

Red John Pumped Storage Hydro Scheme

Volume 5, Appendix 11.1:
Landscape and Visual
Methodology

ILI (Highlands PSH) Ltd.

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Quality information

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Table of Contents

Appendix 11.1 Landscape and Visual Methodology	1
11.1 Introduction	1
11.2 Basis of Assessment.....	1
11.3 Scope of the assessment.....	1
11.4 Impact Assessment Methodology.....	2
11.5 References.....	9

Tables

Table 11.1 Landscape Value Criteria	3
Table 11.2 Landscape Susceptibility Criteria	3
Table 11.3 Sensitivity of Landscape Receptors.....	4
Table 11.4 Value of the View	4
Table 11.5 Visual Susceptibility Criteria.....	5
Table 11.6 Sensitivity of Visual Receptors	5
Table 11.7 Magnitude of Landscape Change.....	6
Table 11.8 Magnitude of Visual Change	7
Table 11.9 Significance of Landscape Effect.....	8
Table 11.10 Significance of Visual Effect	8

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Appendix 11.1 Landscape and Visual Methodology

11.1 Introduction

11.1.1 This section sets out the methodology for the landscape and visual impact assessment (LVIA) contained in Chapter 11 (Volume 2). It builds on the general assessment methodology presented in Chapter 04: Approach to Environmental Impact Assessment and develops this to take account of the range of likely significant effects on the landscape character and visual amenity arising from the construction and operation of the Development.

11.2 Basis of Assessment

11.2.1 Chapter 02: Project and Site Description (Volume 2) outlines the parameters which form the basis of the assessment of likely significant effects on landscape and visual amenity. The LVIA assesses only the effects of the maximum parameters, as for this topic the maximum parameters represent the realistic worst-case scenario.

11.3 Scope of the assessment

11.3.1 The Guidelines for Landscape and Visual Impact Assessment, 3rd Edition (GLVIA3) (Ref. 11.1) requires that a clear distinction is drawn between landscape and visual effects:

- Landscape effects relate to the degree of change to characteristics or physical components of a rural area, which together form the character of that landscape, e.g. topography, land use, vegetation and open space.
- Visual effects relate to the degree of change to an individual receptor or a receptor group's view of that landscape, e.g. local residents, users of public open space, footpaths or motorists passing through the area.

11.3.2 By assessing the construction and operational stages of the Development separately, distinctions may be drawn between temporary and permanent effects, with permanent effects typically being of greater importance. Residual effects are those likely to arise from the Development taking into account all additional mitigation measures.

Temporal Scope

11.3.3 Landscape and visual effects change over time as the existing landscape external to the Development evolves and the embedded mitigation planting establishes and matures. The assessments therefore report on potential effects during construction and at operation both during winter (Year of opening) and summer (Year 15 once the embedded mitigation is expected to be established). The assessments have been carried out, as is best practice, by assuming the worst case scenario, i.e. on a clear bright day, when haze would not interfere with the clarity of the view obtained.

11.4 Impact Assessment Methodology

11.4.1 The following provides details of the process and classification criteria employed in undertaking the landscape and visual assessments. The criteria detailed in Tables 11-3 to Table 11-11 are not intended to be prescriptive. Rather these examples are used to illustrate potential combinations of judgements which relate to the scales for value, susceptibility, sensitivity to change, magnitude of change and significance of effect as described subsequently.

Professional Judgement

11.4.2 GLVIA3 places a strong emphasis on the importance of professional judgement in identifying and defining the significance of landscape effects. This LVIA has been undertaken by two Chartered Landscape Architects and professional judgement has been used in combination with structured methods and criteria to evaluate landscape value, sensitivity, magnitude and significance of effect.

Sensitivity of Landscape Receptors

11.4.3 Landscape receptors are described as components of the landscape that are likely to be affected by the Development. These can include overall character and key characteristics, individual elements or features and specific aesthetic or perceptual aspects. It is the interaction between the different components of the Development and these landscape receptors which has potential to result in landscape effects (both adverse and beneficial).

11.4.4 The sensitivity of the landscape receptor is a combination of the value of the landscape (undertaken as part of the baseline study) and the susceptibility to change of the receptor to the specific type of development being assessed.

11.4.5 Landscape value is frequently addressed by reference to international, national, regional and local designations, determined by statutory bodies and planning agencies. Absence of such a designation does not necessarily imply a lack of quality or value. Factors such as accessibility and local scarcity can render areas of nationally unremarkable quality, highly valuable as a local resource.

11.4.6 Factors that can help in identifying the value of a landscape include:

- Landscape quality / condition – the measure of the physical state of the landscape including the intactness of the landscape and the condition of individual elements;
- Scenic quality – the extent that the landscape receptor is recognised for its perceptual qualities (e.g. remoteness or tranquillity);
- Perceptual aspects – the extent that the landscape receptor is recognised for its perceptual qualities (e.g. remoteness or tranquillity);
- Rarity – the presence of unusual elements or features;
- Representativeness – the presence of particularly characteristic features;
- Recreation – the extent that recreational activities contribute to the landscape receptor; and
- Association – the extent that cultural or historical associations contribute to the landscape receptor.

11.4.7 The evaluation of landscape value has been undertaken with reference to a three point scale, as outlined in Table 11.1 below.

Table 11.1 Landscape Value Criteria

Classification	Criteria
High	Protected by a statutory landscape designation, a landscape contributing strongly to a sense of place, or an unspoilt landscape containing unique or scarce elements / features with few, if any, detracting elements / features
Medium	Locally designated landscape or an undesignated landscape with locally important, but more commonplace, features and containing some detracting elements/features.
Low	Undesignated landscape with few, if any, notable elements / features, or containing several detracting elements / features.

11.4.8 The susceptibility to change is a measure of the ability of a landscape to “*accommodate the proposed development without undue consequences for the maintenance of the baseline situation and/or the achievement of landscape planning policies and strategies*” (Ref. 11.1 para 5.40).

11.4.9 Landscape susceptibility has been appraised through consideration of the baseline characteristics of the landscape, and in particular, the scale or complexity of a given landscape. The evaluation of landscape susceptibility has been undertaken with reference to a three point scale, as outlined in Table 11.2 Landscape Susceptibility Criteria.

Table 11.2 Landscape Susceptibility Criteria

Classification	Criteria
High	Attributes that contribute to a landscape which is considered to be intolerant of even minor change of the type proposed without fundamentally altering key characteristics.
Medium	Attributes that contribute to a landscape which offers some opportunities to accommodate change of the type proposed without fundamentally altering the key characteristics.
Low	Attributes that contribute to a landscape which is considered to be tolerant of a large degree of change of the type proposed without fundamentally altering the key characteristics.

11.4.10 Landscape sensitivity to change has been determined by employing professional judgement to combine and analyse the identified value and susceptibility and has been defined with reference to the three point scale outlined in Table 11.3.

11.4.11 Combining susceptibility and value GLVIA3 indicates that this can be achieved in a number of ways and needs to include professional judgement. However, it is generally accepted that a combination of high susceptibility and high value is likely to result in the highest sensitivity, whereas a low susceptibility and low value is likely to result in the lowest level of sensitivity.

Table 11.3 Sensitivity of Landscape Receptors

Classification	Criteria
High	Landscape of national or regional value with distinctive elements and characteristics, considered to have a limited ability to absorb the type of change proposed without fundamentally altering the key characteristics.
Medium	Landscape of regional or local value, or rarity, exhibiting some distinct elements / features, considered tolerant of some degree of the type of change proposed without fundamentally altering the key characteristics.
Low	Landscape with few distinctive elements / features or valued characteristics and considered tolerant of a large degree of the type of change proposed without fundamentally altering the key characteristics.

Sensitivity of Visual Receptors

11.4.12 Sensitivity of visual receptors has been defined through appraisal of the viewing expectation, or value placed on the view as identified in the baseline study, and its susceptibility to change.

11.4.13 Value of the view is an appraisal of the value attached to views and is often informed by the appearance on Ordnance Survey or tourist maps and in guidebooks, literature or art. Value can also be indicated by the provision of parking or services and signage and interpretation. The nature and composition of the view is also an indicator. Value of the view has been determined with reference to the three point scale and criteria outlined in Table 11.4 Value of the View.

Table 11.4 Value of the View

Classification	Criteria
High	Nationally recognised view, a view with cultural associations (recognised in art, literature, or other medium), or a recognised high quality view of the landscape with very few, if any detracting elements.
Medium	Locally recognised view, or unrecognised but pleasing and well composed view, with few detracting elements.
Low	Typical or poorly composed view, often with numerous detracting elements.

11.4.14 Visual susceptibility relates to the importance of views to receptors at a certain location and is informed by the type of receptor and the activity with which they are engaged. This considers the extent to which receptors' attention or interest is focused on the view or visual amenity. For example, residents in their home, walkers whose interest may tend to be focused on the landscape or a particular view, or visitors at an attraction where views are an important part of the experience, may indicate a higher level of susceptibility. Whereas, receptors occupied in outdoor sport where views are not important or at their place of work could be considered less susceptible to change. Visual susceptibility has been determined with reference to the three point scale and criteria outlined in the Table 11.5 Visual Susceptibility Criteria, below.

Table 11.5 Visual Susceptibility Criteria

Classification	Criteria
High	Locations where the view is of primary importance and receptors are likely to notice even minor change.
Medium	Locations where the view is important but not necessarily the primary focus and receptors are tolerant of some change.
Low	Locations where the view is incidental or unimportant to receptors and tolerant of a high degree of change.

11.4.15 Visual sensitivity to change has been determined by employing professional judgement to combine and analyse the identified value and susceptibility and has been defined with reference to the three point scale outlined in Table 11.6 Sensitivity of Visual Receptors below. In combining susceptibility and value it is generally accepted that a combination of high susceptibility and high value is likely to result in the highest sensitivity, whereas a low susceptibility and low value is likely to result in the lowest level of sensitivity.

Table 11.6 Sensitivity of Visual Receptors

Classification	Criteria
High	Locations where receptors experience an impressive or well composed view containing few detracting elements, with limited ability to absorb change.
Medium	Locations where receptors experience a valued view which generally represents a pleasing composition but may include some detracting features and is tolerant of a degree of change.
Low	Locations where the view is incidental or not important to the receptors and the nature of the view is of limited value or poorly composed with numerous detracting features and is tolerant of a large degree of change.

Landscape Magnitude of Change

11.4.16 The magnitude of landscape change refers to the extent to which the Development would alter the existing characteristics of the landscape. Changes to landscape characteristics can be both direct and indirect.

11.4.17 Magnitude of landscape change refers to the extent to which the Development would alter the existing characteristics of the landscape. It is an expression of the size or scale of change to the landscape, the geographical extent of the area influenced and its duration and reversibility. The variables involved are described below:

- The extent of existing landscape elements that would be lost, the proportion of the total extent that this represents and the contribution of that element to the character of the landscape;
- The extent to which aesthetic or perceptual aspects of the landscape are altered either by removal of existing components of the landscape or by addition of new ones;
- Whether the change alters the key characteristics of the landscape, which are integral to its distinctive character;

- The geographic area over which the change will be felt (within the application boundary itself, the immediate setting, at the scale of the landscape character area, on a larger scale influencing several landscape character areas); and
- The duration of the change short term, medium term or long term and its reversibility (whether it is permanent, temporary or partially reversible).

11.4.18 Magnitude of landscape change has been evaluated with reference to Table 11.7 Magnitude of Landscape Change below ranging from higher to lower levels of magnitude described using a four point scale (**high, medium, low, very low**).

Table 11.7 Magnitude of Landscape Change

Size or Scale of Change	Geographical Extent	Duration	Reversibility
Highly noticeable change, affecting many key characteristics and dominating the experience of the landscape; and introduction of highly incongruous development	Very extensive affecting several landscape types or character areas.	Long-term (10 years +)	Irreversible
Noticeable change, affecting some key characteristics and the experience of the landscape; and introduction of some uncharacteristic elements.	Affecting a substantial proportion of the landscape character area.	Medium-term (5-10 years)	Partially reversible
Minor change, affecting some characteristics and the experience of the landscape to an extent; and introduction of elements that are not uncharacteristic	Affecting the immediate setting of the Project Site.	Short-term (0-5 years)	Reversible
Little perceptible change	Limited to within the Development application boundary.	Short-term (0-5 years)	Reversible

Visual Magnitude of Change

11.4.19 Visual magnitude of change relates to the extent to which the Development would alter the existing view and is an expression of the size or scale of change in the view, the geographical extent of the area influenced and its duration and reversibility. The variables involved are described below:

- The scale of the change in the view with respect to the loss or addition of features in the view and changes in its composition, including the proportion of the view occupied by the Development;
- The degree of contrast or integration of any new features or changes in the form, scale, composition and focal points of the view;
- The nature of the view of the Development in relation to the amount of time over which it will be experienced and whether views will be full, partial or glimpsed;

- The angle of view in relation to the main activity of the receptor, distance of the viewpoint from the Development and the extent of the area over which the changes would be visible; and
- The duration of the change short term, medium term or long term and its reversibility (whether it is permanent, temporary or partially reversible).

11.4.20 Visual magnitude of change has been evaluated with reference to Table 11.8 Magnitude of Visual Change, ranging from higher to lower levels of magnitude described using a four point scale (**high, medium, low, very low**).

Table 11.8 Magnitude of Visual Change

Size or Scale of Change	Geographical Extent	Duration	Reversibility
Extensive change to the existing view including the loss of existing characteristic features, and/or introduction of new discordant features. A change to an extensive proportion of the view. Views where the Development would become the dominant landscape feature or contrast heavily with the current view.	The Development is located in the main focus of the view; and or at close range over a large area.	Long-term (10 years +)	Irreversible
The Development will result in a change to the view but not fundamentally change its characteristics. Changes that would be immediately visible but not the key feature of the view.	Changes where the Development is located obliquely to the main focus of the view; and/or at medium range; and/or over a narrow area.	Medium-term (5-10 years)	Partially reversible
The Development would result in a small change to the composition of the view. Changes that would only affect a small portion of the view or introduce new features that were partially screened.	Changes where the Development is located on the periphery to the main focus of the view; and/or long range; and/or over a small area.	Short-term (0-5 years)	Reversible
Little perceptible change in the existing view.	Changes where the Development is peripheral to the overall view.	Short-term (0-5 years)	Reversible

Significance of Landscape Effect

11.4.21 Determination of the significance of landscape effects has been undertaken by employing professional judgement and experience to combine and analyse the magnitude of change, against the identified sensitivity of the receptor. The assessment takes account of direct and indirect change on existing landscape elements, features and key characteristics and evaluates the extent to which these would be lost or modified, in the context of their importance in determining the existing baseline character.

11.4.22 The levels of landscape effects are described with reference to the four point scale outlined in Table 11.9 Significance of Landscape Effect, below.

Table 11.9 Significance of Landscape Effect

Classification	Criteria
Major	Considerable change over an extensive area of a more sensitive landscape, fundamentally affecting the key characteristics and the overall impression of its character.
Moderate	Small or noticeable change to a more sensitive landscape or more intensive change to a less sensitive landscape, affecting some key characteristics and the overall impression of its character.
Minor	Small change to a limited area of more sensitive landscape or a more widespread area of a less sensitive landscape, affecting few characteristics and not altering the overall impression of its character.
Negligible	Scarcely any perceptible change to the existing landscape.

11.4.23 Following the classification of an effect as detailed in Table 11.9 Significance of Landscape Effect, a clear statement is made as to whether the effect is ‘significant’ or ‘not significant’. As a general rule, major and moderate effects are considered to be significant and minor and negligible effects are considered to be not significant. However, professional judgement is also applied where appropriate.

Significance of Visual Effect

11.4.24 Determination of the significance of visual effects has been undertaken by employing professional judgement and experience to combine and analyse the magnitude of change against the sensitivity of the receptor. The assessment takes into account likely changes to the visual composition, including the extent to which new features would distract or screen existing elements in the view or disrupt the scale, structure or focus of the existing view.

11.4.25 The levels of visual effects are described with reference to the four point scale outlined in Table 11.10 Significance of Visual Effect below.

Table 11.10 Significance of Visual Effect

Classification	Criteria
Major	Substantial loss, alteration or replacement of existing components which causes a very noticeable change in the existing view.
Moderate	Whilst some existing characteristic components of the existing view remain, there is a noticeable change in the overall composition.
Minor	The Development would be visible in the view but would form a small component and the majority of the view would be unaffected.
Negligible	The Development would be scarcely perceptible in the existing view.

11.4.26 Following the classification of an effect as detailed in Table 11.10 Significance of Visual Effect, a clear statement is made as to whether the effect is ‘significant’ or ‘not significant’. As a general rule, major and moderate effects are considered to be significant and minor and negligible effects are considered to be not significant. However, professional judgement is also applied where appropriate.

11.5 References

Ref 11.1 Landscape Institute and Institute of Environmental Assessment and Management. (2013). *Guidelines for Landscape and Visual Impact Assessment*, 3rd Edition (GLVIA3).

