Appendix B:
VIA Best Practice Guideline

PROVINCIAL GOVERNMENT OF THE WESTERN CAPE:
DEPARTMENT OF ENVIRONMENTAL AFFAIRS
AND DEVELOPMENT PLANNING

GUIDELINE FOR INVOLVING VISUAL AND AESTHETIC SPECIALISTS IN EIA PROCESSES

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EDITION 1

Prepared by:	*Co-ordinated by:*
Bernard Oberholzer PO Box 26643 Hout Bay 7872 South Africa	CSIR Environmentek PO Box 320 Stellenbosch 7599 South Africa

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GUIDELINE FOR INVOLVING VISUAL AND AESTHETIC IN EIA PROCESSES

Edition 1

Issued by:

Provincial Government of the Western Cape
Department of Environmental Affairs and Development Planning
Utilitas Building, 1 Dorp Street
Private Bag X9086
Cape Town 8000
South Africa

Prepared by:

Bernard Oberholzer Landscape Architect
PO Box 26643
Hout Bay 7872 South Africa
email: bola@wol.co.za

Co-ordinated by:

CSIR Environmentek
P O Box 320
Stellenbosch 7599
South Africa

Contact person:

Frauke Münster
Tel: +27 21 888-2538
(fmunster@csir.co.za)

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ACKNOWLEDGEMENTS

Steering committee:

Paul Hardcastle	-	DEA&DP
Ayub Mohammed	-	DEA&DP
Susie Brownlie	-	de Villiers Brownlie Associates
Keith Wiseman	-	City of Cape Town
Mike Burns	-	CSIR Environmentek
Paul Lochner	-	CSIR Environmentek
Pete Ashton	-	CSIR Environmentek

Focus group participants:

Paul Hardcastle	-	DEA&DP
Washiela Anthony	-	DEA&DP
Danie Smit	-	DEAT
Eileen Weinronk	-	City of Cape Town
Menno Klapwijk	-	Landscape Consultant
Graham Young	-	Landscape Consultant
Bernard Oberholzer	-	Landscape Consultant
Nicolas Baumann	-	Heritage Consultant
Sarah Winter	-	Heritage Consultant
Tanya de Villiers	-	Landscape Consultant
Frauke Munster	-	CSIR Environmentek

Internal review:

Mike Burns	-	CSIR Environmentek
Eileen Weinronk	-	City of Cape Town
Paul Hardcastle	-	DEA&DP
Washiela Anthony	-	DEA&DP

Stakeholders engaged in the guideline development process:

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Finalisation of report figures and formatting:

Magdel van der Merwe and Elna Logie, DTP Solutions

PREFACE

For Environmental Impact Assessment (EIA) processes to retain their role and usefulness in supporting decision-making, the involvement of specialists in EIA needs to be improved in order to:

- Add value to project planning and design;
- Accurately predict and assess potential project benefits and negative impacts;
- Provide practical recommendations for avoiding or adequately managing negative impacts and enhancing benefits;
- Supply adequate and appropriate information that addresses key issues and concerns to effectively inform decision-making in support of sustainable development.

The purpose of this series of guidelines is to improve the efficiency, effectiveness and quality of specialist involvement in EIA processes. They aim to improve the capacity of roleplayers to anticipate, request, plan, review and discuss specialist involvement in EIA processes. Specifically, they aim to improve the capacity of EIA practitioners to draft appropriate terms of reference for specialist input and assist all roleplayers in evaluating whether or not specialist input to the EIA process was appropriate for the type of development and environmental context.

The guidelines draw on best practice in EIA in general, and within specialist fields of expertise in particular, to address the following issues related to the timing, scope and quality of specialist input. Although the guidelines have been developed with specific reference to the Western Cape province of South Africa, their core elements are more widely applicable.

	ISSUES
TIMING	▪ When should specialists be involved in the EIA process; i.e. at what stage in the EIA process should specialists be involved (if at all) and what triggers the need for their input?
SCOPE	▪ Which aspects must be addressed through specialist involvement; i.e. what is the purpose and scope of specialist involvement? ▪ What are appropriate approaches that specialists can employ? ▪ What qualifications, skills and experience are required?
QUALITY	▪ What triggers the review of specialist studies by different roleplayers? ▪ What are the review criteria against which specialist inputs can be evaluated to ensure that they meet minimum requirements, are reasonable, objective and professionally sound?

The following guidelines form part of this series:

- Guideline for determining the scope of specialist involvement in EIA processes
- Guideline for the review of specialist input into the EIA process

- Guideline for involving biodiversity specialists in EIA processes
- Guideline for involving hydrogeologists in EIA processes
- Guideline for involving visual and aesthetic specialists in EIA processes
- Guideline for involving heritage specialists in EIA processes
- Guideline for involving economists in EIA processes

The *Guideline for determining the scope of specialist involvement* and the *Guideline for the review of specialist input* provide generic guidance applicable to any specialist input to the EIA process and clarify the roles and responsibilities of the different roleplayers involved in the scoping and review of specialist input. It is recommended that these two guidelines are read first to introduce the generic concepts underpinning the guidelines which are focussed on specific specialist disciplines.

It is widely recognized that no amount of theoretical information on how best to plan and co-ordinate specialist inputs as an EIA practitioner, or to provide or review specialist input, can replace the value of practical experience of co-ordinating, being responsible for and/or reviewing specialist studies. Only with such experience can the EIA practitioner and specialist develop sound judgment on such issues as the level of detail needed or expected in specialist input to inform decision-makers adequately. For this reason, the guidelines should not be viewed as prescriptive and inflexible documents; their intention is to provide best practice guidance only.

Who is the target audience for these guidelines?

The guidelines are directed at authorities, EIA practitioners, specialists, proponents, financing institutions and other interested and affected parties involved in EIA processes.

What type of environmental assessment processes and developments are these guidelines applicable to?

The guidelines have been developed to support project-level EIA processes regardless of whether this is undertaken during the early project planning phase to inform planning and design decisions (i.e. during pre-application planning/screening) or as part of a legally defined EIA process to obtain statutory approval for a proposed project (i.e. during screening, scoping and/or impact assessment). The guidelines promote early, focussed and appropriate involvement of specialists in EIA processes in order to encourage proactive consideration of potentially significant impacts, so that they may be avoided through due consideration of alternatives and changes to the project.

The guidelines aim to be applicable to a range of types and scales of development, as well as different biophysical, social, economic and governance contexts.

What will these guidelines not do?

In order to retain their relevance in the context of changing legislation, the guidelines promote the principles of EIA best practice without being tied to specific legislated national or provincial EIA requirements. They therefore do not clarify the specific administrative, procedural or reporting requirements and timeframes for applications to obtain statutory approval. They should, therefore, be read in conjunction with the applicable legislation, regulations and procedural guidelines to ensure that mandatory requirements are met.

The guidelines do not intend to create experts out of non-specialists. Although the guidelines outline broad approaches that are available to the specialist discipline (e.g. field survey, desktop review, consultation, modelling), specific methods (e.g. the type of model or sampling technique to be used) cannot be prescribed. The guidelines should therefore not be used indiscriminately without due consideration of the particular context and circumstances within which an EIA is undertaken as this influences both the approach and the methods available and used by specialists.

The specialist guidelines have been structured to make them user-friendly. They are divided into six parts, as follows:

- **Part A**: Background;
- **Part B**: Triggers and key issues;
- **Part C**: Planning and co-ordination of specialist inputs (drawing up Terms of Reference);
- **Part D**: Providing specialist input;
- **Part E**: Review of specialist input; and
- **Part F**: References.

Part A provides grounding in the specialist subject matter for all users. It is expected that authorities and peer reviewers will make most use of Parts B and E; EIA practitioners and project proponents Parts B, C and E; specialists Part C and D; and other stakeholders Parts B, D and E. Part F gives useful sources of information for those who wish to explore the specialist topic.

SUMMARY

This guideline document, which deals with specialist visual input into the EIA process, has been organised into a sequence of interleading sections. These follow a logical order covering the following:

- the background and context for specialist visual input;
- the triggers and issues that determine the need for visual input;
- the type of skills and scope of visual inputs required in the EIA process;
- the methodology, information and steps required for visual input;
- finally, the review or evaluation of the visual assessment process.

In **Part A** principles and concepts, the context, and the role and timing of specialist inputs are outlined to set the stage for the importance of visual assessments.

In **Part B** typical issues that trigger a visual assessment are identified. These may arise from the public participation process, the nature of the receiving environment, or the nature of the project.

In **Part C** the scope and extent of a visual assessment are determined, by establishing the time and spatial parameters of the assessment, appropriate alternatives and scenarios, and the approach or methodology required.

In **Part D** the information required, as well as the assessment and reporting of visual impacts and management actions is discussed. This includes the establishment of visual impact criteria, as well as thresholds of significance. The following are also identified:

- affected parties, who stand to benefit or lose,
- risks and uncertainties related to the project,
- assumptions that have been made, and their justification,
- levels of confidence in making the visual input or assessment,
- management actions that can be employed to mitigate adverse effects, and
- the best practicable environental option arising from the assessment.

In **Part E** the evaluation of a visual assessment by a specialist, where this becomes necessary, is examined, including the evaluation criteria that can be used.

SYNOPSIS

May be included in final guideline.

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VISUAL AND AESTHETIC GUIDELINE

PART A : BACKGROUND

1. INTRODUCTION

Some of the current problems associated with visual and aesthetic assessments undertaken as part of the EIA process include the following:

- A wide range in the standard of visual impact assessments (VIA) that are carried out;
- A lack of understanding of the landscape processes that are responsible for the particular visual qualities or scenic resources of the area;
- A lack of clarity in the methodology and determination of impact ratings, as well as inconsistency between different assessments;
- A lack of objectivity, or conflict of interests, especially where the assessment is carried out by the same firm that is representing the proponent.
- The risk that the ratings of impacts are tempered by the fact that the proponent is paying for the VIA.

This visual guideline document is therefore an attempt to develop a 'best practice' approach for visual specialists, EIA practitioners and authorities involved in the EIA process.

The term **'visual and aesthetic'** is intended to cover the broad range of visual, scenic, cultural, and spiritual aspects of the landscape. However, for the purpose of brevity, the term **'visual'** is used in the text.

2. PRINCIPLES AND CONCEPTS UNDERPINNING VISUAL INPUT

The following key principles and concepts should be considered during visual input into the EIA process:

- An awareness that 'visual' implies the full range of visual, aesthetic, cultural and spiritual aspects of the environment that contribute to the area's sense of place.
- The consideration of both the natural and the cultural landscape, and their inter-relatedness.
- The identification of all scenic resources, protected areas and sites of special interest, together with their relative importance in the region.
- An understanding of the landscape processes, including geological, vegetation and settlement patterns, which give the landscape its particular character or scenic attributes.

- The need to include both quantitative criteria, such as 'visibility', and qualitative criteria, such as landscape or townscape 'character'.
- The need to include visual input as an integral part of the project planning and design process, so that the findings and recommended mitigation measures can inform the final design, and hopefully the quality of the project.

3. CONTEXTUALISING THE SPECIALIST INPUT

3.1 LEGAL, POLICY AND PLANNING CONTEXT

Current environmental legislation, which would include visual impacts as one component, would be the National Environmental Management Act (NEMA) and the Environmental Conservation Act, which refer to EIAs. Specialists need to be aware that this legislation is reviewed from time to time.

The National Heritage Resources Act provides legislative protection for listed or proclaimed sites, such as urban conservation areas, nature reserves and proclaimed scenic routes.

Visual pollution is controlled, to a limited extent, by the Advertising on Roads and Ribbons Act, which deals mainly with signage on public roads.

Western Cape provincial legislation requires the preparation of a Spatial Development Framework (SDF) and an Integrated Development Plan (IDP) for each sub-region or municipality. These could include reference to visual and scenic resources and the identification of areas of special significance, together with visual guidelines for the area covered by these plans.

Visual and aesthetic resources are also protected by local authorities, such as the City of Cape Town, where policies and by-laws relating to urban edge lines, scenic drives, special areas, signage, communication masts, etc. have been formulated.

Specialists need to refer to the relevant provincial or local authority, to determine whether there are any policies, by-laws or other restrictions relating to visual impact, or the protection of scenic, rural or cultural resources.

Authorities may also require visual impact assessments as a condition of rezoning of a particular site to another use, or for subdivisions and departures.

3.2 ENVIRONMENTAL CONTEXT

Specialist input needs to take into account the specific nature of the biophysical, social and economic environment within which a project is undertaken. Box 1 provides a brief description of the environmental context for the Western Cape.

Box 1: Environmental context for the Western Cape

The Western Cape is richly endowed with scenic resources by virtue of the mountainous landscape, the coastline along two oceans, and the unique flora and fauna.

In addition to this natural heritage, there are centuries of human settlement that have created a tapestry of vineyards, orchards, wheat fields, farmsteads, tree shelter belts and country towns.

The scenic resources of the Western Cape have enormous implications for the economy of the region mainly in the form of tourism, which provides income for the province, and creates jobs for the local population.

Table Mountain, Robben Island and designated areas within the Cape Floral Kingdom have been declared World Heritage Sites, and therefore have international status. There are a number of National Parks in the province, which have national status, along with numerous other protected areas, which have provincial or local authority status.

However, the scenic resources on which the economy of the region depends, is at great risk from rapid urban and infrastructure expansion.

There has therefore been a growing emphasis on visual and scenic assessments for most major projects in the region, in order to maintain the integrity and value of these natural and cultural landscapes as far as possible.

4. THE ROLE AND TIMING OF SPECIALIST INPUT

The role and timing of specialist visual input within the broader EIA process involves a number of aspects that need to be considered, i.e.:

- Whether visual input is required – see Sections 5 and 6;
- When visual input is appropriate - see Section 8;
- What aspects visual input should cover - see Section 8;
- What level of visual input is required – see Section 8, Table 2.

Visual assessments should not be seen as an obstacle in the approval process. Visual input, especially at the early concept stage of the project, can play an important role in helping to formulate design alternatives, as well as minimising impacts, and possibly even costs, of the project.

It is important to note that specialist visual input can be given for various purposes and for different levels of involvement. This visual guideline document therefore aims to be applicable to a range of different types and scales of development, and for various stages of the EIA process.

Specialist involvement my take the form of any or all of the following:

- Providing specialist opinion or comment;
- Baseline survey of visual / scenic resources;
- Mapping of landscape or scenic units, and viewsheds;
- Digital terrain modeling and visual simulations;
- Assessments of visual impacts and their relative significance.

Furthermore, specialist involvement may take place at any or all of the following stages of the EIA process:

- **Pre-application planning stage**, to identify scenic resources, and visually sensitive areas or receptors, which may determine site selection, and layout of the project, and to determine potential fatal flaws, significant negative impacts and possible alternatives.
- **Screening stage**, to determine if a more detailed visual assessment is required, and the appropriate level of assessment.
- **Scoping stage**, to identify key concerns or issues relating to potential visual impacts arising from the project, and to determine boundaries and parameters for visual input.
- **Impact assessment stage**, to determine the character and visual absorption capacity of the landscape, the visibility of the proposed project, the potential visual impact on visual / scenic resources, and the nature, extent, duration, magnitude, probability and significance of impacts, as well as measures to mitigate negative impacts.

Adequate time and resources should be allocated for visual input by the specialist, including time for site visits, photographic surveys, coordination with other specialists and acquiring all necessary information.

PART B: TRIGGERS AND KEY ISSUES

5. TRIGGERS FOR SPECIALIST INPUT

The need for visual input is often determined by issues relating to visual impact that may be raised by local residents or organisations, by the local authority, or on the recommendation of the EIA Practitioner of a project, or the visual specialist.

The following are indicators that could suggest the need for visual input based on the nature of the receiving environment and the nature of the project.

The nature of the receiving environment:

- Areas with protection status, such as national parks or nature reserves;
- Areas with proclaimed heritage sites or scenic routes;
- Areas with intact wilderness qualities, or pristine ecosystems;
- Areas with intact or outstanding rural or townscape qualities;
- Areas with a recognized special character or sense of place;
- Areas lying outside a defined urban edge line;
- Areas with sites of cultural or religious significance;
- Areas of important tourism or recreation value;
- Areas with important vistas or scenic corridors;
- Areas with visually prominent ridgelines or skylines.

The nature of the project:

- High intensity type projects including large-scale infrastructure;
- A change in land use from the prevailing use;
- A use that is in conflict with an adopted plan or vision for the area;
- A significant change to the fabric and character of the area;
- A significant change to the townscape or streetscape;
- Possible visual intrusion in the landscape;
- Obstruction of views of others in the area.

6. KEY ISSUES REQUIRING SPECIALIST INPUT

In order to focus the EIA process, issues are identified in the scoping phase of the EIA. Issues are concerns related to the proposed development, such as the impact of an activity on the visual or scenic environment.

As indicated in Section 5 key issues that tend to determine the need for a VIA relate to the type of environment, as well as type and scale of development.

Table 1 shows a possible range of environments, from the most visually sensitive to the least sensitive on the one axis, and a range of development types from the least intensive to the most intensive on the other axis, (see Box 2).

The correlation of environment types with development types leads to varying levels of expected visual impact, on a scale from none to very high, (see Box 3).

Note: Table 1 and the explanatory boxes should not be regarded as a comprehensive list of landscape/land use types and development categories, and do not replace the need for a comprehensive, systematic scoping process to identify the range of issues arising from a particular development.

Table1: Categorisation of issues to be addressed by the visual assessment

Type of environment	**Type of development (see Box 2) Low to high intensity**				
	Category 1 development	**Category 2 development**	**Category 3 development**	**Category 4 development**	**Category 5 development**
Protected/wild areas of international, national, or regional significance	Moderate visual impact expected	High visual impact expected	High visual impact expected	Very high visual impact expected	Very high visual impact expected
Areas or routes of high scenic, cultural, historical significance	Minimal visual impact expected	Moderate visual impact expected	High visual impact expected	High visual impact expected	Very high visual impact expected
Areas or routes of medium scenic, cultural or historical significance	Little or no visual impact expected	Minimal visual impact expected	Moderate visual impact expected	High visual impact expected	High visual impact expected
Areas or routes of low scenic, cultural, historical significance / disturbed	Little or no visual impact expected. Possible benefits	Little or no visual impact expected	Minimal visual impact expected	Moderate visual impact expected	High visual impact expected
Disturbed or degraded sites / run-down urban areas / wasteland	Little or no visual impact expected. Possible benefits	Little or no visual impact expected. Possible benefits	Little or no visual impact expected	Minimal visual impact expected	Moderate visual impact expected

Box 2: Key to Categories of Development
Category 1 development: e.g. nature reserves, nature-related recreation, camping, picnicking, trails and minimal visitor facilities. **Category 2 development:** e.g. low-key recreation / resort / residential type development, small-scale agriculture / nurseries, narrow roads and small-scale infrastructure. **Category 3 development:** e.g. low density resort / residential type development, golf or polo estates, low to medium-scale infrastructure. **Category 4 development:** e.g. medium density residential development, sports facilities, small-scale commercial facilities / office parks, one-stop petrol stations, light industry, medium-scale infrastructure. **Category 5 development:** e.g. high density township / residential development, retail and office complexes, industrial facilities, refineries, treatment plants, power stations, wind energy farms, power lines, freeways, toll roads, large-scale infrastructure generally. Large-scale development of agricultural land and commercial tree plantations. Quarrying and mining activities with related processing plants.

Explanation of terms used:

Low-key development – generally small-scale, single-storey domestic structures, usually with more than 75% of the area retained as natural (undisturbed) open space.

Low density development - generally single or double-storey domestic structures, usually with more than 50% of the area retained as natural (undisturbed) open space.

Medium density development - generally 1 to 3-storey structures, including cluster development, usually with more than 25% of the area retained as green open space.

High density development - generally multi-storey structures, usually with less than 25% of the area retained as green open space.

Box 3: Key to Categories of Issues
Very high visual impact expected: Potentially significant effect on wilderness quality or scenic resources; Fundamental change in the visual character of the area; Establishes a major precedent for development in the area. High visual impact expected: Potential intrusion on protected landscapes or scenic resources; Noticeable change in visual character of the area; Establishes a new precedent for development in the area. Moderate visual impact expected: Potentially some affect on protected landscapes or scenic resources; Some change in the visual character of the area; Introduces new development or adds to existing development in the area. Minimal visual impact expected: Potentially low level of intrusion on landscapes or scenic resources; Limited change in the visual character of the area; Low-key development, similar in nature to existing development.

Little or no visual impact expected: Potentially little influence on scenic resources or visual character of the area; Generally compatible with existing development in the area; Possible scope for enhancement of the area.

Explanation of terms used:

Fundamental change – dominates the view frame and experience of the receptor;

Noticeable change – clearly visible within the view frame and experience of the receptor;

Some change – recognisable feature within the view frame and experience of the receptor;

Limited change – not particularly noticeable within the view frame and experience of the receptor;

Generally compatible – Practically not visible, or blends in with the surroundings.

PART C: PLANNING AND COORDINATION OF SPECIALIST INPUTS

7. QUALIFICATIONS, SKILLS AND EXPERIENCE REQUIRED

The qualifications, skills and experience required to provide specialist visual input relate to the nature and extent of both the receiving environment and the proposed project. They could also relate to the various levels of assessment outlined in Box 4.

Three broad types of visual assessment studies are suggested in Box 6 in order to determine relevant qualifications and skills required. These should apply particularly where Levels 3 and 4 visual input are involved.

Box 4: Qualifications and Skills for Visual Assessments

Type A Assessments:
Visual assessments, which are relatively large in extent, and involve natural landscapes.

Qualifications:
- Either landscape architecture or environmental planning.
- Preferably affiliated to the South African Council for the Landscape Architecture Profession (SACLAP).
- Alternatively, recognised expertise and experience in the field.
- **Skills:**
- Training in the natural sciences and landscape processes, the ability to map landscape features and viewsheds, and an understanding of the implications of these for development.
- Experience in visual assessment techniques.

Type B Assessments:
Visual assessments which are more local in extent and involve the built environment.

Qualifications:
- Either landscape architecture, urban design or heritage studies.
- Preferably affiliated to SACLAP, or the Association of Heritage Assessment Practitioners (AHAP).
- Alternatively, recognised expertise and experience in the field.
- **Skills:**
- Training in natural and urban processes, and the design of the built environment, in relation to cityscapes, townscapes and streetscapes.
- Experience in visual assessment techniques.

Type C Assessments:
Visual assessments which are more site specific and architectural in nature, involving buildings and groups of buildings. (Refer to *Guideline involving Heritage Specialists* for cultural and archaeological sites).

Qualifications:
- Either landscape architecture, urban design, architecture or heritage studies.
- Preferably affiliated to SACLAP, AHAP.
- Alternatively, recognised expertise and experience in the field.
- **Skills:**
- Training in urban and building design, particularly in relation to historical architecture.
- Experience in visual assessment techniques.

The visual specialist should ideally have good knowledge relating to visual assessment techniques and to relevant legislation, policies and guidelines. Knowledge of the area, or experience with similar environments would be an additional benefit.

A visual assessment should be carried out by an independent specialist, who is not involved in the project, or with any firm that is employed on the project, i.e. the person should not benefit from the outcome of the project decision-making.

8. DETERMINING THE SCOPE OF SPECIALIST INPUTS

Once the need for specialist visual input has been determined through the identification of key issues, the extent and scope of the input needs to be clarified through discussion with the EIA practitioner, the specialist, the proponent and the decision-making authority. (Refer to *Guideline for Determining the Scope of Specialist Involvement in the EIA Process)*.

The terms of reference, and scope of the assessment should be clearly stated in writing, and agreed to by both the specialist and the EIA practitioner. The terms of reference must not be framed in order to limit an effective and true assessment.

Participants in the EIA process should have an understanding of visual assessment terminology. Common terms have therefore been defined in Appendix A.

8.1 RESPONDING TO ISSUES RAISED IN THE SCOPING PROCESS

The Scoping Report should be used as a source of information by visual specialists to ensure that their assessment addresses the issues raised during the scoping process.

It should be borne in mind that other issues may emerge in the course of a visual study, especially where a visual specialist has not been involved in the scoping stage. Consultation with stakeholders, and other specialists involved with the EIA process, could reveal additional issues.

8.2 ESTABLISHING APPROPRIATE TIME AND SPACE BOUNDARIES

The time scale for the visual study would relate to the project concept stage, scoping stage, and if required, the visual impact assessment stage, as well as to any monitoring programmes that

follow. The timing of the visual assessment is therefore dependent on the overall EIA process, on essential information being made available, and on the implementation of the project.

The space boundary for specialist visual input depends on the extent of the view catchment area, or what is known as the 'zone of visual influence' of the project. This will in most cases determine the boundary of the study area. Assessments of linear type projects, such as roads or powerlines, would obviously have boundaries that include the entire visual corridor.

8.3 SELECTING APPROPRIATE DEVELOPMENT ALTERNATIVES

Development proposals considered in the EIA process may include a range of possible alternatives in any or all of the following categories:

- *location* and/or *routing* alternatives,
- *layout* alternatives,
- *built form* alternatives,
- *process* and/or *design* alternatives,
- *scheduling* alternatives,
- *input* alternatives.

The selection of alternatives should be aimed at addressing significant issues that have have been identified, and not merely provide a range of options that could have similar problems.

Prior to, or during, the scoping phase, the visual specialist should ideally be involved in assisting the project proponent and EIA practitioner identify the range of viable alternatives that should be considered by the specialist.

Principles that influence the range of alternatives within a receiving environment include the following:

- the need to maintain the overall integrity (or intactness) of the particular landscape or townscape;
- the need to preserve the special character or 'sense of place' of a particular area;
- the need to minimise visual intrusion or obstruction of views within a particular area;
- the need to recognise the regional or local idiom, including building styles and materials, particularly where these form a strong or coherent theme.

8.4 ESTABLISHING ENVIRONMENTAL AND OPERATING SCENARIOS

There are a number of factors or variables that could result in different scenarios for the visual impact of a project. Scenarios, where predictable, should be identified as part of the assessment. Typical factors include the following:

- Expansion of the project owing to unexpected demand;
- Changes in technology or operating processes over time;

- Changes in the type of materials or finishes used on structures, for economic or other reasons;
- Removal of screening vegetation, including plantations and alien vegetation;
- Changes in the landscape and surrounding uses over time.

8.5 DEALING WITH DIRECT, INDIRECT AND CUMULATIVE EFFECTS

All visual studies should include the assessment of cumulative effects resulting from the proposed project. These could include, but are not necessarily confined to the types of cumulative effects listed in Box 5.

Box 5: Definitions and components of direct, indirect and cumulative effects

Direct (or primary) effects occur at the same time and in the same space as the activity. For example, the loss of views through construction of buildings.

Indirect (or secondary) effects occur later in time, or at a different place, from the causal activity. For example, the construction of power lines leading to a subsequent drop in property values in the surrounding area.

Cumulative effects can be:

- **Additive:** the simple sum of all the effects, (eg sprawl effect of houses along a scenic route);
- **Synergistic:** effects interact to produce a total effect greater than the sum of individual effects, (eg incremental urban development eventually results in total loss of rural or wilderness character of an area);
- **Time crowding:** frequent, repetitive impacts on a visual resource at the same time (eg constant movement of heavy vehicles through an area).
- **Space crowding:** high spatial density of impacts on a rural environment (eg rapid informal settlement).
- **Neutralizing:** where effects may counteract each other to reduce the overall effect (eg provision of new structures, accompanied by removal of redundant structures).

Source: Cooper, 2004.

8.6 SELECTING THE APPROPRIATE APPROACH

From Table 1 it can be seen that visual assessments become more critical where wilderness or protected landscapes are involved, as well as when high density urban development or large-scale infrastructure are being considered.

Approaches and methods for specialist visual input would relate to the issues raised during the scoping process, and the different types of landscape or townscape contexts. Table 2 indicates the 'level' of visual assessment required, together with the recommended approach and method given in Box 6.

Note: Table 2 and the explanatory box provide a summary of approaches and methods commonly used to address different issues and contexts. This should not be regarded as a comprehensive summary, and does not

replace the need for a discussion between the EIA project manager, the visual specialist, the proponent and the authorities to determine the best approach for the specific circumstances.

Table 2: Categorisation of approaches and methods used for visual assessment

Approach and Method	Type of issue (see Box 3)				
	Little or no visual impact expected	**Minimal visual impact expected**	**Moderate visual impact expected**	**High visual impact expected**	**Very high visual impact expected**
Level of visual assessment recommended	**Level 1** visual assessment	**Level 2** visual assessment	**Level 3** visual assessment	**Level 4** visual assessment	

Box 6: Key to Approaches and Methods

Level 1 assessment:
Approach:
Visual screening report by EIA Practitioner / visual specialist.
Method:
Identification of issues raised in scoping phase, and site visit;
Brief comment on visual influence of the project, and assessment of expected impacts / benefits.

Level 2 assessment:
Approach:
Visual scoping report by visual specialist or competent professional.
Method:
Identification of issues raised in scoping phase, and site visit;
Description of the receiving environment and the proposed project;
Establishment of view catchment area and receptors;
Brief indication of potential visual impacts, and possible mitigation measures.

Level 3 assessment:
Approach:
Visual impact assessment report by visual specialist or competent professional/s.
Review by independent, experienced visual specialist (if required).
Method:
Identification of issues raised in scoping phase, and site visit;
Description of the receiving environment and the proposed project;
Establishment of view catchment area, view corridors, viewpoints and receptors;
Indication of potential visual impacts using established criteria;
Inclusion of potential lighting impacts at night;
Description of alternatives, mitigation measures and monitoring programmes.

Level 4 assessment:
Approach:
Visual impact assessment report by independent visual specialist.
Review by independent, experienced visual specialist (if required).
Method:
As per Level 3 assessment, plus complete 3D modeling and simulations, with and without mitigation.

The approach to visual assessment should be based on both quantitative and qualitative aspects. Quantitative aspects often make use of landscape resource classification methods. These may include combinations of landforms (geomorphology), vegetation cover and land use mapping.

The basic components comprising an accepted methodology for visual studies are given in Box 7.

Box 7: Typical Components of Visual Studies

- Identification of landscape types, landscape character and sense of place, generally based on geology, landforms, vegetation cover and land use patterns;
- Identification of viewsheds, and view catchment areas, generally based on topography;
- Identification of important view points and view corridors within the affected environment, including sensitive receptors;
- Indication of distance radii from the proposed project to the various view points and receptors;
- Determination of the visual absorption capacity (VAC) of the landscape, usually based on vegetation cover or urban fabric in the area;
- Determination of the relative visibility, or visual intrusion, of the proposed project.
- Determination of the relative compatibility or conflict of the project with the surroundings;
- A comparison of the existing situation with the probable effect of the proposed project, through visual simulation, generally using photo-montages.

It is common for these studies to make use of computer-based techniques and digital cameras for greater accuracy and ease of constructing realistic visual simulations. GIS and CAD software are often used to create digital terrain models (DTM), which are in turn used to determine view catchments and view shadows.

NB: The actual approach and method used would depend on the level of visual input required in the EIA process, as put forward in Box 6.

8.7 THE TIMING, SEQUENCE AND INTEGRATION OF SPECIALIST INPUT

Effective interaction with other specialists should be facilitated by the EIA practitioner to ensure that an integrated approach is adopted, where the various components of the environment are seen as a whole.

Factors that determine or influence the timing of the specialist visual assessment in relation to the other specialist assessments may include the following:

- the need for adequate information on the receiving environment, such as geology, types of vegetation cover, and features of cultural or historical importance;
- the need for adequate information on the proposed project and related processes or activities, such as sources of dust or other emission plumes.

See Section 9.4 for a more detailed list of information required from other specialists.

8.8 CONFIDENTIALITY AND CONSULTATION ASPECTS

In developing TORs, aspects of confidentiality need to be discussed and agreed upon. These may relate to how commercially confidential information is treated and communicated, as well as information about sensitive resources.

In addition, the potential for specialists to engage with stakeholders needs to be discussed and agreed upon. This includes the types of stakeholders that should typically be consulted, and for what purpose.

However, any consultation with stakeholders must be done in line with the overall stakeholder engagement process, ideally working through the EIA practitioner or stakeholder engagement practitioner.

PART D: PROVIDING SPECIALIST INPUT

9. INFORMATION REQUIRED TO PROVIDE SPECIALIST INPUT

9.1 RELEVANT PROJECT INFORMATION

The following information about the proposed project is generally required for specialist visual input into the EIA process:

Essential information:

- The precise location and elevation of the project, and the boundaries of the project site, or the proposed route in the case of roads, pipelines, powerlines, etc.;
- The siting and orientation of the structures within the project site;
- The footprint, massing and height of the various structures;
- Elevations of the structures, including finishes and colours;
- Length, area and finishes of access roads to the site, internal roads and parking areas;
- Type and height of area lighting, including flood-lighting;
- Type and height of all outdoor signage, including illuminated signage, associated with the project;
- Type and height of all ancillary structures, such as masts, antennas, security fencing, gatehouses, substations, electrical kiosks, reservoirs, overhead power-lines and other

cables (both on and off the site);
- Cut and fill slopes and other major earthworks or excavations associated with the project;
- Traffic within the site, or to and from the site, which may constitute a visual impact;
- Construction phase facilities, such as construction camps, labourers' housing, haul roads, material storage, stockpiles, batch mixing areas, etc. where applicable;
- Nature and extent of future expansion of the project, if applicable;
- Alternative scenarios, layouts or designs for the project that have been proposed.

Other useful information:
- CAD and 3D digital information of the project;
- Coordinates of the various structures for visual simulation.

9.2 INFORMATION DESCRIBING THE AFFECTED ENVIRONMENT

The following information describing the current state of the affected environment, as well as trends in the area, are required for visual input into the EIA process:

Essential information:
- Contextual map indicating the location of the site and the nature of the surroundings (1:50 000 survey maps are usually suitable).
- Topographic information indicating contours, landforms, etc.
- Geology map indicating formations, rock outcrops, etc.
- Aerial photographs indicating landscape patterns, vegetation cover, etc.
- Cadastral maps indicating properties and buildings.
- Land use maps indicating existing activities in the area.
- Information about receptors / viewers in the area.

Other useful information:
- Historical maps and old aerial photographs help to give an indication of changes in the landscape, or trends in the area over time.
- Topographical and cadastral information in digital format is useful for creating a digital terrain model (DTM) and visual simulations, using GIS or CAD software.

General Description:
A holistic description of the affected environment is required, meaning that all aspects of the natural, cultural, historical, sacred and scenic landscape need to be included. Both tangible and intangible components of the environment should be included.

An indication should be given of the particular character, uniqueness, intactness, rarity, and vulnerability of the area. The overall context and representivity of the area within the region should also be discussed.

Certain landscapes may change with the season, such as in the case of deciduous vegetation, and where this has an effect on the visibility of the proposed project, it should be taken into account.

9.3 LEGAL, POLICY AND PLANNING CONTEXT

The following information of a legal, policy or planning nature is needed to measure and predict visual impacts resulting from the project:

Essential information:

- Guide plans, Spatial Development Frameworks (SDF), Integrated Development Plans (IDP) and zoning schemes of provincial or local authorities, which give an indication of planning policy for the area, and whether the proposed project will be compatible with these policies.
- Other aspects, such as major roads, national parks, biosphere reserves, nature reserves, scenic routes and cultural heritage sites, which may exist or be planned for the area.
- Title deed restrictions relating to the property of the proposed project, if applicable.

9.4 INFORMATION GENERATED BY OTHER SPECIALISTS IN THE EIA PROCESS

Information typically required from other specialist assessments, before the visual assessment can be completed, is included below. Where inadequate information is available, this should be indicated (see Box 7).

- A description of the vegetation cover, and the possibility of vegetation cover being removed through alien vegetation clearing or fire (from the biodiversity or vegetation specialist);
- The nature and location of any cultural heritage sites, and areas of special or historical interest (from the heritage specialist);
- The identification and extent of any sources of dust and emission plumes that may be visible in the surrounding area (from the atmospheric specialist);
- The identification of receptors / viewers who will be affected by the project, and their perception / sensitivity to visual impacts (from the social specialist).

The visual assessment may in turn have implications for other specialist studies, such as the effect of loss of scenic resources on tourism and property values (for the economic specialist). Liaison, and possibly even workshops, with the various specialists is therefore required.

Box 8: What to do in data poor circumstances

- Indicate where information gaps occur, together with the bearing this may have on the accuracy of the visual assessment.
- Indicate the associated risks in terms of visual impacts resulting from inadequate information on the project.
- Indicate any uncertainties in the rating of visual impacts, resulting from unknowns.

10. INPUT ON IMPACTS AND MANAGEMENT ACTIONS

10.1 PREDICTING POTENTIAL IMPACTS

Possible impacts should be assessed for the different alternatives, as well as for the range of risk situations and scenarios (including the worst case scenario), both with and without management actions, (i.e. mitigation).

The visual simulations should enable 'before' and 'after' comparisons to be made, as well as comparison of alternatives, taking into account mitigation measures.

It is in the nature of visual and scenic resources to include abstract qualities and connotations. It is necessary therefore to include both quantitative criteria (such as viewing distances), and qualitative criteria (such as sense of place), in visual assessments. An implication of this is that the impact ratings cannot simply be added together. Instead the assessment relies on the evaluation of a wide range of considerations, both objective and subjective, including the context of the proposed project within the surrounding area.

Where specialists are involved in the pre-application planning or screening stage, it may be appropriate in certain cases to identify 'fatal flaws'. Criteria that determine whether or not a visual impact constitutes a potential fatal flaw are included in Box 10.

Box 9: Definition of a potential fatal flaw

A potential fatal flaw is defined as an impact that could have a "no-go" implication for the project. A "no-go" situation could arise if the proposed project were to lead to:

1. Non-compliance with Acts, Ordinances, By-laws and adopted policies relating to visual pollution, scenic routes, special areas or proclaimed heritage sites.
2. Non-compliance with conditions of existing Records of Decision.
3. Impacts that may be evaluated to be of *high significance* and that are considered by stakeholders and decision-makers to be unacceptable.

10.2 DEFINING IMPACT ASSESSMENT CRITERIA

A number of criteria that relate specifically to visual impact assessments are given in Box 8. The proposed project should be assessed against these criteria before attempting the summary criteria defined in EIA Regulations (Box 9).

Box 10: Specific criteria for visual impact assessments

(See also definitions in Appendix A).

Visual exposure of the area – the geographic area from which the project will be visible, or view catchment area. (The actual zone of visual influence of the project may be smaller

because of screening by existing trees and buildings).
- *High visual exposure* – covers a large area (e.g. several square kilometres).
- *Moderate visual exposure* – covers an intermediate area (e.g. several hectares).
- *Low visual exposure* – covers a small area around the project site

Visual absorption capacity (VAC) - the potential of the landscape to conceal the proposed project, i.e.
- *High VAC* – e.g. effective screening by topography and vegetation;
- *Moderate VAC* - e.g. partial screening by topography and vegetation;
- *Low VAC* - e.g. little screening by topography or vegetation.

Landscape integrity – the compatibility or congruence of the project with the qualities of the existing landscape or townscape, or the 'sense of place'.
- *Low compatibility* – visually intrudes, or is discordant with the surroundings;
- *Medium compatibility* – partially fits into the surroundings, but clearly noticeable;
- *High compatibility* – blends in well with the surroundings.

Visibility of the project – based on distance from the project to selected viewpoints i.e.:
- *Highly visible* – dominant or clearly noticeable (e.g. 0 to 1km)
- *Moderately visible* – recognisable to the viewer (e.g. 1 to 2km);
- *Marginally visible* – not particularly noticeable to the viewer (e.g. 2km+);

Note 1: These, as well as any additional criteria, need to be customised for different project assessments.

Note 2: Various components of the project, such as the structures, lighting or powerlines, may have to be rated separately, as one component may have fewer visual impacts than another. This could have implications when formulating alternatives and mitigations.

To aid decision-making, the assessment and reporting of possible impacts requires consistency in the interpretation of impact assessment criteria. Various criteria are defined in the EIA Regulations, such as 'nature', 'extent', 'duration', etc. The interpretation of these criteria for visual assessments is given in Box 9.

Box 11: Criteria used for the assessment of impacts

The assessment of impacts is based on a synthesis of the following assessment criteria:

Nature of the impact - an appraisal of the visual effect the activity would have on the receiving environment. This description should include visual and scenic resources that are affected, and the manner in which they are affected, (both positive and negative effects).

Extent – the spatial or geographic area of influence of the visual impact, i.e.:
- *site-related:* extending only as far as the activity;
- *local:* limited to the immediate surroundings;
- *regional:* affecting a larger metropolitan or regional area;
- *national:* affecting large parts of the country;
- *international:* affecting areas across international boundaries.

Duration - the predicted life-span of the visual impact:
- *short term,* (e.g. duration of the construction phase);
- *medium term,* (e.g. duration for screening vegetation to mature);
- *long term,* (e.g. lifespan of the project);
- *permanent,* where time will not mitigate the visual impact.

Intensity – the magnitude of the impact on views, scenic or cultural resources.
- *low,* where visual and scenic resources are not affected;
- *medium,* where visual and scenic resources are affected to a limited extent;
- *high,* where scenic and cultural resources are significantly affected.

Probability – the degree of possibility of the visual impact occurring:
- *improbable,* where the possibility of the impact occurring is very low;
- *probable,* where there is a distinct possibility that the impact will occur;
- *highly probable,* where it is most likely that the impact will occur; or
- *definite,* where the impact will occur regardless of any prevention measures.

Significance – The significance of impacts can be determined through a synthesis of the aspects produced in terms of their nature, duration, intensity, extent and probability, and be described as:
- *low,* where it will not have an influence on the decision;
- *medium,* where it should have an influence on the decision unless it is mitigated; or
- *high,* where it would influence the decision regardless of any possible mitigation.

Note: These significance ratings may have limited usefulness unless they are described in terms of the broader context. The criteria given in Box 8 could assist in this regard.

10.3 ESTABLISHING THRESHOLDS OF SIGNIFICANCE

Problems relating to thresholds:

- Unlike water quality or air quality, thresholds for visual or scenic quality cannot be easily quantified, as they tend to be abstract, and often relate to cultural values or perceptions.
- A second difficulty is that natural, rural and urban landscapes are constantly changing, and the assessment will therefore need to consider this in determining the significance of impacts.
- A third difficulty may be the divergence of opinion on what constitutes 'acceptable' change, by the individual, the community or society in general.

Some indicators of significance:

The visual specialist will need to take into account principles of long term sustainable development, and not only the existing status of the area, when making an assessment. (Scenic resources are generally non-renewable and once destroyed or degraded, are lost to society).

International conventions and protocols, such as those for World Heritage Sites, or the RAMSAR convention on wetlands, will need to be taken into account when considering significance.

Wilderness type landscapes, pristine areas, and environments of high scenic value have national importance, tend to be the most sensitive to even small changes, and would therefore have higher significance ratings.

Areas that lie outside a defined 'urban edge' line for a particular municipality, may be more sensitive to development, or to changes to the natural or rural landscape.

Where regions or communities are dependent on visual, scenic or heritage resources for tourism or recreation, this will add to the significance rating of a visual impact.

Poorer or less educated communities may tend to support development initially, irrespective of visual impacts. However, as they progress economically, visual issues will become more important, and the VIA may need to accommodate this.

The visual assessment should recognise that some change to the landscape over time is inevitable with the expansion of urban areas, and introduction of new technologies, such as communication masts. This will have a bearing on significance ratings, particularly in identified growth areas.

10.4 DESCRIBING THE DISTRIBUTION OF IMPACTS

Visual specialists should identify the possible distribution of impacts, i.e. beneficiaries and losers, resulting from the proposed development, in particular vulnerable or risk-prone systems or communities.

Beneficiaries may include the following:

- Residents or users of a project, such as a resort in a scenic area;
- Individuals or communities who will benefit from infrastructure development, such as powerlines or communication masts provided for an area;
- Poor or unemployed individuals who will benefit from economic type development and related job opportunities.

Losers may include the following:

- National parks, nature reserves and other protected or pristine areas that rely on a wilderness experience for their visitors;
- Individuals and organisations who depend on scenic and recreation resources for their livelihood;
- Property owners who may rely on uninterrupted views and absence of visual intrusions.

10.5 IDENTIFYING KEY RISKS AND UNCERTAINTIES

Visual specialists should take into account key risks and uncertainties in the impact assessment process, which may influence the accuracy of, and confidence in, the visual impact assessment process. These may include the following:

- inadequate information on the form and aesthetics of the proposed project, making it difficult to depict the proposal in visual montages and to predict visual impacts;
- exclusion of related facilities, such as roads and powerlines, from the visual assessment;
- lack of information on future expansion of the project, or a change in activities related to the site.
- unpredictability of cumulative impacts resulting from the proposed project, which may, for example, act as a catalyst for other development in the area;
- uncertainty regarding future planning or development for the general area.

10.6 JUSTIFYING UNDERLYING ASSUMPTIONS

Where assumptions have been made during the visual input, or visual assessment, these should be clearly stated. The reason or justification for the assumption should also be given.

Any assumptions that are made should be confirmed with the EIA practitioner and proponent, before completing the visual input or assessment.

Assumptions typically have to be made where information is inadequate, or is not known, and may include the following:

- the final design and finishes of the proposed project;
- the final footprint and future expansion of the project;
- separate visual assessments for related structures or activities that do not form part of the TOR.

10.7 DEFINING CONFIDENCE LEVELS

The confidence of the visual specialist, relating to the identification and significance of potential impacts and benefits, should be clearly stated. The level of confidence should be indicated on a scale from high to low, together with reasons for the rating. (See also Para.10.5 and 10.6 above).

10.8 RECOMMENDING MANAGEMENT ACTIONS

The visual assessment should provide recommendations to mitigate or enhance impacts/benefits so that these can inform the design of the project, including the siting and scale of structures and roads, the choice of materials and colours, and measures for screening where necessary.

Appropriate types of management actions for different types of developments in different contexts are outlined below, including those for 'worst case' scenarios.

The project proponent should include a comment in the specialist assessment on their ability to implement the management actions recommended in the visual assessment.

Note: Management actions should be seen as an integral and necessary part of the planning and design phase of the project, rather than as *ad hoc* measures applied at the end.

AVOIDANCE

Consideration should be given to avoiding potential visual impacts altogether. This may be achieved by re-examining the need for the proposed project, relocating the project, or re-designing the project. These would obviously have to be considered feasible by the proponent.

MITIGATION

Measures to mitigate or reduce the effect of negative visual impacts should be considered. These may include adjustments to the siting and design of the project, the careful selection of finishes and colours, and the use of earthworks (such as berms), and planting to provide visual screening where required.

Those mitigations, which are mandatory or essential to the project, should be indicated, along with those that are optional.

COMPENSATION

Where avoidance or mitigation cannot achieve the desired effect, various forms of compensation could be considered. These may include land swaps, appropriation or financial compensation.

REHABILITATION

Both on-site and off-site landscape rehabilitation of areas affected by the project should be considered as part of the visual impact management. This may include re-instating landforms and natural vegetation, provision of landscaped open space, or other agreed upon facilities.

ENHANCEMENT

Where the proposed project is located in run-down areas, or degraded landscapes, the improvement of these areas could form part of the visual management actions for the project.

10.9 IDENTIFYING THE BEST PRACTICABLE ENVIRONMENTAL OPTION

Factors that need to be considered by the visual specialist in selecting the Best Practicable Environmental Option (BPEO) from a range of agreed alternatives include the following:

- Long term protection of important scenic resources and heritage sites;
- Minimisation of visual intrusion in scenic areas;
- Retention of wilderness or special areas intact as far as possible;
- Responsiveness to the area's uniqueness, or sense of place.

Each specialist assessment will identify the BPEO from a range of given options, or even add to the set of options. It is the responsibility of the EAP to evaluate the BPEO recommendations within the various specialist assessments and provide an overall recommendation for the BPEO, which takes into account the outcomes of the various specialist assessments. In the event that there have been differences in opinion between specialist assessments regarding the BPEO, the Environmental Impact Report should highlight these reasons and explain why these have arisen (e.g. the pursuance of different management or environmental objectives).

10.10 COMMUNICATING THE FINDINGS OF THE IMPACT ASSESSMENT

Specialist assessment reports should be concise and, as far as possible, avoid the use of technical terminology. Where this is unavoidable, brief explanations should be provided in order to ensure that the reader is able to understand the approach to, and findings of, the specialist assessment.

In order to answer the “so what” question, specialist assessments must include the following:

- Summary impact assessment table using the defined impact assessment and significance rating criteria;
- Clear indication of whether impacts are irreversible or result in an irreplaceable loss to the environment and/or society.
- Statement of impact significance for each issue specifying whether level of acceptable change has been exceeded and whether the impact presents a potential fatal flaw;
- Identification of beneficiaries and losers from the proposed development.
- Specification of key risks and uncertainties that may influence the impact assessment findings.
- Degree of confidence in the impact assessment prediction.
- Summary of key management actions that fundamentally affect impact significance.
- Identification of the best practicable environmental option, providing reasons.
- Identification of viable development alternatives not previously considered.

11. MONITORING PROGRAMMES

The visual assessment should provide recommendations for monitoring programmes during the construction and operational phases of the project, including ideally input into sketch plans, final tender documentation, site works and maintenance.

Principles that specialists should incorporate into their proposed monitoring programme for different stages of the project cycle are outlined below:

- Monitoring programmes should be agreed to by the proponent, and approved by the relevant environmental authority.
- Monitoring programmes should reflect environmental and aesthetic policies and guidelines applicable to the area, and incorporate the approval conditions of the project.
- Monitoring programmes should be drawn up and administered by a responsible, suitably qualified person, and enforced by an appropriate agency in order to be effective.
- Monitoring programmes should have clear objectives, and be practical and measurable.

Appropriate indicators that can be used to evaluate the effectiveness of management actions need to be identified. Where possible indicators should be aligned with key national and provincial indicators in order to track how the project contributes to, or undermines, the realization of local or regional sustainable development targets.

PRE-CONSTRUCTION BASELINE MONITORING

Monitoring programmes should include procedures for the timely review of plans for the proposed project. This could include the review of building plans, landscape plans and rehabilitation plans by the appropriate agencies responsible for aesthetics and environmental control, to ensure that visual mitigation measures have been incorporated into the design.

CONSTRUCTION PHASE MONITORING

Monitoring programmes should include procedures for the specified visual mitigation measures to be carried out on site, usually as part of an environmental management plan (EMP). These procedures would typically be the responsibility of an environmental control officer (ECO), or other suitably qualified person. Measures may include visual screening, dust control, etc. Penalties for non-compliance should be considered.

OPERATIONAL PHASE MONITORING

Monitoring programmes for the operational stage could include procedures for the on-going control of aesthetic aspects of the project, including signage, lighting, fencing, etc. to ensure that the mitigation measures or guidelines are being applied. All maintenance, upgrading and future expansion of the project should comply with the original approved mitigation measures.

DE-COMMISSIONING PHASE MONITORING

Monitoring programmes should include procedures for removal, re-use, or recycling at the end of the lifespan of the project, as well as the rehabilitation or redevelopment of the site to a visually acceptable form.

PART E: REVIEW OF THE SPECIALIST INPUT

See also *Guideline for the Review of Specialist Input into the EIA Process*, which forms part of this series of guideline documents.

12. EVALUATION CRITERIA

Specific aspects that constitute a high quality visual assessment, and against which assessments can be reviewed, include the following:

- meets minimum requirements for a visual assessment;
- is appropriate to the nature and scale of the proposed development;
- provides a full description of the environment and the project;
- Considers the project within its wider context;
- provides a clear methodology using accepted conventions for visual assessment;
- all sources of information and references are given;
- graphics, including maps and visual simulations, are clear;
- includes both quantitative and qualitative criteria;
- cumulative visual impacts have been considered;
- an evaluation of alternatives has been made;
- an explanation of significance ratings, related to bench-marks, is given;
- long term sustainable development objectives are included;
- recommendations for visual mitigation are sensible and practical;
- recommendations for monitoring programmes have been outlined;
- the best practicable environmental option has been considered;
- all the visual issues raised in the scoping have been addressed;
- A clear summary of mitigation measures, including essential and optional measures, is given.

PART F: REFERENCES

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APPENDIX A: DEFINITIONS AND ACRONYMS

DEFINITIONS

Alternatives	A possible course of action, in place of another, that would meet the same purpose and need defined by the development proposal. Alternatives considered in the EIA process can include location and/or routing alternatives, layout alternatives, process and/or design alternatives, scheduling alternatives or input alternatives.
Best practicable environmental option	This is the option that provides the most benefit or causes the least damage to the environment as a whole, at a cost acceptable to society, in the long term as well as in the short term.
Environmental impact assessment	A public process that is used to identify, predict and assess the potential positive and negative social, economic and biophysical impacts of a proposed development. EIA includes an evaluation of alternatives, appropriate management actions and monitoring programmes.
Impact (visual)	A description of the effect of an aspect of the development on a specified component of the visual, aesthetic or scenic environment within a defined time and space
Issue (visual)	Issues are concerns related to the proposed development, generally phrased as questions, taking the form "what will the impact of some activity be on some element of the visual, aesthetic or scenic environment?"
Key issue	An issue raised during the scoping process that has not received an adequate response and which requires further investigation before it can be resolved.
Landscape integrity	The relative intactness of the existing landscape or townscape, whether natural, rural or urban, and with an absence of intrusions or discordant structures
Management actions	Actions that enhance benefits of a proposed development, or avoid, mitigate, restore or compensate for negative impacts.
Mitigation measures	See 'mangement actions'
Pre-application planning	The process of identifying environmental opportunities and constraints, potential fatal flaws and negative impacts, as well as alternatives and management actions in the early stage of the project design, prior to application for environmental authorization.
Receptors	Individuals, groups or communities who are subject to the visual influence of a particular project.
Scenarios	A description of plausible future environmental states that could influence the nature, extent, duration, magnitude/intensity, probability and significance of the impact occurring
Sense of place	The unique quality or character of a place, whether natural, rural or urban.
Scenic corridor	A linear geographic area that contains scenic resources, usually, but not necessarilly, defined by a route. See also *view corridor.*
Scenic route	A linear movement route, usually in the form of a scenic drive, but which could also be a railway, hiking trail, horse-riding trail or 4x4 trail.
Scoping	The process of determining the key issues, and the space and time boundaries to be addressed in an environmental assessment.

ACRONYMS

BPEO	Best Practicable Environmental Option
DEA&DP	Department of Environmental Affairs and Development Planning
DEAT	Department of Environmental Affairs and Tourism
DWAF	Department of Water Affairs and Forestry
DTM	Digital terrain model
ECO	Environmental Control Officer
EIA	Environmental impact assessment
EMP	Environmental Management Plan
GIS	Geographic information system
VAC	Visual absorption capacity
VIA	Visual impact assessment
VRM	Visual resource management
ZVI	Zone of visual influence