APPENDIX 4 – HOLFORD RULES

In 1959, Lord Holford, then advisor to the Central Electricity Generating Board (CEGB), developed a series of planning guidelines in relation to amenity issues, which have subsequently become known as the "Holford Rules". The National Grid Company (NGC) subsequently revised these rules in the 1990's, and although never formally published as official guidance, they are often referred to in planning publications such as "Planning Overhead Routes (RJB Carruthers, 1987)" and "Visual Amenity Aspects of High Voltage Transmission (GA Goulty, 1989)".

The Holford Rules form the basis upon which the decision making process of siting overhead transmission lines, and minimising the potential landscape impact of such infrastructure. They are particularly helpful in a route Optioning process, as most Landscape Visual Impact Assessment guidelines relate to other forms of infrastructure such as highways, wind farms or hydroelectric generating structures. In contrast, the Holford Rules relate specifically to transmission lines, and although slightly amended in the 1990's, the core premise of each rule remains intact since originally proposed in 1959.

Rule 1: Avoid altogether, if possible, the major areas of high 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.

This is the basic guidance that multiple routes should be considered as an integral part of environmental statements. Rule 1 also implies an obligation to protect areas designated for, or otherwise recognised as being of the highest amenity value. This rule also obliges consideration of alternative routes that avoid such protected sites, even if the proposal is direct replacement of existing structures and transmission lines that presently run through protected areas. Areas to be avoided include;

- Schedule of Ancient Monuments
- Protected Coastal Zone Designations
- Special Area of Conservation
- Special Protection Area
- Ramsar Site
- National Scenic Areas
- National Parks
- National Nature Reserves
- Sites of Special Scientific Interest (SSSI)
- Listed Buildings
- Conservation Areas

- World Heritage Sites (non-statutory designation)
- Historic Gardens and Designed Landscapes (non-stat designation)

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 that are used when lines change direction.

Whilst smaller areas of amenity value may not be encompasses in designated sites as listed above, they should also be avoided where possible. Effects on the settings of historic buildings and other cultural heritage features should be minimised.

Rule 3: Other things being equal, choose the most direct line, with no sharp changes of direction and thus with few angle towers.

The fewer more massive structures used to support the transmission lines, the less impact upon the amenity of the area. However, it is also suggested that in flat or open landscapes, support poles or towers should not be erected in a straight line, as this increases the visual intrusion due to an artificially linear feature being introduced into the landscape.

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 the towers will be reduced, and views of the line will be broken by trees.

Rules 4 and 5 suggest that both background and foreground features be utilised to mask or minimise the appearance and impact of the infrastructure, where the existing ground features afford opportunity. The exposure of lines and pylons on ridges should be minimised.

Where possible, follow areas of open space, running alongside (but not though) existing wooded areas, including skirting edges of copses and small plantations. Where there is no reasonable alternative, to cutting through woodland, the Forestry Authority Guidelines should be followed; “Forest Landscape Design Guidelines, 2nd Ed. (the Forestry Commission, 1994)”, and “Forest Design Planning – A Guide to Good Practice (S. Bell / The Forestry Authority, 1998)”.

Rule 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’.

In all locations, minimise confusion by mixing cable and support types. Avoid concentrations where possible, in order to avoid the cable runs dominating the landscape character. Wherever possible and practicable, parallel or closely

related routes should be arranged to provide a coherent appearance. Where diverging routes allow, sufficient separation should be planned to limit the effects on properties and features within the cable 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.

Should lines be required to pass through development areas, the course should be carefully selected to minimise the effects on the development as far as is practicably possible. Undergrounding should be considered as a realistic alternative in order to minimise impact where there is little alternative. Alignments should be chosen after consideration of the effects of the infrastructure on proposals for new development. When siting sub-stations, the effects of terminal towers should be considered in order to take advantage of screening opportunities such as ground form and vegetation.

General Notes:

Avoid routing close to residential areas where possible, on amenity value grounds.

Where possible, select routes that causes the minimum disturbance to Areas of Great Landscape Value and other similar designations such as designated areas of regional or local importance.

There are steel lattice tower and timber pole designs alternative to the conventionally prescribed designs. These should be investigated where additional costs and voltages allow, in order to minimise visual intrusion. SHETL have reviewed these alternatives for use in Scotland, and summarised the findings in “Overhead Transmission Line Tower Study (SHETL, 2004)”.

The Holford Rules focus upon landscape amenity issues, and how these issues are perceived by receptors; so as to minimise any adverse impact upon the local amenity. SP Transmission Ltd.’s guidelines “Overhead Transmission Lines, Routeing and Environmental Assessment (SPTL, Draft), and other guideline documents focus both on the recommendations set out in the Holford Rules, and the importance of people, residential areas etc., rather than simply the amenity value.

Since the Holford Rules were first proposed, progressively greater importance has been given to users of highways and rights of way. This is especially important with respect to developments such as overhead grid connections near to regional and national parks, whose users are walking rights of way largely for an appreciation of the aesthetic quality of the landscape within the park, but also in outlying areas.