA Worksheet and controls in Ausgrid's Environmental Handbook.

Verifier

I [name and position] certify to the best of my knowledge and belief that:

- I have reviewed this EIA Worksheet
- it has been prepared by person(s) trained by Ausgrid to undertake this assessment
- it appears to be procedurally adequate
- it contains all available information relevant to the environmental assessment of the project.

Table 8-1: Environmental approval responsibilities

Assessment / approval process	Assessor	Verifier	Responsibility for compliance with EIA / CEMP
1. Local Development (Part 4 Development)	Contestable work: ASP Designer Non Contestable work: ESU via Qualified Consultant	Consent Authority (usually the local council)	Project Manager
2. EIA Worksheet (Part 5 Development)	Personnel completed <i>Ausgrid's ET 005 Environmental Impact Assessment Training</i> with an assessment mark greater than 85%.	Projects in 'Trigger Areas' - ESU Otherwise - personnel completed <i>Ausgrid's ET 005 Environmental Impact Assessment Training</i> with an assessment mark greater than 85%.	Project Manager
3. Review of Environmental Factors (Part 5 Development)	ESU	Major Projects - EM-PD&A (> 1 complaint) or DAD Other Projects - ESU	Project Manager
4. SSD or SSI	ESU via Qualified Consultant	EM-PD&A	Project Manager
5. Species Impact Statement (Part 4 or Part 5 Development)	ESU via Qualified Consultant	ESU	Project Manager
6. Commonwealth Department for the Environment referral / approval	ESU via Qualified Consultant	ESU	Project Manager

9 References

Ausgrid's Environmental Planning website > <http://www.ausgrid.com.au/Environmental-planning.aspx>

Network Standard NUS 174 Environmental Procedures

Network Standard NUS 174a Environmental Procedures Supplementary Notes EIA Worksheet

Network Standard NUS 174c Environmental Procedures Supplementary Notes Environmental Handbook

Environmental Planning and Assessment Act 1979

Environmental Planning and Assessment Regulation 2000

State Environmental Planning Policy (Infrastructure) 2007

Appendix A – Route/Site Selection Guide

Ausgrid has a number of objectives when selecting a route/site option for network development. These include minimising environmental, social and economic impacts, and maximising technical performance.

There is often no one route/site which simultaneously optimises all of these objectives and therefore a compromise or trade-off solution must be found.

The following represents a traceable methodology for selecting a preferred option amongst options with competing objectives, constraints and opportunities.

Given the subjective nature of selecting issues/criteria, obtaining data and assigning weightings, the process should be used as a guide only for the methodology and should only be used as one factor in making the decision. It is helpful and usually more important to ensure that all stakeholders have the opportunity to participate in the process by expressing the importance of particular factors from their perspective (see Community Consultation Guidelines).

It is invariably the case that the process of understanding the issues and how they affect the decision is more useful than the outcome itself. This process has the potential to become complex and may appear impersonal and therefore is should always be accompanied by an appropriate level of community consultation.

STEP 1 – Identify all reasonably feasible site/route options

Firstly, identify all reasonably feasible site/route options that satisfy the preferred network option. Below is an example of a mathematical adaptation of the process.

Options	Criteria		
	Criteria 1	Criteria 2	Criteria 3
<i>Option 1</i>			
<i>Option 2</i>			
<i>Option 3</i>			

STEP 2 – Identify all issues

Identify all issues (environmental, social, economic and technical) and then criteria which are relevant to distinguishing between options

The criteria must be as close to mutually exclusive as possible. For example ‘minimise the number of houses passed’ is related with ‘minimise the public’s exposure to EMF’ and hence they are not mutually exclusive.

NUS 174A EIA Worksheet provides a useful starting point in determining the issues/criteria which may be applicable to the range of options.

It is possible that specialist studies will be required to identify issues and collect data, however, this will depend on the issues and the degree of confidence required at this stage in the project.

It may be helpful to break the issues/criteria into sub issues/criteria to make the information gathering and disseminating more manageable.

Some issues may be very important to assess the environmental impact, however, if the impacts are identical between all options then the issue will be irrelevant in choosing between options. Below is an example of a mathematical adaptation of the process.

Options	Criteria		
	<i>Minimise the number of houses passed by the line</i>	<i>Minimise the number of trees destroyed</i>	<i>Minimise the cost</i>
<i>Option 1</i>			
<i>Option 2</i>			
<i>Option 3</i>			

STEP 3 – Collect data about all criteria

Collect data about all criteria sufficient to enable relative comparison between the options. The data should be quantified as much as possible. Below is an example of a mathematical adaptation of the process.

Options	Criteria		
	<i>Minimise the number of houses passed by the line</i>	<i>Minimise the number of trees destroyed</i>	<i>Minimise the cost</i>
<i>Option 1</i>	50	0	\$100k
<i>Option 2</i>	20	4	\$90k
<i>Option 3</i>	30	2	\$80k

STEP 4 – Rank the criteria

Rank the criteria according to importance in deciding between the options. Some issues may be more important in general, however, for this process, the criteria need to be ranked according to their importance to the decision of a preferred option.

This can be achieved by comparing the worst case data for each criteria. As this stage can be very subjective, it may be necessary to canvass a range of views. If a reasonable consensus cannot be reached, it may be necessary to evaluate more than one scenario.

Mathematically, the criteria would be ranked by taking the first two criteria, comparing the worst case data and assigning relative weightings (if possible). In the example below, criteria 2 is considered 80% as important as criteria 1 to making a decision.

The process is then repeated for all the remaining data (criteria 3 is 50% as important as criteria 2 in the example). Finally, the relative weightings are normalised to represent the Issue Weighting. Overleaf is an example of a mathematical adaptation of the process.

Options	Criteria		
	<i>Minimise the number of houses passed by the line</i>	<i>Minimise the number of trees destroyed</i>	<i>Minimise the cost</i>
<i>Worst case for each option</i>	50	4	\$100k
<i>Criteria weighting</i>	100	80	40
<i>Issue Weighting</i>	$100 / 220 = 46\%$	$80 / 220 = 36\%$	$40 / 220 = 18\%$

STEP 5 – Scale the data for each issue (Mathematical adaptation only)

The scaled data is achieved by dividing each data by its maximum value for each criteria. Below is an example of a mathematical adaptation of the process.

Options	Criteria		
	Minimise the number of houses passed by the line	Minimise the number of trees destroyed	Minimise the cost
Option 1	$50 / 50 = 1$	0	$100 / 100 = 1$
Option 2	$20 / 50 = 0.4$	$4 / 4 = 1$	$90 / 100 = 0.9$
Option 3	$30 / 50 = 0.6$	$2 / 4 = 0.5$	$80 / 100 = 0.8$

STEP 6 – Determine the preferred route/site

The preferred route is that option which achieves the best balance between the competing objectives. It is the option which maximises the overall attainment of all criteria taking into account their relative importance.

Given the subjective nature of selecting issues/criteria, obtaining data and assigning weightings, the process should be used as a guide only for the methodology and should only be used as one factor in making the decision. It is helpful and usually more important to ensure that all stakeholders have the opportunity to participate in the process by expressing the importance of particular factors from their perspective (see Community Consultation Guidelines).

Mathematically, the option with the best score would be determined by multiplying the scaled data by its associated Issue Ranking. The resulting data is summed for each option with the results giving the overall Option Ranking (lowest being the preferred).

These can be normalised if required.

It should be stressed that the mathematically preferred route/site cannot use weightings and criteria which are representative of all views from all stakeholders. Further, the process is only as accurate as the data and the issues are rarely totally mutually exclusive (see Community Consultation Guidelines). Below is an example of a mathematical adaptation of the process.

Options	Criteria			Option Rankings (sum data)
	Minimise the number of houses passed by the line	Minimise the number of trees destroyed	Minimise the cost	
Option 1	$1 \times 0.5 = 0.5$	0	$1 \times 0.1 = 0.1$	0.6
Option 2	$0.4 \times 0.5 = 0.2$	$1 \times 0.4 = 0.4$	$0.9 \times 0.1 = 0.09$	0.69
Option 3	$0.6 \times 0.5 = 0.3$	$0.5 \times 0.4 = 0.2$	$0.8 \times 0.1 = 0.08$	0.58

In this example, the preferred option with the lowest score would be Option 3.

STEP 7 – Sensitivity analysis

It may be appropriate that the final result be tested for sensitivity to both the data, and weightings. This can be achieved by changing the data and weightings within reasonable degrees of confidence. The degree to which the result changes (if at all) will represent the degree of sensitivity of the decision.

Results which have a high sensitivity should be treated with additional caution. In this instance it may be necessary to place less reliance on this process and more reliance on other methods (See Community Consultation Guidelines).