



Appendix 9.1: LVIA Methodology

Introduction

The Landscape and Visual Impact Assessment (LVIA) will consider the potential effects of the development upon:

- Individual landscape/townscape features and elements;
- Landscape/Townscape character and quality (condition); and
- Visual amenity and the people who view the landscape.

Distinction between Landscape and Visual Impacts

Landscape and visual effects are two distinct but related areas, which will be assessed separately in accordance with the approach outlined below. Landscape and visual impacts do not necessarily coincide and can be beneficial or adverse. A clear distinction will be drawn between landscape and visual impacts as follows:

- Landscape impacts relate to the effects of the proposal on the physical and other characteristics of the landscape and its resulting character and quality; and
- Visual impacts relate to the effects on views experienced by visual receptors (e.g. residents, footpath users, tourist's etc.) and on the visual amenity experienced by those people.

Guidance

The LVIA of the proposed scheme will be undertaken by a Landscape Architect with experience of similar types of development. The assessment will be undertaken in accordance with best practice outlined in published guidance:

- Guidelines for Landscape and Visual Impact Assessment, 3rd Edition (2013) Landscape Institute and the Institute for Environmental Management and Assessment;
- Landscape Character Assessment Guidance for England and Scotland (2002) The Countryside Agency and Scottish Natural Heritage; and
- Guidelines for Environmental Impact Assessment (2004) Institute for Environmental Management and Assessment.

LVIA Methodology

The LVIA will be undertaken in the following stages:

- Baseline data collection via desk-top, consultation and fieldwork;

- Description of the baseline landscape character and visual amenity of the site and surrounding area which identify the relevant landscape and visual receptors (including key viewpoints) and determine their sensitivity to change;
- Description of the magnitude of change in the landscape and visual amenity as a consequence of the proposal;
- Description of the potential landscape and visual impacts arising from the proposal; and
- Development of strategic mitigation proposals to assist in reducing adverse landscape and visual effects or provide compensation where unavoidable, and where possible enhance and safeguard beneficial effects.

Baseline information regarding landscape features and sensitive visual receptors, and the likely change in the landscape character and visual amenity of the site and its surroundings, will be used to identify potential impacts and inform the final scheme as appropriate.

Strategic mitigation measures will be developed in tandem with the proposal to minimise adverse impacts as part of an iterative design process. Options for screening various components of the scheme will be investigated and adopted as mitigation measures where appropriate.

Criteria thresholds for assessing the degree of change as a result of the scheme will be established and the final layout of the scheme will be reviewed to ascertain the magnitude of change in the landscape and in views. Visual impact on historic features of interest may also need to be assessed.

Sensitivity of Receptors, Magnitude of Change and Significance of Effects

The significance of effects of the proposal on both the landscape and visual receptors within the study area are ascertained by cross-referencing the sensitivity of the baseline landscape or visual receptor and the magnitude of change as a result of the development.

The sensitivity of landscape and visual receptors is judged as high, medium or low. The magnitude of change is also judged to be negligible, low, medium or high. Significance of effects is expressed as either slight, moderate or substantial, which may be either beneficial or adverse, or neutral.

Study Area

For the purposes of this LVIA, a 2.5km study area from the centre of the site has been used as a boundary to assess the effects of the proposals. 2.5km has been considered in acknowledgement of the scale of the proposals, the undulating nature of the local topography and the extent of vegetation cover within the immediate environs. This is not to say that there will not be views of the site from outside this study area; however, it is considered that more distant views are likely to be limited and in any event the development would only be seen as a small element of a wider panorama.

Visual Envelope

The visual envelope of a scheme defines the broad area from within which it may be possible to see the whole or part of the proposed development, and helps to establish the potential for sensitive visual receptors. The site is not considered to be visible outside this area or will be very difficult to perceive, except from occasional tall buildings or higher elevations. There will however still be pockets within the visual envelope from which there are no views of the study area, due to the local screening effects of vegetation and topography or other features such as buildings. Landscape features, which form visual barriers and restrict views towards parts of the study area, such as landform, settlements and woodland, can then be evaluated and significant barriers identified to refine the baseline visibility of the proposal.

Representative Viewpoints

Within the extent of the visual envelope, it would not be practical to illustrate the visual impact on every individual visual receptor affected by a scheme. Therefore, representative viewpoints will be used to assess the impacts on the different range of views towards the site. Viewpoints will be illustrated photographically using a 56mm lens digital SLR camera and the site location and significant features will be identified together with landmarks and features in the surrounding area. All photography carried out as part of this assessment is in accordance with LI Advice Note 01/11 (March 2011).

A provisional list of representative viewpoints and a plan demonstrating their locations were provided to Andrew Burton, the Senior Planning Officer at Barnsley Metropolitan Borough Council (e-mail dated 17.02.2014) for the previous application 2014/0559. The correspondence with Mr Burton included a request for an opinion on the suitability of the viewpoints. Mr Burton replied stating that the viewpoints were appropriate; however he asked that we included a viewpoint in the northern extents of Darfield as this was anticipated to be a sensitive receptor.

Given that the proposed development is similar to, albeit slightly smaller than, the previous application it was not considered necessary to re-consult on the location and number of representative viewpoints, although new photographs would be taken to ensure that any change in views in the intervening 18-months are considered.

Temporal Scope

2014 has been taken as the baseline year for defining the existing landscape. The relevant impacts of the development will be assessed at the following times:

- During construction;
- Year 1:- one year after opening (Opening Year) to assess the impacts once the major construction is complete; and
- Year 15:- fifteen years after opening (Design Year) to allow for any mitigation planting and other landscape schemes to mature to give the intended effect.



Desk Studies:

The baseline landscape and visual assessment comprised a desktop study of the following data sources:

- The Google Earth website at www.earth.google.com;
- The Multi-Agency Geographical Information for the Countryside website at www.magic.gov.uk;
- National Planning Policy Framework (NPPF); Department for Communities and Local Government (2012);
- Ordnance Survey Explorer Map; 1:2500, Sheffield and Barnsley 278
- Barnsley Unitary Development Plan [2000], Barnsley City Council
- The Regional Spatial Strategy for Yorkshire and The Humber [2008]
- National Character Area Profile 38: Nottinghamshire, Derbyshire and Yorkshire Coalfield [2013], Natural England

Field Studies:

The site was visited on December 19th 2013, March 3rd 2014 and 16th January 2015 to obtain the following data:

- Photographs from proposed Representative Viewpoints:
- A corroboration of the findings of the desktop review; and
- To obtain additional information on landscape features, views and localised screening barriers.

All site surveys were undertaken during periods of clement weather from public highways, public rights of way (PRoW) and publically accessible areas, including areas of public open space.

Landscape Assessment Methodology

Landscape Sensitivity

A judgement regarding the sensitivity of the landscape will be made based on the following general criteria:

Table 1: Landscape Sensitivity Criteria

Sensitivity	Criteria
Low	A landscape of few positive characteristics, poor condition or one that is not particularly valued for its scenic quality. The character of the landscape, existing land use, pattern and scale are tolerant of change and offer considerable opportunities for successful mitigation and landscape enhancement. The landscape may be a poor example of a locally abundant landscape type.
Medium	A landscape that exhibits some distinctive characteristics but may have been slightly degraded or one that is moderately valued despite its alteration. The character of the landscape, land use, pattern and scale offers some opportunities for successful mitigation and landscape enhancement. The landscape may be a poor example of a locally scarce landscape type or a good example of a locally abundant landscape type. Locally designated landscapes.
High	A landscape of particularly distinctive characteristics, maintained in a good condition or one that is particularly valued for its scenic quality. The character of the landscape, existing land use, landscape features, pattern and scale are intolerant of change and offer few opportunities for successful mitigation or landscape enhancement. The landscape may be a good example of a locally scarce landscape type. Nationally designated landscapes.

Magnitude of Landscape Change

A judgement regarding the magnitude of change to landscape features and character will be made based on the following general criteria:

Table 2: Magnitude of landscape Change Criteria

Magnitude of Change	Criteria
High	<p>Total loss of or severe damage to key characteristics, features or elements of the landscape</p> <p>Introduction of highly unnatural or unattractive features into the landscape which do not fit well with the existing character</p> <p>Major improvement or removal of several notable existing features or characteristics that significantly detract from the existing character</p> <p>Introduction of major new features or elements into the landscape which significantly improve the existing character</p>
Medium	<p>Partial loss of or damage to key characteristics, features or elements of the landscape</p> <p>Introduction of some unnatural features into the landscape but which may be accommodated without major detriment to the existing character.</p> <p>Moderate improvement or removal of some existing features or characteristics that currently detract from the existing character</p> <p>Introduction of some new features or elements into the landscape which moderately improve the existing character</p>
Low	<p>Minor loss of or alteration to one or more key characteristics, feature or elements of the landscape</p> <p>Introduction of minor unnatural features into the landscape which do not detract significantly from the existing character</p> <p>Minor improvement or removal of a small existing feature or characteristic that slightly detracts from the existing character</p> <p>Introduction of minor new features or elements into the landscape which slightly improve the existing character</p>
Negligible	<p>No notable loss or alteration of any key characteristics, features or elements of the landscape</p> <p>No notable new features introduced into the landscape</p>

Visual Assessment Methodology

Visual Sensitivity

The sensitivity of visual receptors will depend on a number of factors including: the location and context of the viewpoint, the expectations and occupation of the visual receptor, the number of receptors being represented by the viewpoint and distance from the scheme. The extent of visual intrusion by any existing development may also affect the sensitivity of visual receptors in this vicinity. A judgement will be made regarding the sensitivity of baseline receptor views based on a combination of these factors. The sensitivity of the following visual receptors is given as a guide only and other factors may also affect their sensitivity:

Table 3: Visual Sensitivity Criteria

Sensitivity	Criteria
Low	Users of industrial sites, offices and commercial properties. Users of A and B roads (except on key tourist trails). Users of active recreational and leisure facilities where the focus is on the activity and not the landscape. Community buildings in an urban location.
Medium	Residential properties with restricted views, distant and panoramic views, oblique views, limited/partially screened views towards the scheme or surrounded by urban development. Community buildings with a rural view. Users of Public Rights of Way and local 'C' class roads, unclassified lanes, tracks used by non-motorised users and users of outdoor recreational facilities and public open space with restricted views towards the scheme, distant views or with views of existing urban development. Users of local and regional tourist routes ('A' and 'B' class roads).
High	Residential properties with predominantly open rural views from the curtilage, ground floor and upper floors directly towards the scheme. Users of Public Rights of Way and local 'C' class roads, unclassified lanes, tracks used by non-motorised users which traverse open countryside with predominantly open views towards the scheme. Users of recognised vistas and designated viewpoints. Users of outdoor recreational facilities and public open space with open views towards the scheme at close proximity.

Magnitude of Visual Change

A judgement regarding the magnitude of change to visual amenity and Key Views will be made based on the following general criteria:

Table 4: Magnitude of Visual Change Criteria

Magnitude of Change	Criteria
High	A significant deterioration or improvement in the existing view
Medium	A noticeable deterioration or improvement in the existing view
Low	A barely perceptible deterioration or improvement in the existing view
Negligible	No discernible deterioration or improvement in the existing view

Evaluation of Landscape and Visual Impact Significance

The evaluation of residual impact significance will take into account all agreed landscape and visual mitigation measures. The significance of impacts will be graded by relating the sensitivity of the baseline landscape or view to the magnitude of change as a result of the proposed development. The following matrix outlines approximately how the significance of adverse and beneficial impacts will be determined. The criteria thresholds are for approximate guidance only, the assessment of landscape and visual impact significance will rely upon clearly explained professional judgement.

Table 5: Significance of Landscape/Visual Impacts

Sensitivity of Landscape/View	Magnitude of Change in the Landscape/View			
	High	Medium	Low	Negligible
High	Substantial	Substantial/ Moderate	Moderate/Slight	Neutral
Medium	Substantial/ Moderate	Moderate	Slight	Neutral
Low	Moderate/ Slight	Slight	Slight	Neutral