Scottish & Southern Electricity Networks

TRANSMISSION

Dunoon to Loch Long 132kV OHL Rebuild

Environmental Impact Assessment

Volume 4 | Technical Appendix

Appendix 2.1 – The Holford Rules

ELECTRICITY TRANSMISSION DEVELOPMENT PROPOSALS IN SCOTLAND

THE SCOTTISH HYDRO-ELECTRIC TRANSMISSION LIMITED (SHETL) APPROACH

HIGH VOLTAGE STEEL LATTICE TOWER TRANSMISSION LINES

THE HOLFORD RULES : GUIDELINES FOR THE ROUTEING OF NEW HIGH VOLTAGE OVERHEAD TRANSMISSION LINES WITH NGC 1992 AND *SHETL 2003 NOTES*

July 2004

THE HOLFORD RULES : GUIDELINES FOR THE ROUTEING OF NEW HIGH VOLTAGE OVERHEAD TRANSMISSION LINES WITH NGC 1992 AND *SHETL 2003 NOTES*

RULES 1-7

Rule 1

Avoid altogether, if possible, the major areas of highest amenity value, by so planning the general route of the line in the first place, even if the total mileage is somewhat increased in consequence.

Note on Rule 1

a) Investigate the possibility of alternative routes, avoiding *altogether, if possible major* areas of highest amenity value. The consideration of alternative routes must be an integral feature of environmental statements. *If there is an existing transmission line through a major area of highest amenity value and the surrounding land use has to some extent adjusted to its presence, particularly in the case of commercial forestry, then the effect of remaining on this route must be considered in terms of the effect of a new route avoiding the area.*

b) Areas of highest amenity value *require to be established on a project-by-project basis considering Schedule 9 to The Electricity Act 1989, Scottish Planning Policies, National Planning Policy Guidelines, Circulars and Planning Advice Notes and the spatial extent of areas identified*

Examples of areas of highest amenity value which should be considered are

Special Area of Conservation	*(NPPG 14)*
Special Protection Area	*(NPPG 14)*
Ramsar Site	*(NPPG 14)*
National Scenic Areas	*(NPPG 14)*
National Parks	*(NPPG 14)*
National Nature Reserves	*(NPPG 14)*
Protected Coastal Zone Designations	*(NPPG 13)*
Sites of Special Scientific Interest (SSSI)	*(NPPG 14)*
Schedule of Ancient Monuments	*(NPPG 5)*
Listed Buildings	*(NPPG 18)*
Conservation Areas	*(NPPG 18)*
World Heritage Sites (a non-statutory designation)	*(NPPG 18)*
Historic Gardens and Designed Landscapes (a non-statutory designation)	*(NPPG 18)*

Rule 2

Avoid smaller areas of high amenity value, or scientific interest by deviation; provided that this can be done without using too many angle towers, i.e. the more massive structures which are used when lines change direction.

Note on Rule 2

a) *Small areas of highest amenity value not included in Rule 1 as a result of their spatial extent should be identified along with other areas of regional or local high amenity value identified from development plans.*

b) Effects on the setting of historic buildings and other cultural heritage features should be minimised.

c) *If there is an existing transmission line through an area of high amenity value and the surrounding landuses have to some extent adjusted to its presence, particularly in the case of commercial forestry, then the effect of remaining on this line must be considered in terms of the effect of a new route deviating around the area.*

Rule 3

Other things being equal, choose the most direct line, with no sharp changes of direction and thus with few angle towers.

Note on Rule 3

a) Where possible choose inconspicuous locations for angle towers, terminal towers and sealing end compounds.

b) *Too few angles on flat landscape can also lead to visual intrusion through very long straight lines of towers, particularly when seen nearly along the line.*

Rule 4

Choose tree and hill backgrounds in preference to sky backgrounds, wherever possible; and when the line has to cross a ridge, secure this opaque background as long as possible and cross obliquely when a dip in the ridge provides an opportunity. Where it does not, cross directly, preferably between belts of trees.

Rule 5

Prefer moderately open valleys with woods where the apparent height of towers will be reduced, and views of the line will be broken by trees.

Notes on Rules 4 and 5

a) Utilise background and foreground features to reduce the apparent height and domination of towers from main viewpoints.

b) Minimise the exposure of numbers of towers on prominent ridges and skylines.

c) Where possible follow open space and run alongside, not through woodland or commercial forestry, and consider opportunities for skirting edges of copses and woods. Where there is no reasonable alternative to cutting through woodland or commercial forestry, the Forestry Commission Guidelines should be followed (Forest Landscape Design Guidelines, second edition, The Forestry Commission 1994 and Forest Design Planning – A Guide to Good Practice, Simon Bell/The Forest Authority 1998).

d) Protect existing vegetation, including woodland and hedgerows, and safeguard visual and ecological links with the surrounding landscape.

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Rules 6

In country which is flat and sparsely planted, keep the high voltage lines as far as possible independent of smaller lines, converging routes, distribution poles and other masts, wires and cables, so as to avoid a concatenation or 'wirescape'.

Note on Rule 6

a) In all locations minimise confusing appearance.

b) Arrange wherever practicable that parallel or closely related routes are planned with tower types, spans and conductors forming a coherent appearance. Where routes need to diverge allow. where practicable, sufficient separation to limit the effects on properties and features between lines.

Rule 7

Approach urban areas through industrial zones, where they exist; and when pleasant residential and recreational land intervenes between the approach line and the substation, go carefully into the comparative costs of undergrounding, for lines other than those of the highest voltage.

Note on Rule 7

a) When a line needs to pass through a development area, route it so as to minimise as far as possible the effect on development.

b) Alignments should be chosen after consideration of effects on the amenity of existing development and on proposals for new development.

c) When siting substations take account of the effects of the terminal towers and line connections that will need to be made and take advantage of screening features such as ground form and vegetation.

Explanatory Note on Rule 7

The assumption made in Rule 7 is that the highest voltage line is overhead.

Supplementary Notes

a) Residential Areas

Avoid routeing close to residential areas as far as possible on grounds of general amenity.

b) Designations of Regional and Local Importance

Where possible choose routes which cause the least disturbance to Areas of Great Landscape Value and other similar designations of Regional or Local Importance.

c) Alternative Lattice Steel Tower Designs

In addition to adopting appropriate routeing, evaluate where appropriate the use of alternative lattice steel tower designs available where these would be advantageous visually, and where the extra cost can be justified [*Note : SHETL have reviewed the visual and landscape arguments for the use of lattice steel towers in Scotland and summarised these in a document titled Overhead Transmission Line Tower Study 2004]*.

FURTHER NOTES ON CLARIFICATION TO THE HOLFORD RULES

Line Routeing and People

The Holford Rules focused on landscape amenity issues for the most part. However, line routeing practice has given greater importance to people, residential areas etc. The following notes are intended to reflect this.

a Avoid routeing close to residential areas as far as possible on grounds of general amenity.

b In rural areas avoid as far as possible dominating isolated houses, farms or other small-scale settlements.

c Minimise the visual effect perceived by users of roads and public rights of way, paying particular attention to the effects of recreational, tourist and other well-used routes.

SUPPLEMENTARY NOTES ON THE SITING OF SUBSTATIONS

a Respect areas of high amenity value (see Rule 1) and take advantage of the containment of natural features such as woodland, fitting in with the landscape character of the area.

b Take advantage of ground form with the appropriate use of site layout and levels to avoid intrusion into surrounding areas.

c Use space effectively to limit the area required for development, minimizing the effects on existing land use and rights of way.

d Alternative designs of substations may also be considered, eg ‘enclosed’, rather than ‘open’, where additional cost can be justified.

e Consider the relationship of towers and substation structures with background and foreground features, to reduce the prominence of structures from main viewpoints.

f When siting substations take account of the effects of line connections that will need to be made.

APPENDIX A

INTERPRETATION OF THE HOLFORD RULES 1 AND 2 AND THE NOTES TO RULE 2 REGARDING THE SETTING OF A SCHEDULED ANCIENT MONUMENT OR A LISTED BUILDING

1 Interpretation of The Holford Rules 1 and 2

1.1 Introduction

Rules 1 refers to avoiding major areas of highest amenity value, Rule 2 refers to avoiding smaller areas of high amenity value. These rules therefore require identification of areas of amenity value in terms of highest and high, implying a hierarchy, and the extent of their size(s) or area(s) in terms of major and smaller areas.

The NGC Notes to these Rules identify at Rule 1(b) areas of highest amenity value and at Rule 2(a) and (b) of high amenity value that existed in England circa 1992.

1.2 Designations

Since 1949 a framework of statutory measures has been developed to safeguard areas of high landscape value and nature conservation interest. In addition to national designations, European Community Directives on nature conservation, most notably through Special Areas of Conservation under the Habitats and Species Directive (92/43/EC) and Special Protection Areas under the Conservation of Wild Birds Directive (79/409/EEC) have been implemented. Governments have also designated a number of Ramsar sites under the Ramsar Convention on Wetlands of International Importance (CM6464). Scottish Office circulars 13/1991 and 6/1995 are relevant sources of information and guidance. In addition, a wide range of non-statutory landscape and nature conservation designations affect Scotland.

1.3 Amenity

The term 'Amenity' is not defined in The Holford Rules but has generally been interpreted as designated areas of scenic, landscape, nature conservation, scientific, architectural or historical interest.

This interpretation is supported by paragraph 3 of the Schedule 9 to the Electricity Act 1989 (The Act). Paragraph 3 (1)(a) requires that in formulating any relevant proposals the licence holder must have regard to the desirability of preserving natural beauty, of conserving flora, fauna and geological or physiological features of special interest and of protecting sites, buildings including structures and objects of architectural, historic or archaeological interest. Paragraph 3 (1)(b) requires the licence holder to do what he reasonably can do to mitigate any effect which the proposals would have on the natural beauty of the countryside or on any flora, fauna, features, sites, buildings or objects.

1.4 Hierarchy of Amenity Value

Rules 1 and 2 imply a hierarchy of amenity value from highest to high.

Schedule 9 to the Act gives no indication of hierarchy of value and there is no suggestion of a hierarchy of value in either NPPG 5 : Archaeology and Planning, NPPG 13: Coastal Planning, NPPG 14 : Natural Heritage or NPPG 18 : Planning and the Historic Environment. Nevertheless, designations give an indication of the level of importance of the interest to be safeguarded.

1.5 Major and Smaller Areas

Rules 1 and 2 imply consideration of the spatial extent of the area of amenity in the application of Rules 1 and 2.

1.6 Conclusion

Given that both the spatial extent in terms of major and smaller and the amenity value in terms of highest and high that must be considered in applying Rules 1 and 2, that no value in these terms is provided by either Schedule 9 to the Act, relevant Scottish Planning Policies or National Planning Policy Guidelines, then these must be established on a project-by-project basis. Designations can be useful in giving an indication of the level of importance and thus value of the interest safeguarded. The note to The Holford Rules can thus only give examples of the designations which may be considered to be of the highest amenity value.

2 The setting of a Scheduled Ancient Monument or a Listed Building

The NGC note to Rule 2 refers to the setting of historic buildings and other cultural heritage features. NPPG 5: Archeology and Planning refers to the setting of scheduled ancient monuments and NPPG 18 : Planning and the Historic Environment refers to the setting of Listed Buildings. None of these documents define setting.

APPENDIX B

ENVIRONMENTAL AND PLANNING DESIGNATIONS – EXAMPLES OF DESIGNATIONS TO BE TAKEN INTO ACCOUNT IN THE ROUTEING OF NEW HIGH VOLTAGE TRANSMISSION LINES

Major Areas of Highest Amenity Value

1 *In Scotland relevant national or international designations for major areas of highest amenity value include the following identified from Scottish Planning Policies and National Planning Policy Guidelines :*

Special Areas of Conservation	*(NPPG 14)*
Special Protection Areas	*(NPPG 14)*
Ramsar Sites	*(NPPG 14)*
National Scenic Areas	*(NPPG 14)*
National Parks	*(NPPG 14)*
National Nature Reserves	*(NPPG 14)*
Protected Coastal Zone Designations	*(NPPG 13)*
Sites of Special Scientific Interest	*(NPPG 14)*
Scheduled Ancient Monuments	*(NPPG 5)*
Listed Buildings	*(NPPG 18)*
Conservation Areas	*(NPPG 18)*
World Heritage Sites	*(NPGG 18)*
Historic Gardens and Designed Landscapes	*(NPPG 18)*

Other Smaller Areas of High Amenity Value

2 *There are other designations identified in development plans of local planning authorities which include areas of high amenity value:-*

Areas of Great Landscape Value
Regional Scenic Areas
Regional Parks
Country Parks

The nature of the landscape in these areas is such that some parts may also be sensitive to intrusion by high voltage overhead transmission lines, but it is likely that less weight would be given to these areas than to National Scenic Areas and National Parks.

Flora and Fauna

3 *Legislation sets out the procedure for designation of areas relating to flora, fauna and to geographical and physiogeographical features. Designations relevant to the routeing of transmission lines will include Special Area of Conservation, Special Protection Area, Sites of Special Scientific Interest, National Nature Reserves, Ramsar Sites and may also include local designations such as Local Nature Reserve.*

4 Area of Historic, Archaeological or Architectural Value

Certain designations covering more limited areas are of relevance to the protection of views and the settings of towns, villages, buildings of historic, archaeological or architectural value. These designations include features which may be of exceptional interest. Of particular importance in this connection are:-

Schedule of Ancient Monuments
Listed Buildings, especially Grade A and Grade B
Conservation Areas
Gardens and Designed Landscapes included in the Inventory of Gardens and Designed Landscapes of Scotland

Green Belts

5 Generally the purposes of Green Belts are not directly concerned with the quality of the landscape.