

Annex D

Study Specific Criteria for Assessing Social Impacts

This *Annex* presents the criteria for assessing social (including socio-economic, landscape and visual and cultural heritage) impacts as part of the Yara Dallol Potash ESIA.

The overall approach to the rating and evaluation of environmental impacts (including air quality and noise impacts) is presented in *Chapter 6* (of *Part I* of the ESIA); however, this *Annex* describes the impact criteria used to define social sensitivities.

The specific objectives of this section are to define magnitude, sensitivity / vulnerability and significance for social (including socio-economic, visual and landscape and cultural heritage) disciplines.

D1.1

SOCIO-ECONOMIC

This *Section* provides the criteria for assessing social (including community health) impacts as part of the Yara Dallol Potash ESIA. The overall approach to the rating and evaluation of impacts is provided within *Chapter 6* of the overall ESIA (*Part I* of the ESIA). The specific objectives of this section are to:

- Provide a framework for determining the **vulnerability** of receptors to potential social impacts by assessing social sensitivities and those receptors who may be more vulnerable to impacts and less able to adapt to change.
- Provide criteria that help to determine the **magnitude** of change in social conditions potentially brought on by a social impact.
- Provide criteria that evaluate the **significance** of potential social impacts, which is a combination of the above elements and includes consideration of the acceptability of the change to stakeholders and the local regulatory framework.

This *Annex* is divided into the following sections:

- **Section D1.2** defines vulnerability and provides a framework for identifying key social sensitivities and groups that may be more vulnerable or less resilient to change;
- **Section D1.3** defines and provides a methodology for assessing the magnitude of social impacts; and
- **Section D1.4** provides an approach and relevant definitions for rating the significance of social impacts.

For the purposes of this clarity the definition of the term 'social' when referring to social impacts is discussed in *Box 1.1*.

Box 1.1 ***Defining 'Social'***

For the purposes of this *Annex* it is understood that the term 'social' when referring to social impacts includes impacts received by the following aspects:

- Settlements, dispersed communities, solitary dwellings and mobile / semi-mobile groups (including temporary and permanent human residents with both formal and informal tenure of land/structures);
- Population dynamics including population size, structure, settlement pattern and migration;
- Tangible and intangible cultural heritage sites and items, including archaeological heritage;
- Ecosystem services, including provisioning services, regulating services, supporting services and cultural services used by human receptors;
- Social infrastructure including both tangible (i.e. schools, community centres, electricity lines, water pipes) and intangible items (i.e. meeting places, shaded areas);
- Individual and communally owned assets (i.e. farm animals and/or grazing land);
- Livelihoods, formal and informal businesses;
- Community groups including civil society groups;
- Gender;
- Human rights;
- Employee and worker labour, accommodation and working conditions; and
- Community health, safety and security (including wellbeing).

D1.2 ***DETERMINING VULNERABILITY FOR SOCIAL RECEPTORS***

A vulnerable individual or group is one that could experience adverse impacts more severely than others, or have a limited ability to take advantage of positive impacts, due to a vulnerable or disadvantaged status. *Box 1.2* provides some common definitions of vulnerable groups.

Vulnerable Groups (ref: World Bank Glossary of Terms).

"This denotes a condition characterised by higher risk and reduced ability to cope with shock or negative impacts. It may be based on socio-economic condition, gender, age, disability, ethnicity, or other criteria that influence people's ability to access resources and development opportunities. Vulnerability is always contextual, and must be assessed in the context of a specific situation and time..."

Vulnerable Groups (ref: IFC Performance Standards).

"...individuals and groups that may be directly and differentially or disproportionately affected by the project because of their disadvantaged or vulnerable status. This disadvantaged or vulnerable status may stem from an individual's or group's race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth, or other status. The client should also consider factors such as gender, age, ethnicity, culture, literacy, sickness, physical or mental disability, poverty or economic disadvantage, and dependence on unique natural resources."

Vulnerability is a pre-existing status that is independent of the Project. The Project could however, exacerbate these vulnerabilities if existing sensitivities and coping mechanisms are not adequately understood or considered.

Heightened vulnerability may be caused by an existing low level of access to key socio-economic/cultural, health or bio-physical resources or a low status in certain socio-economic/cultural or health resources. More vulnerable receptors will tend to lack natural resources, services and infrastructure, skills and livelihoods options, and rights and access to decision making that could help them to respond to or manage changes. Often this vulnerability can be exacerbated if rights to resources and services are not recognised or protected.

An assessment of the levels of access to key socio-economic/cultural, health or environmental resources or a low status in certain socio-economic/cultural or health conditions will be context specific, comparing to local, regional and national Ethiopian averages.

D1.2.1

Assessing Levels of Vulnerability for the ESIA

Table 1.1 shows a matrix that was used to identify potentially vulnerable receptors according to sensitivity. This reflects vulnerability resulting from an absence of a variety of socio-economic/cultural, health or bio-physical resources.

The table may identify receptors that are only vulnerable in relation to an absence of individual or limited numbers of socio-economic/cultural, health or bio-physical resources, or those receptors that are vulnerable across many resource areas. This may result in the identification of receptors that are vulnerable to only a certain type of impacts; e.g. some receptors may demonstrate vulnerability to socio-economic or livelihood impacts but not to health or service / infrastructure impacts.

Table 1.1 Matrices for Identifying Vulnerable Receptors

	Socio-Economic/Cultural or Bio-physical Resources	Specific Considerations	Assessing Vulnerability of Receptors
Receptors Access to:	Livelihoods	Diversity of livelihoods	<ul style="list-style-type: none"> • Reliance on one principal livelihood? • Principal livelihoods are unsustainable, fragile or lack legal backing? • Principal livelihoods are relatively unproductive and/or highly seasonal?
		Legality of livelihood	
		Productivity of livelihood	
	Natural Resources / Ecosystem Services	Water	<ul style="list-style-type: none"> • Heavily dependent on a particular resource, with few alternatives available? • Resource shortages are frequent and serious? • Key species or areas depended upon for goods or services are legally protected and use is illegal? • Resources are controlled by an influential organisation or individual and access is not guaranteed? • Low availability of alternatives for a number of important ecosystem services?
		Ecosystem Services	
		Non-Timber Forest Products	
		Land	
		Regulating services including flood and erosion control	
	Services and Infrastructure	Health	<ul style="list-style-type: none"> • Minimal access to services and infrastructure? • Provision of key services and infrastructure is poor? • Lack of awareness of rights for services?
		Education	
Transport			
Recreation			
Savings and support networks			
Fair Policing and Security			
Participation in Political and Civil Institutions and Decision Making	Freedom of association	<ul style="list-style-type: none"> • Minimal ability to participate in orthodox governance and decision making systems? • Subject to high levels of corruption? • Restrictions on rights of association, ability to participate freely in governance? • Traditional governance systems not recognised? 	
	Freedom from corruption		
	Rights / ability to participate in decision making		
Community and Social Inclusion and Cohesion	Security	<ul style="list-style-type: none"> • Subject to marginalisation and discrimination? • Subject to violence and conflict? 	
	Freedom from inter and intra community conflict		
Receptors status for:	Health	Health status including malnutrition, infectious diseases, disability etc.	<ul style="list-style-type: none"> • Suffer from acute / chronic illness? • Frequent incidence of health problems? • High rates of maternal/child mortality?
	Knowledge, Skills and Education	Levels of knowledge skills and education	<ul style="list-style-type: none"> • Low levels of literacy? • Low rates of school attendance? • Low levels of education levels achievement?
		Ability to participate in orthodox economic and social systems.	
	Financial resources	Income generation	<ul style="list-style-type: none"> • Low levels of income levels relative to expenditure? • Low ability to pay for food, key services, resources and infrastructure? • Limited access to savings, loans, banking, and financial support systems?
		Savings	
	Independent Cultural Identity	Desire to maintain strong independent cultural identity.	<ul style="list-style-type: none"> • Cultural identity not understood by the mainstream? • Minority cultural identity is discriminated against? • Receptors have relatively limited interaction with predominant cultural systems?
		Desire to avoid all socio-cultural change	
	Labour and Human Rights	Human Rights	<ul style="list-style-type: none"> • Presence of contractors? • Minimal labour right regulation? • Poor track record of recognition of human rights?
		Child and Child Labour	
		Right to association	
H&S and accommodation standards			
Minimum wages etc.			

Receptors will be considered vulnerable in the context of their immediate surroundings and should be considered against existing pre-project baseline levels; because of this there are usually some vulnerable receptors within a given Project Area.

D1.2.2 *Ranking Levels of Vulnerability*

As part of the social impact assessment process ERM will consider the topic area of the social impact being considered and calculate the vulnerability of receptors according to the specific impact area; receptor sensitivity may therefore be ranked differently for different impacts that are assessed.

Table 1.2 shows exemplar descriptions of the level of vulnerability of receptors to positive and negative impacts. The transitional colour scheme is designed to show that levels of vulnerability are often fluid and moving and may not be a 'hard' quantitative definition.

Table 1.2 *Levels of Vulnerability*

Level of Vulnerability	Definition for Negative Impacts
Low	Minimal areas of vulnerabilities; consequently with a high ability to adapt to changes brought by the project.
Medium	Few areas of vulnerability; but still retaining an ability to at least in part adapt to change brought by the project
High	Profound or multiple levels of vulnerability that undermine the ability to adapt to changes brought by the project.

It should be noted that levels of vulnerability of receptors to impacts related to ecosystem services, although assessed using the same technique, will be defined differently. Please see the ecosystem services impact assessment methodology for further details.

Vulnerability to impacts related to human health will consider health vulnerability including access to healthcare, amenities, services and support networks as well as levels of poverty and education.

D1.3 *RATING MAGNITUDE OF IMPACTS*

D1.3.1 *Defining Magnitude for Social and Health Impact Assessment*

Magnitude of social and health impacts is understood as a reflection of the 'size' of change caused by social impacts ⁽¹⁾. As discussed in the Impact Assessment Methodology Section (*Chapter 6* of the ESIA [*Part I*]) magnitude is a function of the following:

⁽¹⁾ Noting that size does not equate to significance.

- Extent;
- Duration;
- Scale; and
- Frequency.

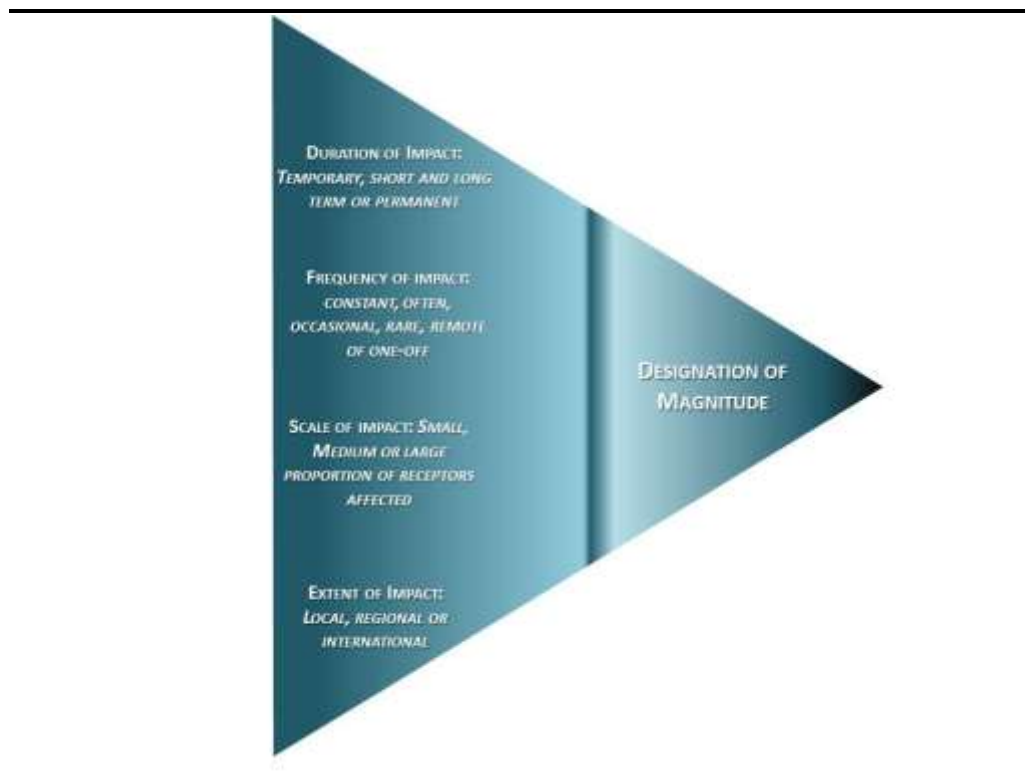
D1.3.2 *Assessing Magnitude for Social and Health Impacts*

The following sections provide guidance of how to determine magnitude in terms of assessing social and health impacts.

- **Extent** for social impacts is the geographic ‘reach’ of the impact; this may include reference to a local, regional or international scale. This takes into account the proportion of the households or communities potentially affected by the change.
- **Duration** for social impacts is the timeframe over which an impact will be experienced, this may include temporary, short-term, long-term and permanent. An impact that lasts for only a short time, for example for a few months, would tend to be small duration, while one that persisted for the lifetime of the Project would tend to be a large duration
- **Scale** for social impacts is the degree of change at a household or community level to livelihoods and quality of life. For example, an impact that leads to a fundamental change in the way of life of people or to the nature of relationships within a community or to the livelihood patterns would tend to be large, whilst one that resulted in only subtle changes in conditions would be small.
- **Frequency** for social impacts is the constancy or periodicity of an impact. For example an impact that incurs constantly would have a high frequency while an impact that occurs as a one off occurrence would have a low frequency. The designation for frequency is constant (is a permanent occurrence), often (occurs at least once a month), occasional (occurs at least once every six months), rare (occurs about once a year), remote (occurs periodically less often than once a year) or one-off.

Figure 1.1 shows a representation of how the assessment of impact characteristics should culminate in a rating of magnitude based on past experience and expert judgement.

Figure 1.1 Assessing Level of Magnitude



D1.3.3 Ranking Levels of Magnitude

Table 1.3 shows exemplar descriptions of the different designations of magnitude.

Table 1.3 Designation of Magnitude

Designating Magnitude	Definition
Negligible	Change remains within the range commonly experienced within the household or community.
Small	Perceptible difference from baseline conditions. Tendency is that impact is local, rare and affects a small proportion of receptors and is of a short duration.
Medium	Clearly evident difference from baseline conditions. Tendency is that impact affects a substantial area or number of people and/or is of medium duration. Frequency may be occasional and impact may be regional in scale.
Large	Change dominates over baseline conditions. Affects the majority of the area or population in the area of influence and/or persists over many years. The impact may be experienced often and national or international in scale.

D1.4 **RATING SIGNIFICANCE**

D1.4.1 ***Evaluating Significance for Social Impacts***

The significance of social impacts is evaluated taking into account the magnitude of the impact and the vulnerability of affected receptors. The approach to calculating significance is established in the Impact Assessment Methodology defined in *Chapter 6* of the ESIA (*Part I* of the ESIA). *Figure 1.2* shows how to calculate negative social impacts and includes the definitions of vulnerability and magnitude designations specifically for rating significance for social impacts.

Figure 1.2 Designating Significance Ratings for Social Impacts

Negative impacts					
			Vulnerability of Receptors		
			Low	Medium	High
			Minimal areas of vulnerabilities; consequently with a high ability to adapt to changes brought by the project.	Few areas of vulnerability; but still retaining an ability to at least in part adapt to change brought by the project.	Profound or multiple levels of vulnerability that undermine the ability to adapt to changes brought by the project.
Magnitude of Impact	Negligible	Change remains within the range commonly experienced within the household or community.	Negligible	Negligible	Negligible
	Low	Perceptible difference from baseline conditions. Tendency is that impact is local, rare and affects a small proportion of receptors and is of a short duration.	Negligible	Minor	Moderate
	Medium	Clearly evident difference from baseline conditions. Tendency is that impact affects a substantial area or number of people and/or is of medium duration. Frequency may be occasional and impact may be regional in scale.	Minor	Moderate	Major
	Large	Change dominates over baseline conditions. Affects the majority of the area or population in the area of influence and/or persists over many years. The impact may be experienced often and national or international in scale.	Moderate	Major	Major

D1.4.2 *Involving Stakeholders, Policy and Planning and Perceptions into Significance Rating*

Change brought about by the Project needs to be reflected within the frame of reference of the local setting as articulated in stated policy or development objectives and / or the views and perceptions of the local people. For example:

- Owners of holiday homes looking for a peaceful retreat typically consider noise and disturbance caused by construction to be more severe than communities in developing countries that are anxious to see signs of change and development in their area.
- Communities with strong cultural identity and norms may be more greatly disturbed by a non-local workforce than holiday makers in a cosmopolitan location.

The ESIA process will seek ways to bring stakeholders' views on impacts explicitly into the evaluation, for example by reporting the results of stakeholder workshops, including quotes from consultation or public meetings required by law etc.

Stakeholder views and priorities will be integrated specifically into the assessment by increasing significance ratings where necessary based on expert judgement and experience.

It is common that the public may have the perception that an impact is different (either lower or higher) than will actually be the case. This is commonly referred to as a perceived impact. Perceived impacts will be captured, but will be clearly differentiated to 'actual' impacts as evaluated in the standard methodology. Where the effect of impacts are perceived to be more critical than has been assessed in the impact assessment they will be evaluated separately. Relevant mitigation is likely to focus around, for example, strengthening aspects of awareness raising, project communication and engagement, participation in project development and participative monitoring.

D1.4.3 *Ranking Levels of Significance*

Table 1.4 shows exemplar descriptions of the different designations of significance for social impacts.

Table 1.4 *Defining Significance Designations*

Significance	Negative Social Impacts	Negative Health Impacts
Negligible	Inconvenience caused but with no long-term consequences on long-term livelihoods, culture, quality of life, resources, infrastructure and services.	Annoyance, minor inquiry or illness that does not require treatment.
Minor	Impacts are confined to an area around the project. Primary and secondary impacts caused on livelihoods, culture, quality of life, resources, infrastructure and services.	Some exposure to communicable diseases to workers and population around the project, as well as risks from project activities that may expose the community to accidents and injuries risks.
Moderate	Some adverse impacts; can be reversed or compensated, but significant residual impacts remain. Impact is widespread and will be difficult for receptors to reverse or compensate for.	High risks to diseases, injuries as well as exposure to project operational risks to both workers as well as local community.
Major	Diverse primary and secondary impacts that will be impossible to reverse or compensate for; will lead to widespread impoverishment, or societal breakdown.	Loss of life, severe injuries or chronic illness requiring hospitalisation. Exposure to and incidence of diseases not common previously in the area.

Due to the specific requirements involved in assessing potential impacts to cultural heritage the criteria that were used to determine the sensitivity of cultural heritage resources are detailed in *Table 1.5*. The sensitivity of cultural heritage resources is based on its perceived scientific, historical, and cultural importance to stakeholders. These values are determined through a review of relevant scientific publications; applicable local, regional, national, and international cultural heritage legislation; and guidance found in the IFC PS8, particularly the concepts of replicable, non-replicable, and critical cultural heritage described in IFC PS8.

Table 1.5 Cultural Heritage Site Sensitivity Characteristics

Cultural Heritage Site Sensitivity	Defining Characteristic(s)
Low	Site is not specifically protected under local, national, or international laws or treaties; Site can be moved to another location or replaced by a similar site, or is of a type that is common in surrounding region; site has limited or no cultural value to local, national or international stakeholders; and/or site has limited scientific value or similar information can be obtained at numerous sites. Replicable cultural heritage.
Medium	Site is specifically or generically protected by local or national laws but laws allow for mitigated impacts; Site can be moved or replaced, or data and artefacts recovered in consultation with stakeholders; Site has considerable cultural value for local and/or national stakeholders; and/or site has substantial scientific value but similar information can be obtained at a limited number of other sites. Non-replicable cultural heritage.
High	Site is protected by local, national, and international laws or treaties; site cannot be moved or replaced without major loss of cultural value; legal status specifically prohibits direct impacts or encroachment on site and/or protection zone; Site has substantial value to local, national, and international stakeholders; and/or site has exceptional scientific value and similar site types are rare or non-existent. Critical cultural heritage.

Moreover *Table 1.6* provides the definitions for cultural heritage site sensitivity levels.

Table 1.6 Cultural Heritage Site Sensitivity Definitions

Cultural Heritage Site Sensitivity Level	Definition
Low	Site is not protected under local, national, or international laws or treaties; site has limited or no cultural value to local, national, or international stakeholders; site has limited scientific or social value or similar information or social functionality is available at numerous other sites in the region.
Medium	Site is protected by local or national laws but laws allow for mitigated impacts; Site can be moved or replaced in consultation with stakeholders; Site has considerable cultural value for local and/or national stakeholders; Site has substantial scientific value but similar information can be obtained at a limited number of other sites in the region.
High	Site is protected by local, national, and international laws or treaties; Site cannot be moved or replaced without significant loss of cultural value; Site has substantial value to local, national, and international stakeholders; site has exceptional scientific value and similar site types are rare or non-existent.

D1.6 LANDSCAPE AND VISUAL

In the absence of any specific landscape and visual impact assessment guidelines in Ethiopia, this landscape and visual impact assessment has been prepared in accordance with good practice and also incorporates the assessment methodology as described in the Guidelines for Landscape and Visual Impact Assessment ⁽¹⁾ produced jointly by the UK Landscape Institute and the Institute of Environmental Management and Assessment (IEMA). This methodology is applicable both to the assessment of short term impacts during the construction of the proposed Project, and to long term impacts during its operation.

Landscape character and resources should be considered to be of importance in their own right, and valued for their intrinsic qualities regardless of whether they are seen by people. Impacts on visual amenity as perceived by people are therefore clearly distinguished from, although closely linked to, impacts on landscape character and resources. Landscape and visual assessments are therefore separate, but linked processes and a clear distinction is drawn between impacts on landscape character and visual impacts, and described as follows:

- Landscape impacts relate to the effects of the proposed Project on the physical and other characteristics of the landscape and its resulting character and quality.

(1) The Landscape Institute and Institute of Environmental Management and Assessment (2013), Guidelines for Landscape and Visual Impact Assessment:3rd Edition

- Visual impacts relate to the effects on views from visual receptors (e.g. residents, workers, tourists, etc.) and on the amenity experienced by those people (sometimes referred to as visual receptors).

D1.6.1 *Impact Assessment Criteria*

The significance of impacts is identified as being of:

- Negligible;
- Minor;
- Moderate; or
- Major.

The significance of landscape and visual impact is based and evaluated on two main factors – 1) sensitivity of the landscape or viewer to change; and 2) magnitude of change.

D1.6.2 *Sensitivity of the Landscape or Viewer to Change*

The sensitivity of the landscape depends upon its inherent nature, quality, condition and ability to accommodate change; and on any specific values (such as statutory landscape designations) that may apply. A World Heritage site for example would be more sensitive to change.

The sensitivity of viewers depends upon the duration of their exposure to perceptible views of the site and the frequency of opportunities for them to visually perceive the site. Hence, a resident with a permanent view is considered to be of higher sensitivity than a worker or traveller with a transient viewing opportunity.

The sensitivity of the receptor is described as low, medium or high.

D1.6.3 *Magnitude of Change*

The magnitude of change on landscape or visual receptors depends upon the nature and scale of the development and other factors such as distance from source, context and quantifiable elements such as area and length. The magnitude of impact is described as being negligible, small, medium or large.

D1.6.4 *Evaluation of Impact Significance*

Impact significance is determined by cross-referencing the sensitivity of the landscape or viewer, with the magnitude of change expected as a consequence of the development. Thus an impact of major significance will usually occur where the sensitivity of the landscape or viewer is high and the magnitude of the impact is large. The assessment of impact significance also requires the application of professional judgement and experience as significance can be subjective. Each example is therefore assessed on a case-by case-basis.

The following definitions, as described in *Table 1.7* and *Table 1.8*, are used in this assessment and are considered in the landscape and visual assessment:

- Landscape integrity - compatibility with existing built environment; and
- Visibility of lighting, and its effect on surroundings.

Table 1.7

Levels of Significance of Landscape Impacts

Levels of Significance		Sensitivity of Landscape		
		Low	Medium	High
		A landscape which is not valued for its scenic quality or where its character, existing land use, pattern and scale are tolerant of the type of change envisaged, and the landscape has a capacity to accommodate change.	A moderately valued landscape, perhaps a locally important landscape, or where its character, land use, pattern and scale may have the capacity to accommodate a degree of the type of change envisaged.	A landscape protected by a regional (structure plan) or national designation and/or widely acknowledged for its quality and value; a landscape with distinctive character and low capacity to accommodate the type of change envisaged.
Magnitude of Impact	Negligible	Negligible	Negligible	Negligible
	A barely perceptible change in landscape characteristics.			
	Small	Negligible	Minor	Moderate
	A small change in landscape characteristics over a wide area or a moderate change either over a restricted area or infrequently perceived.			
	Medium	Minor	Moderate	Major
	A moderate change in landscape characteristics frequent or continuous and over a wide area or a clearly evident change either over a restricted area or infrequently perceived.			
	Large	Moderate	Major	Major
A clearly evident and frequently/continuous change in landscape characteristics affecting an extensive area.				

Table 1.8 Levels of Significance of Visual Impacts

Levels of Significance		Sensitivity of Viewpoint		
		Low	Medium	High
		Small numbers of visitors with interest in their surroundings. Viewers with a passing interest not specifically focussed on the landscape eg workers, commuters. The quality of the existing view, as likely to be perceived by the viewer, is assessed as being low.	Small numbers of residents and moderate numbers of visitors with an interest in their environment. Larger numbers of recreational road users. The quality of the existing view, as likely to be perceived by the viewer, is assessed as being medium.	Larger numbers of visitors and/or those with proprietary interest and prolonged viewing opportunities such as residents and users of attractive and well-used recreational facilities. The quality of the existing view, as likely to be perceived by the viewer, is assessed as being high.
Magnitude of Impact	Negligible	Negligible	Negligible	Negligible
	Change which is barely visible, at very long distances, or visible for a very short duration, perhaps at an oblique angle, or which blends with the existing view.			
	Small	Negligible	Minor	Moderate
	Minor changes in views, at long distances, or visible for a short duration, perhaps at an oblique angle, or which blends to an extent with the existing view.			
	Medium	Minor	Moderate	Major
	Clearly perceptible changes in views at intermediate distances, resulting in either a distinct new element in a significant part of the view, or a more wide-ranging, less concentrated change across a wider area.			
	Large	Moderate	Major	Major
Major changes in view at close distances, affecting a substantial part of the view, continuously visible for a long duration, or obstructing a substantial part or important elements of the view.				

