

APPENDIX 2: Landscape and visual effects assessment methodology

Landscape and Visual Effects Assessment Methodology

Introduction

The landscape and visual effects assessment process provides a framework for assessing and identifying the nature and level of likely effects that may result from a proposed development. Such effects can occur in relation to changes to physical elements, the existing character of the landscape and the experience of it. In addition, the landscape assessment method may include an iterative design development processes which includes stakeholder involvement. The outcome of any assessment approach should seek to avoid, remedy or mitigate adverse effects. A separate assessment is required to assess changes in natural character in coastal areas and other waterbodies.

When undertaking landscape and visual effects assessments, it is important that a structured and consistent approach is used to ensure that findings are clear and objective. Judgement should always be based on skills and experience, and be supported by explicit evidence and reasoned argument.

While landscape and visual effects assessments are closely related, they form separate procedures. The assessment of the potential effect on the landscape forms the first step in this process and is carried out as an effect on an environmental resource (i.e. landscape elements, features and character). The assessment of visual effects considers how changes to the physical landscape affect the viewing audience. The types of effects can be summarised as follows:

Landscape effects:

Change in the physical landscape, which may change its characteristics or qualities.

Visual effects:

Change to views which may change the visual amenity experienced by people.

The policy context, existing landscape resource and locations from which a development or change is visible all inform the 'baseline' for landscape and visual effects assessments. To assess effects, the landscape must first be described, including an understanding of the key landscape characteristics and qualities. This process, known as landscape characterisation, is the basic tool for understanding landscape character and may involve subdividing the landscape into character areas or types. The condition of the landscape (i.e. the state of an individual area of landscape or landscape feature) should also be described alongside a judgement made on the value or importance of the potentially affected landscape.

This outline of the landscape and visual effects assessment methodology has been undertaken with reference to the Quality Planning Landscape Guidance Note¹ and its signposts to examples of best practice which include the UK guidelines for landscape and visual impact assessment² and the New Zealand Landscape Institute Guidelines for Landscape Assessment³.

Assessing landscape effects requires an understanding of the nature of the landscape resource and the magnitude of change which results from a proposed development to determine the overall level of landscape effects.

Nature of the landscape resource

Assessing the nature of the landscape resource considers both the susceptibility of an area of landscape to change and the value of the landscape. This will vary upon the following factors:

- Physical elements such as topography / hydrology / soils / vegetation;
- Existing land use;
- The pattern and scale of the landscape;

¹ <http://www.qualityplanning.org.nz/index.php/planning-tools/land/landscape>

² Landscape Institute and Institute of Environmental Management and Assessment (2013) Guidelines for Landscape and Visual Impact Assessment, 3rd Edition (GLVIA3)

³ Best Practice Note Landscape Assessment and Sustainable Management 10.1, NZILA

- Visual enclosure / openness of views and distribution of the viewing audience;
- The zoning of the land and its associated anticipated level of development;
- The value or importance placed on the landscape, particularly those confirmed in statutory documents; and
- The scope for mitigation, appropriate to the existing landscape.

The susceptibility to change takes account of both the attributes of the receiving environment and the characteristics of the proposed development. It considers the ability of a specific type of change occurring without generating adverse effects and/or achievement of landscape planning policies and strategies.

Landscape value derives from the importance that people and communities, including tangata whenua, attach to particular landscapes and landscape attributes. This may include the classification of

Outstanding Natural Landscape (RMA s.6(b)) based on important biophysical, sensory/ aesthetic and associative landscape attributes, which have potential to be affected by a proposed development.

Magnitude of Landscape Change

The magnitude of landscape change judges the amount of change that is likely to occur to existing areas of landscape, landscape features, or key landscape attributes. In undertaking this assessment, it is important that the size or scale of the change is considered within the geographical extent of the area influenced and the duration of change, including whether the change is reversible. In some situations, the loss /change or enhancement to existing landscape elements such as vegetation or earthworks should also be quantified.

When assessing the level of landscape effects, it is important to be clear about what factors have been considered when making professional judgements. This can include consideration of any benefits which result from a proposed development. Table 1 below helps to explain this process. The tabulating of effects is only intended to inform overall judgements.

Contributing factors		Higher	Lower
Nature of Landscape Resource	Susceptibility to change	The landscape context has limited existing landscape detractors which make it highly vulnerable to the type of change which would result from the proposed development.	The landscape context has many detractors and can easily accommodate the proposed development without undue consequences to landscape character.
	The value of the landscape	The landscape includes important biophysical, sensory and associative attributes. The landscape requires protection as a matter of national importance (ONF/L).	The landscape lacks any important biophysical, sensory or associative attributes. The landscape is of low or local importance.
Magnitude of Change	Size or scale	Total loss or addition of key features or elements. Major changes in the key characteristics of the landscape, including significant aesthetic or perceptual elements.	The majority of key features or elements are retained. Key characteristics of the landscape remain intact with limited aesthetic or perceptual change apparent.
	Geographical extent	Wider landscape scale.	Site scale, immediate setting.
	Duration and reversibility	Permanent. Long term (over 10 years).	Reversible. Short Term (0-5 years).

Table 1: Determining the level of landscape effects

Visual Effects

To assess the visual effects of a proposed development on a landscape, a visual baseline must first be defined. The visual 'baseline' forms a technical exercise which identifies the area where the development may be visible, the potential viewing audience, and the key representative public viewpoints from which visual effects are assessed.

The viewing audience comprises the individuals or groups of people occupying or using the properties, roads, footpaths and public open spaces that lie within the visual envelope or 'zone of visual influence' of the site and proposal. Where possible, computer modelling can assist to determine the theoretical extent of visibility together with field work undertaken to confirm this. Where appropriate, key representative viewpoints should be agreed with the relevant local authority.

Nature of the viewing audience

The nature of the viewing audience is assessed in terms of the susceptibility of the viewing audience to change and the value attached to views. The susceptibility of the viewing audience is determined by assessing the occupation or activity of people experiencing the view at particular locations and the extent to which their interest or activity may be focused on views of the surrounding landscape. This relies on a landscape architect's judgement in respect of visual amenity and reaction of people who may be affected by a proposal. This should also recognise that people more susceptible to change generally include: residents at home, people engaged in outdoor recreation whose attention or interest is likely to be focused on the landscape and on particular views; visitors to heritage assets or other important visitor attractions; and communities where views contribute to the landscape setting.

The value or importance attached to particular views may be determined with respect to its popularity or numbers of people affected or reference to planning instruments such as viewshafts or view corridors.

Important viewpoints are also likely to appear in guide books or tourist maps and may include facilities provided for its enjoyment. There may also be references to this in literature or art, which also acknowledge a level of recognition and importance.

Magnitude of Visual Change

The assessment of visual effects also considers the potential magnitude of change which will result from views of a proposed development. This takes account of the size or scale of the effect, the geographical extent of views and the duration of visual change which may distinguish between temporary (often associated with construction) and permanent effects where relevant. Preparation of any simulations of visual change to assist this process should be guided by best practice as identified by the NZILA⁴.

When determining the overall level of visual effect, the nature of the viewing audience is considered together with the magnitude of change resulting from the proposed development. Table 2 has been prepared to help guide this process:

Contributing factors		Higher	Lower
Nature of Landscape Resource	Susceptibility to change	Views from dwellings and recreation areas where attention is typically focussed on the landscape..	Views from places of employment and other places where the focus is typically incidental to its landscape context. Views from transport corridors.
	The value of the landscape	Viewpoint is recognised by the community such as an important view shaft, identification on tourist maps or in art and literature. High visitor numbers.	Viewpoint is not typically recognised or valued by the community. Infrequent visitor numbers..
Magnitude of Change	Size or scale	Loss or addition of key features in the view. High degree of contrast with existing landscape elements (i.e. in terms of form scale, mass, line, height, colour and texture). Full view of the proposed development	Most key features of view retained. Low degree of contrast with existing landscape elements (i.e. in terms of form scale, mass, line, height, colour and texture). Glimpse / no view of the proposed development.
	Geographical extent	Front on views. Near distance views; Change visible across a wide area.	Oblique views. Long distance views. Small portion of change visible.
	Duration and reversibility	Permanent. Long term (over 15 years).	Transient / temporary. Short Term (0-5 years).

⁴ Best Practice Guide: Visual Simulations BPG 10.2, NZILA

Nature of Effects

In combination with assessing the level of effects, the landscape and visual effects assessment also considers the nature of effects in terms of whether this will be positive (beneficial) or negative (adverse) in the context within which it occurs. Neutral effects can also occur where landscape or visual change is benign.

It should also be noted that a change in a landscape does not, of itself, necessarily constitute an adverse landscape or visual effect. Landscape is dynamic and is constantly changing over time in both subtle and more dramatic transformational ways, these changes are both natural and human induced. What is important in managing landscape change is that adverse effects are avoided or sufficiently mitigated to ameliorate the effects of the change in land use. The aim is to provide a high amenity environment through appropriate design outcomes.

This assessment of the nature effects can be further guided by Table 3 set out below:

Nature of effect	Use and definition
Adverse (negative):	The proposed development would be out of scale with the landscape or at odds with the local pattern and landform which results in a reduction in landscape and / or visual amenity values
Neutral (benign):	The proposed development would complement (or blend in with) the scale, landform and pattern of the landscape maintaining existing landscape and / or visual amenity values
Beneficial (positive):	The proposed development would enhance the landscape and / or visual amenity through removal of restoration of existing degraded landscapes uses and / or addition of positive elements or features

Table 3: Determining the Nature of Effects

Cumulative Effects

During the scoping of an assessment, where appropriate, agreement should be reached with the relevant local authority as to the nature of cumulative effects to be assessed. This can include effects of the same type of development (e.g. wind farms) or the combined effect of all past, present and approved future development⁵ of varying types, taking account of both the permitted baseline and receiving environment. Cumulative effects can also be positive, negative or benign.

Cumulative Landscape Effects

Cumulative landscape effects can include additional or combined changes in components of the landscape and changes in the overall landscape character. The extent within which cumulative landscape effects are assessed can cover the entire landscape character area within which the proposal is located, or alternatively, the zone of visual influence from which the proposal can be observed.

Cumulative Visual Effects

Cumulative visual effects can occur in combination (seen together in the same view), in succession (where the observer needs to turn their head) or sequentially (with a time lapse between instances where proposals are visible when moving through a landscape). Further visualisations may be required to indicate the change in view compared with the appearance of the project on its own.

Determining the nature and level of cumulative landscape and visual effects should adopt the same approach as the project assessment in describing both the nature of the viewing audience and magnitude of change leading to a final judgement. Mitigation may require broader consideration which may extend beyond the geographical extent of the project being assessed.

Determining the Overall Level of Effects

⁵ The life of the statutory planning document or unimplemented resource consents

The landscape and visual effects assessment concludes with an overall assessment of the likely level of landscape and visual effects. This step also takes account of the nature of effects and the effectiveness of any proposed mitigation.

This step informs an overall judgement identifying what level of effects are likely to be generated as indicated in Table 4 below. This table which can be used to guide the level of landscape and visual effects uses an adapted seven-point scale derived from NZILA's Best Practice Note.

	Effect rating	Use and definition
More than minor • • • •	Very high	Total loss of key elements / features / characteristics, i.e. amounts to a complete change of landscape character
	High	Major modification or loss of most key elements / features / characteristics, i.e. little of the pre-development landscape character remains. Concise Oxford English Dictionary Definition High: adjective- Great in amount, value, size, or intensity
	Moderate to high	Modifications of several key elements / features / characteristics of the baseline, i.e. the pre-development landscape character remains evident but materially changed.
	Moderate	Partial loss of or modification to key elements / features / characteristics of the baseline, i.e. new elements may be prominent but not necessarily uncharacteristic within the receiving landscape. Concise Oxford English Dictionary Definition Moderate: adjective- average in amount, intensity, quality or degree
Minor • • • •	Moderate to low	Minor loss of or modification to one or more key elements / features / characteristics, i.e. new elements are not prominent or uncharacteristic within the receiving landscape.
	Low	No material loss of or modification to key elements / features / characteristics. i.e. modification or change is not uncharacteristic and absorbed within the receiving landscape. Concise Oxford English Dictionary Definition Low: adjective- 1. Below average in amount, extent, or intensity
Less than minor	Very low	Little or no loss of or modification to key elements/ features/ characteristics of the baseline, i.e. approximating a 'no change' situation.

Table 4: Determining the overall level of landscape and visual effects

Determination of “minor”

Decision makers determining whether a resource consent application should be notified must also assess whether the effect on a person is less than minor⁶ or an adverse effect on the environment is no more than minor⁷. Likewise, when assessing a non-complying activity, consent can only be granted if the s104D 'gateway test' is satisfied. This test requires the decision maker to be assured that the adverse effects of the activity on the environment will be 'minor' or not be contrary to the objectives and policies of the relevant planning documents.

These assessments will generally involve a broader consideration of the effects of the activity, beyond the landscape and visual effects. Through this broader consideration, guidance may be sought on whether the likely effects on the landscape resource or effects on a person are considered in relation to 'minor'. It must also be stressed that more than minor effects on individual elements or viewpoints does not necessarily equate to more than minor effects on the wider landscape resource. In relation to this assessment, moderate-low level effects would generally equate to 'minor'.

⁶ RMA, Section 95E

⁷ RMA Section 95D

APPENDIX 3: Determination of landscape quality

Determination of landscape quality		
Category	Criteria	Typical Example
High - Exceptional	Strong landscape structure, characteristics, patterns, balanced combination of landform and land cover	International or nationally recognised site – national park.
	Appropriate management for land use and land cover	
	Distinct features worthy of conservation	
	Sense of place	
	No detracting features	
High	Strong landscape structure, characteristics, patterns, balanced combination of landform and land cover	Nationally or regionally recognised site – national park
	Appropriate management for land use and land cover but potential scope for improvement.	
	Distinct features worthy of conservation	
	Sense of place	
	Occasional detracting features	
Good	Recognisable landscape structure, characteristics, patterns, balanced combination of landform and land cover still evident	Nationally, regionally recognised site all or great majority of area of local landscape importance
	Scope to improve management for land use and land cover	
	Some features worthy of conservation	
	Sense of place	
	Some detracting features	
Ordinary	Distinguishable landscape structure, characteristic patterns of landform and land cover often masked by landuse	
	Some features worthy of conservation	
	Some detracting features	
Poor	Weak landscape structure, characteristic patterns of landform and land cover often masked by landuse	
	Mixed land use evident	
	Lack of management and intervention has resulted in degradation	
	Frequent detracting features	
Very poor	Degraded landscape structure, characteristic patterns of landform and land cover are masked by landuse	
	Mixed land use dominates	
	Lack of management and intervention has resulted in degradation	
	Extensive detracting features	
Damaged landscape	Damaged landscape structure	
	Single land use	
	Disturbed or derelict land requires treatment	
	Detracting features dominate.	

Table 4 has been adapted for NZ conditions from an example of threshold criteria used by practitioners in the United Kingdom. The original document was prepared by Jeff Stevenson Associates and published in Guidelines for Landscape and Visual Assessment ("GLVIA") 3rd Edition. Landscape Institute (UK) and IEMA 2013

APPENDIX 4: Summary of visual amenity effects

Solar SW, Helensville Solar Farm. Visual amenity effect summary

Ref.	Potential receptors	Min dist. from visible area within Site	Ht.	Max level of temporary effect	Level of mid / long term effect
	Receptors located to the north east of the Site				
NE1	Occupants of properties on residential west facing hill slopes within Helensville urban area	500 – 1,500m	10m-60m	Low to moderate	Low to moderate
NE2	Occupants of properties on Kawariki Road, and visitors to industrial area on Mill Road	550m	10m-15m	Low	Very low
NE3	Occupants of properties on Rogan Avenue				
	29 Rogan Avenue	100m	15m-16m	Low	Very low
	44 Rogan Avenue	150m	15m-16m	Low to moderate	Low to moderate
	45 Rogan Avenue	100m	15m-16m	High	Moderate - High
	15 Rogan Avenue	140m	15m-16m	Low	Very low
	Receptors located to east and south east of the Site				
SE1	Occupants of dwellings within rural residential properties located on west facing hill slopes	10m – 30m	150m-500m	Moderate to high	Low to moderate
	Occupants of dwellings within rural residential properties located on west facing hill slopes)	30m – 120m	120m-1,200m	Moderate	Low to moderate
	Users of Mangakura Road	90 – 900m	3m-20m	Low	Very low
	Receptors located to north west, west and south west of the Site				
N/NW1	Occupants of a group of dwellings at 2316, 2324, and 2324A, along SH including 2306 and 2201, 2179 and 2162)	120m – 180m	<5m	Low to moderate	Low
W/SW1	Occupants of dwellings south of 2162 along the State Highway to environs of Bradly Road (2083, 2059, 2238, 2125, 2124, , 9 and 54 Bradley Road, 2059 SH16, and 1995 SH16	320m – 900m	<15m	Moderate	Low to moderate
SW2	Users of the State Highway to the south west of the Site	300m – 600m	<5m	Very low	Very low
W1	Occupants of dwellings within the wider landscape to the west	800 – 3km	30m – 100m	Low	Low

Table 5 Visual effects summary