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Colleen Murphy
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Dear Colleen

Peer Review of Serpentine Jarrahdale Mineral Sands Visual Impact Assessment

As requested, please find below the peer review of the provided Visual Impact Assessment.

1. INTRODUCTION

Ecoscape was engaged by the Shire of Serpentine Jarrahdale to undertake a peer review of the Visual Impact Assessment (VIA) of the proposed Keysbrook Mineral Sand Project, undertaken by Planning Solutions. The VIA process which is advocated in the Visual Landscape Planning Manual (DPI, 2007) is defined by two specific processes:

1. visual landscape evaluation (VLE)
2. visual impact assessment (VIA)

The steps of the VLE process are:

1. Define the scope of the proposal.
2. Describe the visual landscape character.
3. Evaluate the way the visual landscape character is viewed, experienced and valued.
4. Develop strategies for managing visual landscape character.

The step of the VIA process are:

1. Determine the visual management objectives (this should have been done in step 4 of the VLE).
2. Described the proposed development (this should have been done in step 1 of the VLE).
3. Describe the potential visual impacts.
4. Develop visual management measures.
5. Prepare final recommendations and monitoring options.

The VIA document produced by Planning Solutions stated many assessment outcomes, without providing any evidence or justification to quantify these outcomes. Without this evidence, it is not possible for the findings of the impact assessment to be adequately assessed and therefore accepted. This brief report details the outcomes of the peer review process, and highlights the missing information.

1.1 Documents Reviewed

- *Application for Approval to Commence Development, Proposed Industry Extractive, Various lots, Keysbrook* (2010). Planning Solutions, Perth.
- *Keysbrook Mineral Sand Project, Keysbrook, Western Australia: Public Environmental Review* (2006). MBS Environmental, Perth.
- *Keysbrook Mineral Sand Project, Keysbrook, Western Australia: Public Environmental Review Response to Submissions* (2007). MBS Environmental, Perth.

2. VISUAL LANDSCAPE EVALUATION

2.1 Defining the project scope

The proposed project should be introduced to the reader by providing information such as project location, the scope of the project, the methodology of the assessment process and a description of the proposed project. Plans, sections, elevations and diagrams should be used to visually demonstrate what the proposed change within the landscape will look like (the visual elements). Relevant policies and guidelines relating to visual assessment should also be outlined.

2.1.1 Omissions

It is acknowledged that the Planning Solutions report formed a chapter within a larger document, and as such, relied on maps and figures from other chapters, rather than resulting in unnecessary repetition. However, the introduction of 'landscape' did not reference any other maps or figures to enable the reader to visualize the location, scale or context of the project area.

Figure 7 of the VIA report demonstrates a diagrammatic form of the proposed project. This did not relate to the project site at a scale or format that would enable the reader to sufficiently interpret the visual elements of the proposed project.

2.2 Describing the visual landscape character

The existing landscape should be examined and described to allow the reader to visualise the existing conditions. The most effective format for this description is through a combination of maps, photographs and supporting text. This stage of the assessment process is important in defining the visual context of the study area which helps in assessing the potential visual impact of the proposal on landscape character. This process requires:

a. a general description of the Landscape Character Type (LCT) of the study area
b. a detailed description of the Landscape Character Units (LCUs) of the study area.

Landscape features that describe LCT are landform (soil and relief), vegetation, water features and land use. LCT is identified using the CALM (1994) reference which has described LCTs for Western Australia. Landscape Character Units (LCUs) of the study area are identified from desktop and site assessments. The description is focused on the visual elements of landform, vegetation, water form and land use. Photos are used to support these descriptions and a map is produced to illustrate the location of the LCU's. A map showing the study area within the regional context of LCTs should also be shown.

2.2.1 Omissions

Within the VIA report, the visual landscape has not been adequately described with supporting text, images or maps. In particular:

- LCT was not identified or described
- LCUs were not identified or described.

2.3 Evaluation of how the visual landscape character is viewed, experienced and valued

This stage is important as it identifies the features of the landscape that are likely to be valued by the community and need to be considered in the visual impact assessment. This evaluation process sets the basis for determining the visual management objectives to manage landscape character. This stage requires the identification of:

a. key views, such as an elevated view across the landscape or a view to a prominent feature
b. key sites and routes
c. landscape character preferences (landscape features that are valued positively and also features that are not valued have also been called scenic quality in previous evaluation models).

These features are identified from initial desktop assessment and site analysis. Stakeholders should be consulted to confirm valued sites and associated views. An inventory and evaluation of the view experience should be given and described with maps and photos. Maps should show:

- location and direction of key views
- location and classification of key sites/routes, for example tourist sites such as lookouts and picnic areas, trails, road classifications (main roads, roads to recreation sites)
- location of landscape character preferences, for example landforms that are valued.

2.3.1 Omissions

The view experience of the landscape has not been adequately described with written inventories, photos or maps:

- key views and routes have been listed with some descriptions, however they have not been illustrated on a map or described with photos
- the nearby Munda Biddi Trail was not listed as a key site or any other recreation sites that could possibly be within the Escarpment
- key sites have not been identified on a map
- landscape preferences have not been described or identified on a map.

2.4 Developing strategies to manage visual landscape character

A set of broad objectives have been identified by the DPI (2007) to effectively manage visual landscape character. These are:

a. protection and maintenance of landscape character
b. best practice siting and design
c. restoration or enhancement of landscape character.

These objectives are applied to the study area on the basis of the visual evaluation process and are used in the visual impact assessment process to determine if the proposal is able to meet the visual management objectives. A map is generally used to illustrate the visual landscape objective areas.

2.4.1 Omissions

Visual management objectives were not listed or illustrated for the study area.

3. VISUAL IMPACT ASSESSMENT

3.1 Determine the visual management objectives

Refer to section 2.4

3.1.1 Omissions

Refer to section 2.4.1

3.2 Describe the proposed development

Refer to section 2.1

3.2.1 Omissions

Refer to section 2.1.1

3.3 Describe the potential visual impacts

This is done by describing the proposed change within the landscape, the capacity of the landscape to absorb the change and an analysis of visual impacts that may be caused by the proposed change. This should be documented with a clear demonstration of the process and findings. The potential visual impacts should be described for each LCU, for example; list the key sites within each LCU and describe the potential visual impacts. Appropriate methods used to determine visual impacts include viewshed analysis, cross sections and photo montage analysis.

3.3.1 Omissions

The statements in the report about the visual impact of the proposal are:

- *while there will be changes to the landscape those changes are acceptable*
- *much of the excavation area will be screened*
- *the impact on visual impact will be minimal.*

These statements have not been adequately justified to convince the reader that there will be minimal impact on landscape character. The following is required to justify the visual impact assessment results:

- The potential impacts on each landscape character unit and the key views and sites within these LCUs have not been listed or described, even if it has been identified that there is no impact.
- Viewsheds have not been prepared for identified key views to illustrate the potential seen area from these sites. If the viewshed shows that the proposal can be seen from key sites, photographic evidence should be given to illustrate the view from these sites. These photos will justify any statements made with regard to key views and sites.
- From key sites where it has been identified that there is a potential impact, photo montages should be prepared to analyse the extent to the impact on landscape character. These sites include the South Western Highway and the Escarpment.

3.4 Developing visual management measures

This step requires the preparation of a list of the visual management objectives for each LCU to determine if these objectives can be achieved. If the objectives are not met, identify potential mitigation strategies and describe how they might reduce potential visual impacts. The DPI (2007) has also identified specific objectives for development to meet the broad objectives listed in 2.4, these are:

a. not evident (where it is not acceptable to see development)
b. blending (where development may be evident but should blend with the surrounding landscape)
c. prominent (where development may be a prominent feature in the landscape)

3.4.1 Omissions

The report concluded that visual impact will be minimal, however without identifying the visual management objectives for each LCU and if these objectives can be met, it is difficult to justify this conclusion. It is also difficult to demonstrate if the visual mitigation recommendations are appropriate for managing the impact on landscape character as these impacts have not been adequately documented and justified.

3.5 Prepare final recommendations and monitoring options

This requires the summary of the visual impacts on landscape character and the visual mitigation strategies.

3.5.1 Omissions

While a range of mitigation options have been provided, it is difficult to determine if these are appropriate without an adequate visual evaluation and impact assessment process.

4. RECOMMENDATIONS

Ecoscape recommends that the VIA is either; repeated to include sufficient supporting information to justify the reported outcomes of the assessment process, or undertaken by a suitably qualified consultant, with a strong understanding of landscape.

5. REFERENCES

Conservation and Land Management, Department of (CALM) (1994) *Reading the Remote: Landscape Characters of Western Australia*. CALM, Perth

Department of Planning and Infrastructure (DPI) (2007) *Visual Landscape Planning in Western Australia: a manual for evaluation, assessment, siting and design*. Western Australian Planning Commission, Perth.

Yours sincerely
Ecoscape (Australia) Pty Ltd

ADAM USHER
Associate