Proposed Expansion of infrastructure at River Lodge and Drakensig Staff Village in Kapama Private Game Reserve, Limpopo Province

VISUAL IMPACT ASSESSMENT

By:

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1 INTRODUCTION

1.1 QUALIFICATION AND EXPERIENCE OF THE PROFESSIONAL TEAM

NuLeaf Planning and Environmental (Pty) Ltd, specialising in Visual Impact Assessment, undertook this visual assessment.

The team undertaking the visual assessment has extensive practical knowledge in spatial analysis, environmental modelling and digital mapping, and applies this knowledge in various scientific fields and disciplines. The expertise of these practitioners is often utilised in Environmental Impact Assessments and Environmental Management Plans.

The visual assessment team is familiar with the "Guidelines for Involving Visual and Aesthetic Specialists in EIA Processes" (Provincial Government of the Western Cape: Department of Environmental Affairs and Development Planning) and utilises the principles and recommendations stated therein to undertake visual impact assessments. Although the guidelines have been developed with specific reference to the Western Cape Province of South Africa, the core elements are more widely applicable.

NuLeaf Planning and Environmental have been appointed as an independent specialist consultant to undertake the visual impact assessment. Neither the author, nor NuLeaf Planning and Environmental will benefit from the outcome of the project decision-making.

1.2 LEGAL FRAMEWORK

The following legislation and guidelines have been considered in the preparation of this report:

- The Environmental Impact Assessment Amendment Regulations, 2014;
- Guideline on Generic Terms of Reference for EAPs and Project Schedules (DEADP, Provincial Government of the Western Cape, 2011).
- Guideline for Involving Visual and Aesthetic Specialists in EIA Processes (DEADP, Provincial Government of the Western Cape, 2005).

1.3 INFORMATION BASE

This assessment was based on information from the following sources:

- Topographical maps and GIS generated data were sourced from the Surveyor General, Surveys and Mapping in Mowbray, Cape Town;
- Observations made and photographs taken during site visits;
- Conceptual layout plan;
- Professional judgement based on experience gained from similar projects; and
- Literature research on similar projects.

1.4 ASSUMPTIONS AND LIMITATIONS

This assessment was undertaken during the planning stage of the project and is based on information available at that time.

The proposed development entails the expansion of various infrastructure at River Lodge and Drakensig Staff Village within Kapama Private Game Reserve. The expansion at River Lodge will consist of the construction of the following:

- A low impact walkway from the existing complex to the new dining room and kitchen
- Additional staff accommodation
    - Single storey
    - 18 rooms sleeping 28 staff members
- Laundry room

The infrastructure at Drakensig will comprise of

- Additional staff accommodation
    - Double storey building consisting of 24 rooms sleeping 24 staff
    - Four cluster 3 bedroom houses sleeping 24
- A solar plant with a 750 kW output

This Visual Impact Assessment and all associated mapping for the proposed development has been undertaken according to the worst case scenario, which is a typical 1-storey building with roof at River Lodge (measuring approximately 3m) and a typical 2-storey building with roof at Drakensig (measureing approxiamtely 6m). the propsoed walkway at River Lodge and the solar plant at Drakensig will be less than the height of a 1-storey building and will, therefore fall within the viewsheds of the proposed buildings.

As the support infrastructure (i.e. roads, parking, bulk services etc) has no vertical dimesion (i.e. it is located at ground level), no viewshed maps have been generated for these. It is assumed that this ground-level infrastructure will not be visible beyond the boundaries of the site.

1.5 LEVEL OF CONFIDENCE

Level of confidence[1] is determined as a function of:

- The information available, and understanding of the study area by the practitioner:
    - **3**: A high level of information is available of the study area and a thorough knowledge base could be established during site visits, surveys etc. The study area was readily accessible.
    - **2**: A moderate level of information is available of the study area and a moderate knowledge base could be established during site visits, surveys etc. Accessibility to the study area was acceptable for the level of assessment.
    - **1**: Limited information is available of the study area and a poor knowledge base could be established during site visits and/or surveys, or no site visit and/or surveys were carried out.
- The information available, understanding of the project and experience of this type of project by the practitioner:

[1] Adapted from Oberholzer (2005).

- **3**: A high level of information and knowledge is available of the project and the visual impact assessor is well experienced in this type of project and level of assessment.
- **2**: A moderate level of information and knowledge is available of the project and the visual impact assessor is moderately experienced in this type of project and level of assessment.
- **1**: Limited information and knowledge is available of the project and the visual impact assessor has a low experience level in this type of project and level of assessment.

These values are applied as follows:

Table 1: Level of Confidence

	Information on the project & experience of the practitioner			
Information on the study area		**3**	**2**	**1**
	3	9	6	3
	2	6	4	2
	1	3	2	1

*The level of confidence for this assessment is determined to be **9** and indicates that the author's confidence in the accuracy of the findings is high:*

- The information available, and understanding of the study area by the practitioner is rated as **3** and
- The information available, understanding and experience of this type of project by the practitioner is rated as **3**.

2 METHODOLOGY

The study was undertaken using Geographic Information Systems (GIS) software as a tool to generate viewshed analyses and to apply relevant spatial criteria to the proposed development. A detailed Digital Terrain Model (DTM) for the study area was created from 5m interval contours from the National Geo-spatial Information data supplied by the Department: Rural Development and Land Reform.

The approach utilised to identify potential issues related to the visual impact included the following activities:

- The creation of a detailed digital terrain model (DTM) of the potentially affected environment;
- The sourcing of relevant spatial data to develop an understanding of the existing visual character and quality of the receiving environment. This includes cadastral features, vegetation types, land use activities, topographical features, site placement, etc.;
- The identification of sensitive environments upon which the proposed development could have a potential visual impact;
- The creation of viewshed analyses from the proposed development area in order to determine the visual exposure and the topography's potential to absorb the potential visual impact. The viewshed analyses take into account the dimensions of the proposed structures.

This report (Visual Impact Assessment) sets out to identify and quantify the possible visual impacts of the proposed expansion of infrastructure at River Lodge and Drakensig located within Kapama Private Game Reserve.

The following methodology has been followed for the assessment of visual impact[2]:

- **Determine potential visual exposure**

  The visibility or visual exposure of any development is the point of departure for the visual impact assessment. It stands to reason that if the proposed development were not visible, no impact would occur.

  Viewshed analyses of the proposed development components indicate the potential visibility.

- **Determine visual distance and observer proximity to the development**

  In order to refine the visual exposure of the development on surrounding areas/receptors, the principle of reduced impact over distance is applied in order to determine the core area of visual influence.

  Proximity radii are created in order to indicate the scale and viewing distance of the development and to determine the prominence thereof in relation to the environment.

  The visual distance theory and the observer's proximity to the development are closely related, and especially relevant, when considered from areas with a high viewer incidence and a predominantly negative visual perception of the proposed development.

- **Determine viewer incidence, perception and sensitivity**

  The number of observers and their perception of a development determine the concept of visual impact. If there are no observers, then there would be no visual impact. If the visual perception of a development is favourable to all observers, then the visual impact would be positive.

  It is therefore necessary to identify areas of high viewer incidence and to classify certain areas according to the observer's visual sensitivity towards the proposed development and its related infrastructure.

  It would be impossible not to generalise the viewer incidence and sensitivity to some degree, as there are many variables when trying to determine the perception of the observer; regularity of sighting, cultural background, state of mind, and purpose of sighting which would create a myriad of options.

- **Determine the visual absorption capacity**

  This is the capacity of the receiving environment to absorb the potential visual impact of the proposed development. The VAC is primarily a function of the vegetation, and will be high if the vegetation is tall, dense

[2] This methodology is adapted from that developed by MetroGIS, and detailed in numerous Visual Impact Assessments undertaken by them (2010-2014).

and continuous. Conversely, low growing sparse and patchy vegetation will have a low VAC.

The VAC would also be high where the environment can readily absorb the structure in terms of texture, colour, form and light / shade characteristics of the structure. On the other hand, the VAC for a structure contrasting markedly with one or more of the characteristics of the environment would be low.

The VAC also generally increases with distance, where discernible detail in visual characteristics of both environment and structure decreases.

The digital terrain model utilised in the calculation of the visual exposure of the development does not incorporate the potential visual absorption capacity (VAC) of the natural vegetation of the region. It is therefore necessary to determine the VAC by means of the interpretation of the vegetation cover and other landscape characteristics.

- **Determine the visual impact index**

  The results of the above analyses are merged in order to determine where the areas of likely visual impact would occur. These areas are further analysed in terms of the previously mentioned issues (related to the visual impact) and in order to judge the magnitude of each impact.

- **Determine impact significance**

  The potential visual impacts identified and described are quantified in their respective geographical locations in order to determine the significance of the anticipated impact. Significance is determined as a function of extent, duration, magnitude and probability. Appropriate mitigation is recommended where relevant.

3 PROJECT DESCRIPTION

The proposed development entails the expansion of various infrastructure at River Lodge and Drakensig Staff Village within Kapama Private Game Reserve. The expansion at River Lodge will consist of the construction of the following:

- A low impact walkway from the existing complex to the new dining room and kitchen
- Additional staff accommodation
  - Single storey
  - 18 rooms sleeping 28 staff members
- Laundry room

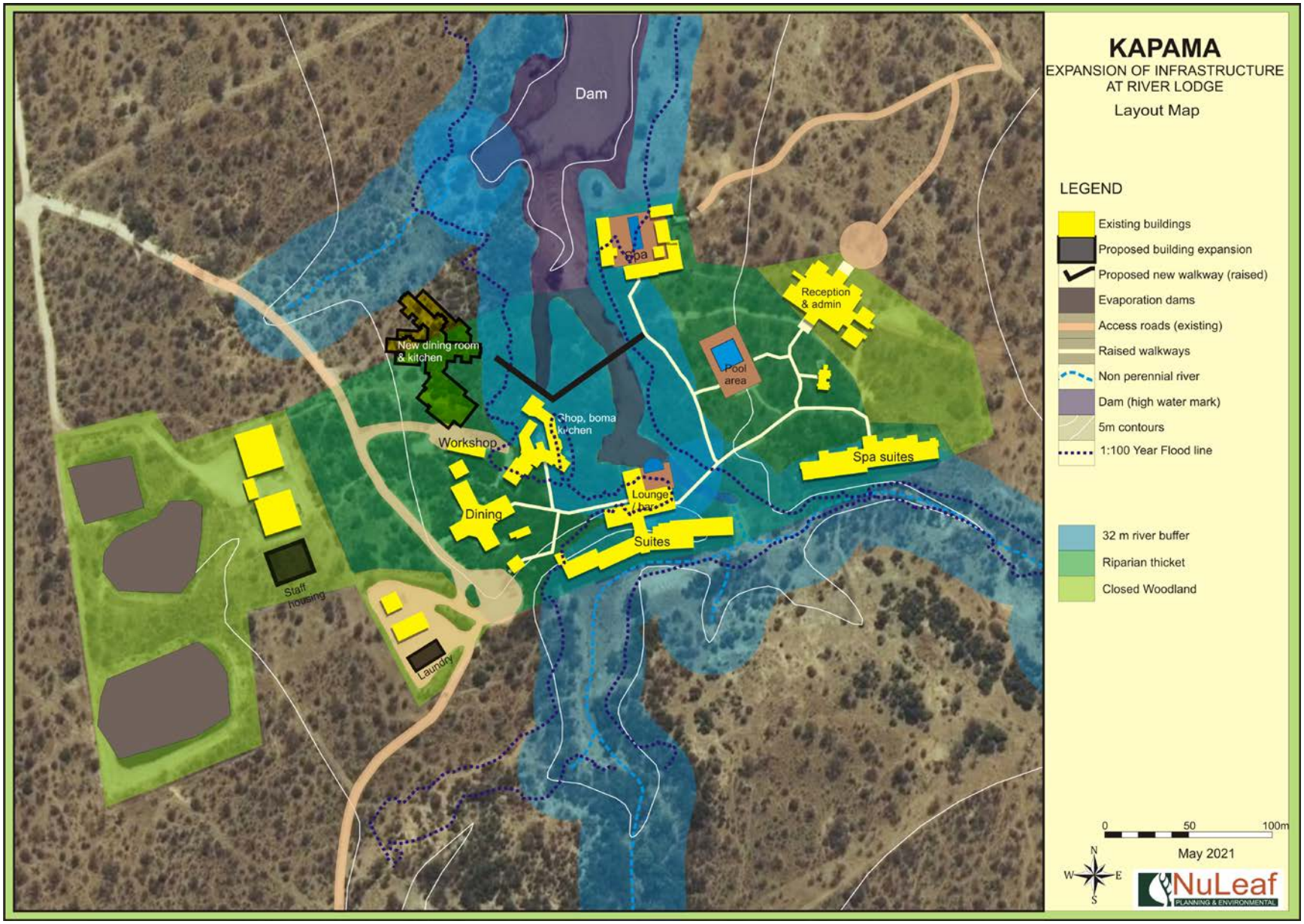
The infrastructure at Drakensig will comprise of

- Additional staff accommodation
  - Double storey building consisting of 24 rooms sleeping 24 staff
  - Four cluster 3 bedroom houses sleeping 24
- A solar plant with a 750 kW output

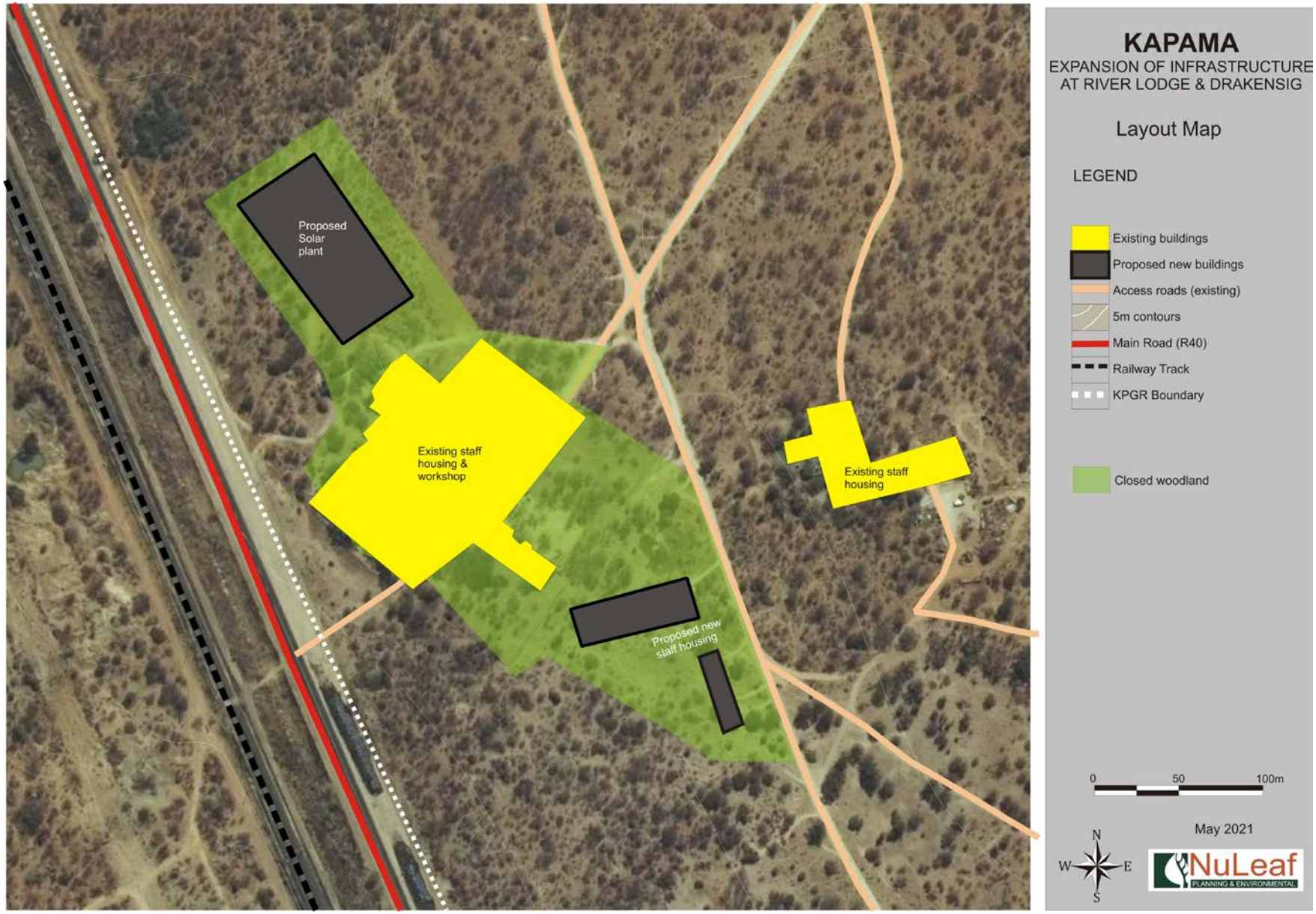
4 SCOPE OF WORK

The scope of work for this assessment includes the determination of the potential visual impacts in terms of nature, extent, duration, magnitude, probability and significance of the construction and operation of the proposed expansion o infrastructure at River Lodge and Drakensig. Mitigation measures are recommended where appropriate.

As the affected property is located within the Kapama Private Game Reserve, special consideration has been taken to determine what the extent of the visual impact will be on such a sensitive area.



Map 1: Existing layout with the proposed expansion of River Lodge



Map 2: Existing layout with the proposed expansion of Drakensig

5 THE AFFECTED ENVIRONMENT

5.1 GENERAL ENVIRONMENT

The affected property, the Remaining extent of the farm Hoedspruit 82 KU, is situated within Kapama Private Game Reserve in Maruleng Local Municipality, approximately 10 Km south of Hoedspruit. The Kapama Private Game Reserve is approximately 13 000 ha in size and lies adjacent to the Greater Kruger National Park.

River Lodge is situated at the confluence of two episodic drainage lines. An earth dam of approximately 1.5 ha in size is situated immediately downstream of the camp with the current dining decks situated over the top end of the dam. The study area is situated within the quarter-degree grid 2431 AC at an altitude of approximately 540 mamsl.

Drakensig staff village is located along the western boundary of the property, south of the main entrance gate on the R40. Existing infrastructure includes a workshop/ maintenance area and staff housing in 2-storey building.

There are no national roads present within the study area, but 1 arterial connector (R40) and a railway has relevance. The R40 and railway are located to the west of the KPGR boundary.

The topography of the general area is flat to undulating. Most of the study area contains untransformed vegetation, but existing infrastructure is present within River Lodge and Drakensig. The area of the proposed laundry room at River Lodge was previously used as a bus parking area and is therefore already disturbed and cleared of vegetation.

According to Mucina & Rutherford (2006), the study area is situated within Granite Lowveld in the Lowveld Savannah Bioregion in the *Savanna* Biome. Granite Lowveld is characterised by moderately open savannah, dominated by *Sclerocarya birrea, Combretum apiculatum* and *C. zeyheri* tree species.

Hoedspruit normally receives about 410 mm of rain per year, with most rainfall occurring mainly during mid-summer. The region receives the lowest rainfall (0 mm) in July and the highest (84 mm) in December. The monthly distribution of average daily maximum temperatures indicates that the average midday temperatures for Hoedspruit range from 23.3°C in June to 30.2°C in January. The overall mean annual rainfall is approximately 500 mm per annum.

Figure 1: Topography of the site

The survey footprint is situated on the western periphery of the Kruger National Park. In general the area is characterized by open and flat plains with several drainage lines running mostly south to north. Infrastructure includes buildings and infrastructure associated with lodges at Kapama Nature Reserve, access roads (R40 and various tracks), a railway line and fences.

The surrounding area is mainly used for conservation and tourism related activities, the area being characterised by game farms. The Kapama Nature Reserve in included in the Kruger-to-Canyon Biospere Reserve.

Surrounding tourist attractions include the Kruger National Park, Timbavati, Kiaserie, Sabi Sand, Thornybush, Kapama, Makalali and The Blyde Nature Reserve representing a 'community' of protected areas. The private nature reserves in the Central Lowveld region make up the largest privately owned nature reserve complex in the world, approximately 500,000 hectares in extent which includes the escarpment protected areas (River Lodge Scoping Report, 2005).

In general, the landscape character of the greater study area presents as rural and natural, with some agriculture. The site itself is natural in character and furthermore it is situated within a conservation zone of surrounding reserves.

5.2 VISUAL QUALITY

The visual quality of the receiving environment within the study areas is high, by virtue of the vast and predominately undeveloped nature of the environment. This

lends a distinct sense of place to the area. This area is known as a tourist destination in its own right and owing to its location in its adjacency to the Greater Kruger National Park and other game reserves within the region.

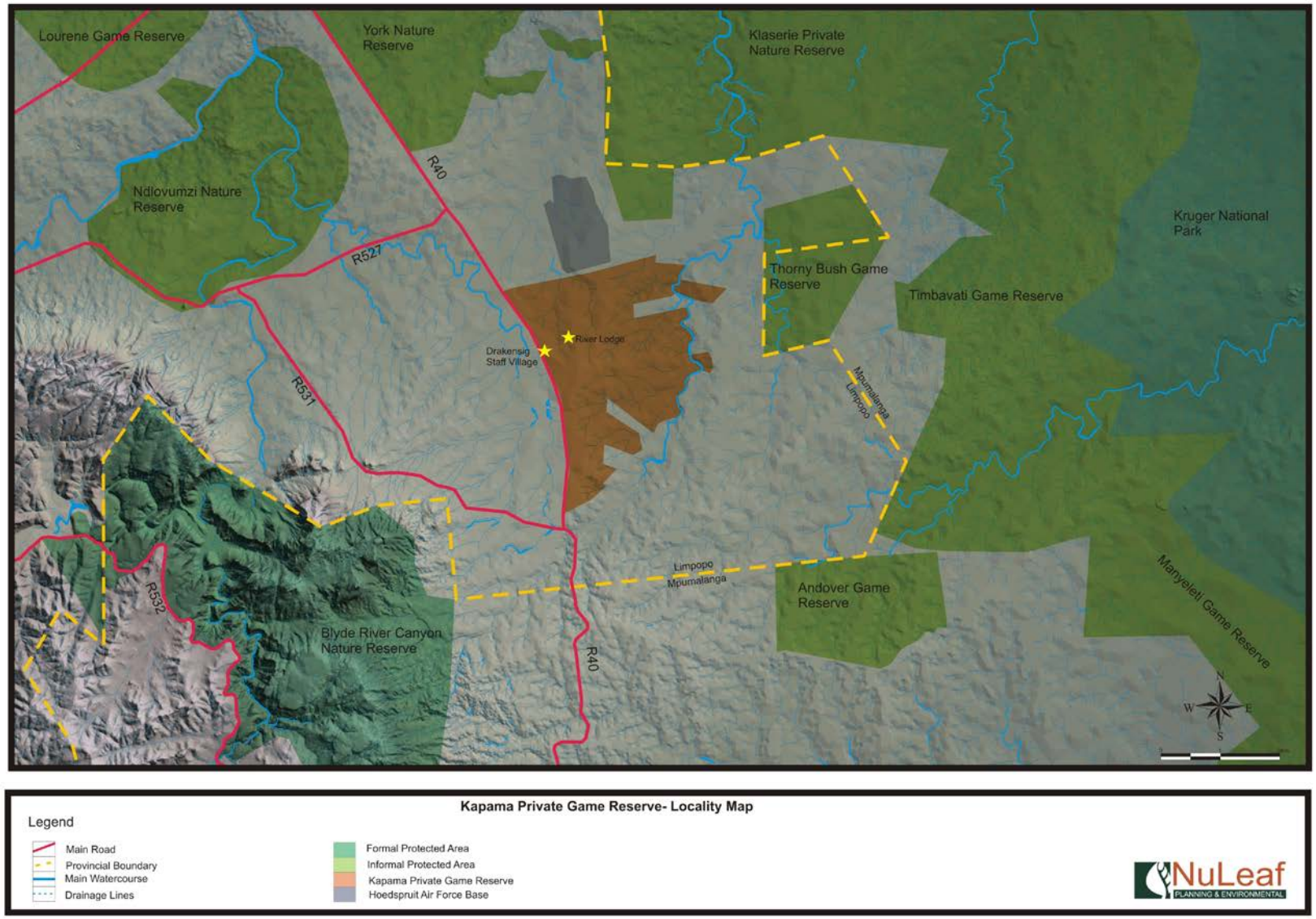
Figure 2: The dam and surrounds, showing the visual quality near the proposed walkway

Figure 3: Visual quality near the proposed new staff accommodation site at River Lodge

Figure 4: Visual quality of the Reserve

The entire study area may be considered as moderately sensitive to visual impacts due to its generally flat topography and dense surrounds of bushveld. However, both River Lodge and Drakensig are established sites with various infrastructure present so the visual impact is already present.

It is assumed that the proposed new infrastructure (staff accommodation, laundry room, walkway) within the existing River Lodge and Drakensig will blend into the landscape through use of sensitive use of natural materials, colour palettes, textures and vegetative covering. Furthermore, large tracts of intact natural vegetation along with the use of indigenous landscaping will reflect and enhance the natural surrounding landscape on site in high traffic areas, or in areas which may be disturbed through construction.



Map 3: Locality map

6 ANTICIPATED ISSUES RELATED TO VISUAL IMPACT

Anticipated issues related to the potential visual impact of the proposed expansion of infrastructure at River Lodge and Drakensig include the following:

- The visibility of the development to, and potential visual impact on sensitive visual receptors in close proximity to the proposed development.
- The potential visual impact of the proposed solar facility on sensitive visual receptors in close proximity thereto.
- Potential visual impact on sensitive visual receptors within the region.
- The potential visual impact associated with the construction phase of the development on sensitive visual receptors in close proximity.
- The potential visual impact of safety and security lighting of the development at night on sensitive visual receptors in close proximity.
- The potential visual impact of the development on the visual character of the landscape.
- The potential cumulative visual impacts of the development within the study area.

7 RESULTS

7.1 POTENTIAL VISUAL EXPOSURE

The results of viewshed analysis and potential observer proximity for the proposed expansions to River Lodge and Drakensig are shown on **Map 4** to follow.

A visibility analysis for the proposed developments was generated from two points, one at River Lodge and one at Drakensig. The point at River Lodge was taken at an offset of 3 m above average ground level, which is approximately the height of an average 1 storey building. The point at Drakensig was taken at an offset of 6 m above average ground level, which is approximately the height of an average 2 storey building. The receptor height within the receiving environment was set at 2m above average ground level, which is representative of a person standing upright.

This was done in order to determine the general visual exposure of the area under investigation, simulating the maximum expected heights of buildings associated with the proposed expansion.

The analysis does not include the potential shielding effect (i.e. VAC) of the existing environment, and does not take into consideration the limitations of the human eye, therefore signifying a worst-case scenario.

The findings of the generated viewshed are detailed below:

The potential visual exposure for the proposed expansions to River Lodge are as follows, (Refer to **Map 4)**:

- Potential visual exposure for the infrastructure at River Lodge is concentrated on the site itself within 1 Km. Similarly, the potential infrastructure at Drakensig is predominately concentrated within the site, but does extend outside the boundary and over the R40 and railway line.

- Potential visual exposure within 3km from the site is moderate, reducing somewhat between 1km and 3km from the site. Visual exposure for River Lodge is concentrated within KPGR, while Drakensig, it extends beyond.

  Within this zone, visually exposed areas for River Lodge lie mainly towards the north and south in the boundaries of the Kapama Game Reserve where there are no sensitive visual receptors.

  Within this zone, visually exposed areas for Drakensig extend to the west and south where sensitive visual receptors include home/farmsteads and users of the R40.

- Between 3km and 6km from the site, potential visual exposure decreases markedly in extent for River Lodge, with a small pocket of visually exposed area to the north, but still within the bounds of KPGR.

  Potential visual exposure for Drakensig is predominately located to large pockets in the west and south where sensitive visual receptors include home/farmsteads and users of the R40.

7.2 VISUAL DISTANCE AND OBSERVER PROXIMITY

NuLeaf Planning and Environmental determined proximity offsets based on the anticipated visual experience of the observer over varying distances. In general, the severity of the visual impact on visual receptors decreases with increased distance from the proposed development.

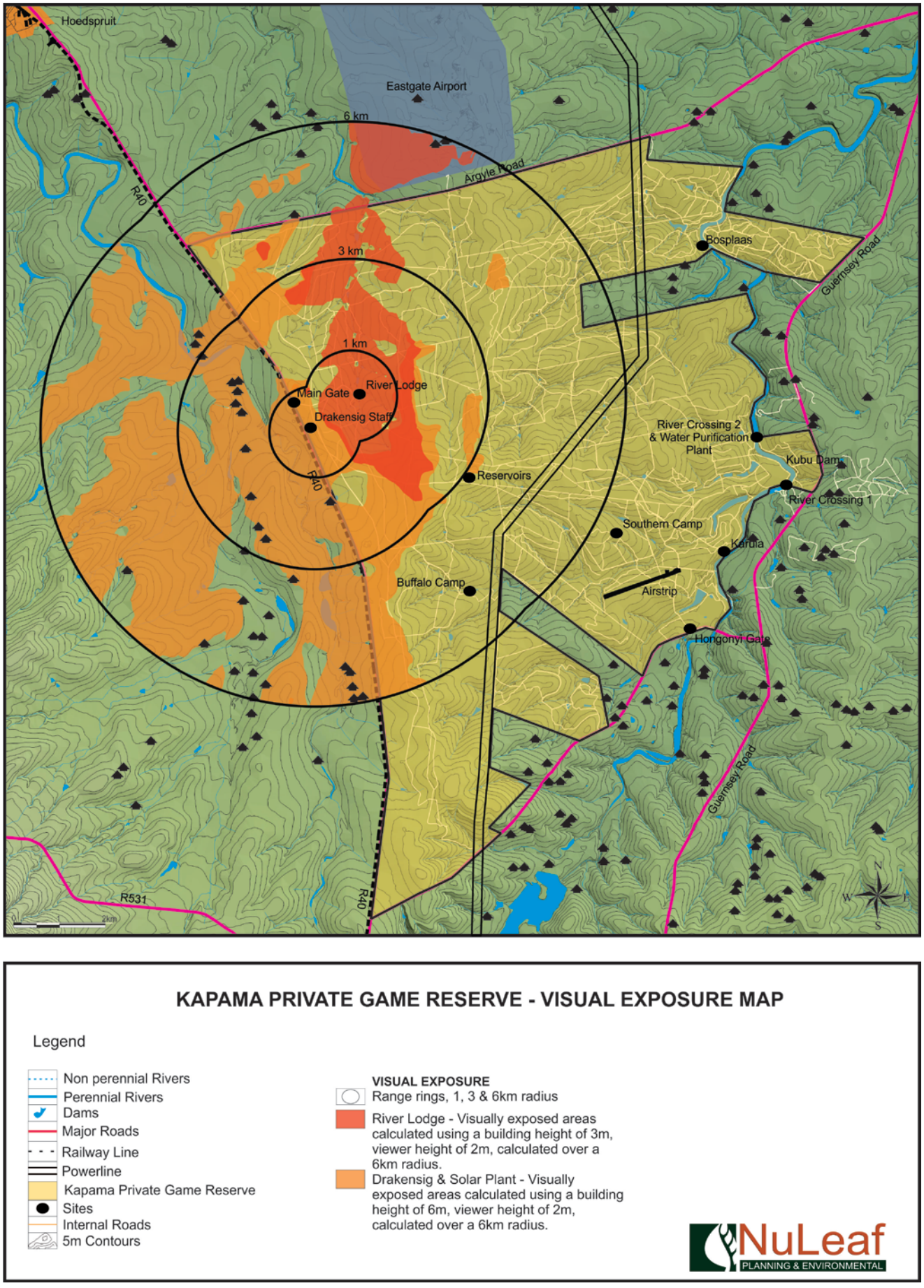
Therefore, in order to refine the visual exposure of the development on surrounding areas/receptors, the principle of reduced impact over distance is applied in order to determine the core area of visual influence for the proposed development.

Proximity radii for the proposed development site are created in order to indicate the scale and viewing distance of the development and to determine the prominence of the structures in relation to their environment.

The proximity radii are based on the anticipated visual experience of the observer over varying distances. The distances are adjusted upwards for larger facilities and downwards for smaller facilities (i.e. depending on the size and nature of the proposed development).

Typically, the proximity radii, calculated from the boundary of the property, would be as follows for the proposed expansion to River Lodge:

- 0 – 1 km - Short distance views where the development would be easily and comfortably visible and recognisable.
- 1 – 3 km - Medium distance view where the development would become part of the visual environment, but could still be visible and recognisable.
- 3 - 6 km - Long distance view where the development might be visible, although this is unlikely.



Map 4: Potential visual exposure of the proposed expansion to River Lodge and Drakensig

7.3 VIEWER INCIDENCE, PERCEPTION AND SENSITIVITY

It is necessary to identify areas of high viewer incidence, and to classify certain areas according to the observer's visual sensitivity towards the proposed development.

Viewer incidence is calculated to be the highest within the bounderies of the site and Kapama Private Game Reserve, where there are no sensitive visual receptors and a visual disturbance is already present at the proposed sites (River Lodge and Drakensig). A portion of the R40 also falls within this zone where commuters using this road could be be negatively impacted upon by the visual exposure of the new staff accommodation and solar pant at Drakensig. Refer to **Map 5.**

Tourists visting and travelling through the area are also seen as possible sensitive visual receptors upon which the presence of the proposed solar plant in particualr could have a negative visual impact.

Tourists and residential receptors in natural and rural contexts are more sensitive than those in urban contexts, due to the absence of visual clutter in these undeveloped and undisturbed areas.

The severity of the visual impact on visual receptors decreases with increased distance from the proposed developments.

No specific report can be made on viewer perception regarding this proposed development, as no reported stakeholder feedback has been received as of yet. The project does not appear to be controversial, however, and to the knowledge of the author, there are no action groups or individuals opposing the development.

7.4 VISUAL ABSORPTION CAPACITY

Visual Absorption Capacity (VAC) is the capacity of the receiving environment to absorb the potential visual impact of the proposed development. VAC is primarily a function of the vegetation, and will be high if the vegetation is tall, dense and continuous. Conversely, low growing sparse and patchy vegetation will have a low VAC.

The VAC would also be high where the environment can readily absorb the development in terms of texture, colour, form and light / shade characteristics of the structure. On the other hand, the VAC for a development contrasting markedly with one or more of the characteristics of the environment would be low.

The VAC also generally increases with distance, where discernable detail in visual characteristics of both environment and development decreases.

Overall, the Visual Absorption Capacity (VAC) of the site and surrounds is high to moderate, depending on the nature of the vegetation (i.e. natural grassland vegetation will have a low VAC and thicket and woodland would have a moderate VAC).

VAC will be taken into account within the Reserve in the Assessment of Visual Impacts to follow.

Figure 5: High to moderate VAC of the receiving environment of the proposed walkway at River Lodge

Figure 6: High to moderate VAC of the receiving environment around River Lodge

7.5 VISUAL IMPACT INDEX

The combined results of the visual exposure, viewer incidence / perception and visual distance of the proposed expansions to River Lodge and Drakensig are displayed on **Map 5**. Here the weighted impact and the likely areas of impact have been indicated as a visual impact index.

Values have been assigned for each potential visual impact per data category and merged in order to calculate the visual impact index. An area with short distance, a high viewer incidence and a predominantly negative perception would therefore have a higher value (greater impact) on the index. This helps in focussing the attention to the critical areas of potential impact when evaluating the issues related to the visual impact.

The visual impact index for the proposed development is further described as follows.

- The visual impact index map indicates a core zone of likely **high** visual impact on the sites themselves and within 1km of the proposed developments confined to the bounds of KPGR, due to VAC.

  Sensitive visual receptors within this zone comprise mainly of the visitors within River Lodge and the surrounding Kapama Game Reserve. These receptors are likely to experience a **moderate to low** visual impact due to the fact that there is already an existing visual disturbance (buildings and infrastructure at River Lodge and Drakensig and other lodge found with KPGR).

  A small portion of the R40 falls within this core zone and commuters using this road are likely to experience a **moderate** visual impact owing to the proposed developments at Drakensig due to the VAC.

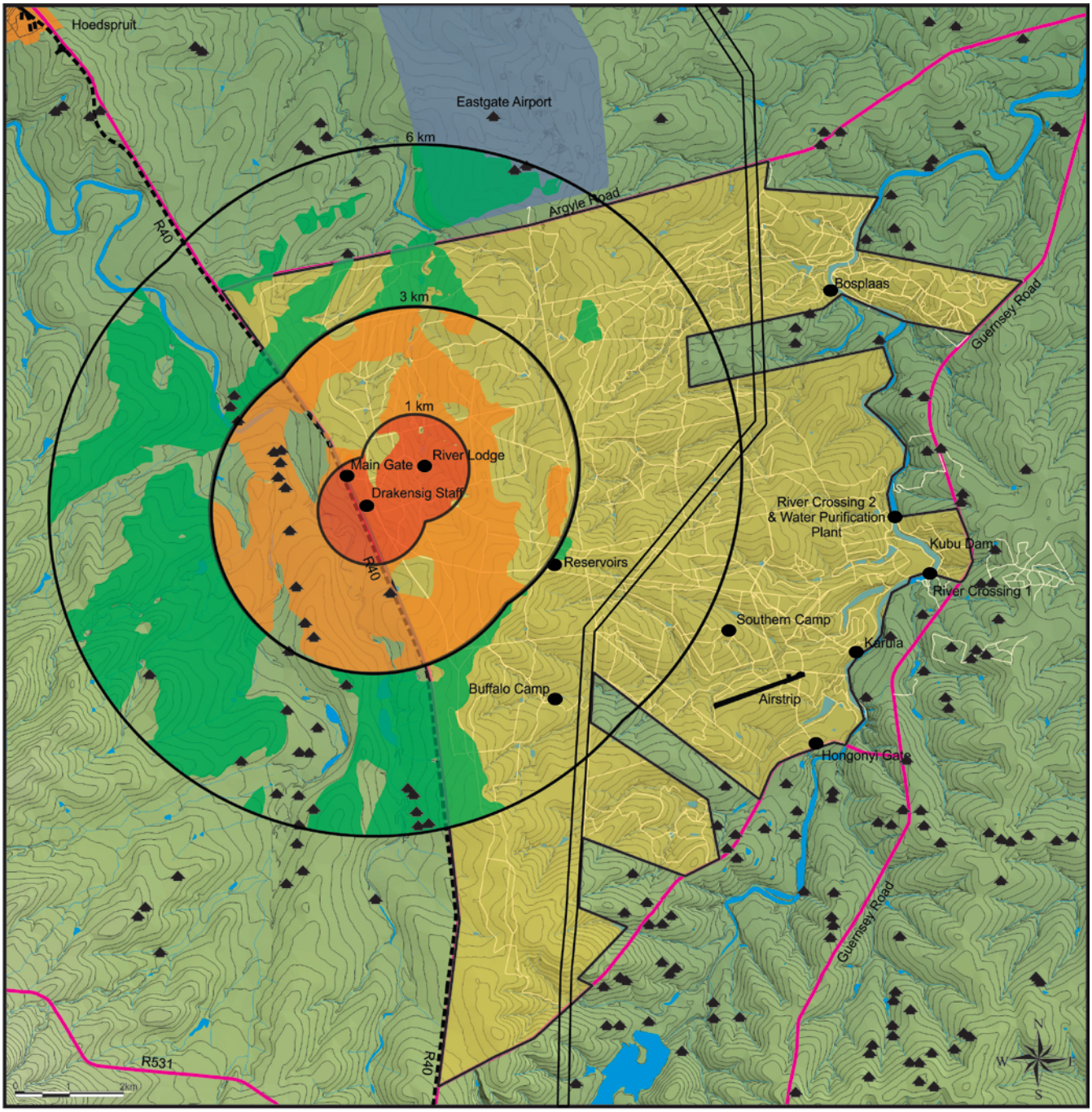
- Visual impact is likely to be **moderate** between 1km and 3km of the proposed development sites.

  Sensitive visual receptors include visitors to the surrounding Kapama Game Reserve, game drive routes within the Reserve and settlements / homesteads towards the west outside of the Reserve boundary. These receptors are likely to experience **low** visual impact.

- Between 3km and 6km of the proposed development sites, the extent of potential visual impact is significantly reduced. Where they occur, visual impacts within this zone due to VAC are likely to be **low**.

  Sensitive visual receptors at this distance include pockets in the south and west predominately outside of the Reserve, as well as the southern portion of the Hoedspruit Air Force Base. Farmsteads located outside of the Reserve may also be impacted upon. Users of the game drive routes within the Reserve may also be affected as well as communters using the R40. Visual impacts on these sensitive receptors are likely to be **very low.**

- Remaining impacts beyond 6km of the proposed development are expected to be **negligible,** where these occur at all.



KAPAMA PRIVATE GAME RESERVE - VISUAL IMPACT INDEX MAP

Legend

- Non perennial Rivers
- Perennial Rivers
- Dams
- Major Roads
- Railway Line
- Powerline
- Kapama Private Game Reserve
- Sites
- Internal Roads
- 5m Contours

VISUAL IMPACT INDEX

- Range rings, 1, 3 & 6km radius
- High (visible within 1 km)
- Moderate (visible between 1 and 3 km)
- Low (visible between 3 and 6 km)

VISUAL EXPOSURE

The viewshed analysis was undertaken at an offset of 3m for River Lodge and 6m for Drakensig above ground level, a receptor height of 2m above ground level, over a 6km radius, utilising a digital model developed from 5m contours. It must be noted that the viewshed analysis does not include the effect of vegetation cover or existing structures on the exposure of the proposed development, therefore signifying a worst-case scenario.

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Map 5: Visual Impact Index

7.6 VISUAL IMPACT ASSESSMENT: METHODOLOGY

The previous section of the report identified specific areas where likely visual impacts would occur. This section will attempt to quantify these potential visual impacts in their respective geographical locations and in terms of the identified issues related to the visual impact.

The methodology for the assessment of potential visual impacts states the **nature** of the potential visual impact (e.g. the visual impact on users of major roads in the vicinity of the proposed development) and includes a table quantifying the potential visual impact according to the following criteria:

- **Extent** - international (very high = 5), national (high = 4), regional (medium = 3), local (low = 2) or site specific (very low = 1)
- **Duration** - very short (0-1 yrs = 1), short (2-5 yrs = 2), medium (5-15 yrs = 3), long (>15 yrs = 4), and permanent (= 5)
- **Magnitude** - None (= 0), minor (= 2), low (= 4), medium/moderate (= 6), high (= 8) and very high (= 10). This value is read off the Visual Impact Index maps.
- **Probability** – very improbable (= 1), improbable (= 2), probable (= 3), highly probable (= 4) and definite (= 5)
- **Status** (positive, negative or neutral)
- **Reversibility** - reversible (= 1), recoverable (= 3) and irreversible (= 5)
- **Significance** - low, medium or high

The **significance** of the potential visual impact is equal to the **consequence** multiplied by the **probability** of the impact occurring, where the consequence is determined by the sum of the individual scores for magnitude, duration and extent (i.e. **significance = consequence (magnitude + duration + extent) x probability**).

The significance weighting for each potential visual impact (as calculated above) is as follows:

- <30 points: Low (where the impact would not have a direct influence on the decision to develop in the area)
- 31-60 points: Medium/moderate (where the impact could influence the decision to develop in the area)
- >60: High (where the impact must have an influence on the decision to develop in the area)

7.7 VISUAL IMPACT ASSESSMENT: PRIMARY IMPACTS

The proposed expansion to River Lodge and Drakensig will have a visual impact, however, it will predominately be contained within the landscape of the Kapama Game Reserve.

The other walkway at River Lodge will have the potential of manifesting as landscape scarring, and thus represent a potential visual impact. However, as this infrastructure has no elevation or height, it is expected that the visual impact will be experienced mostly on the site itself and will be absorbed by the development site.

7.7.1 POTENTIAL VISUAL IMPACT ON SENSITIVE VISUAL RECEPTORS IN CLOSE PROXIMITY

The visual impacts on sensitive visual receptors (i.e. users of tourist roads within KPGR and visitors to the Lodge itself, commuters using a shot stretch of the R40) in close proximity to the proposed developments at River Lodge and the staff accommodation at Drakesnig (i.e. within 1km) are expected to be of **moderate** significance before mitigation and of **low** significance post mitigation. The limited extent of visual receptors in the area and the moderate to high VAC of the area will contribute to reducing the probability of the visual impact of the development somewhat.

The table below illustrates this impact assessment.

Table 2: Impact table summarising the significance of sensitive visual receptors in close proximity to the proposed development

Nature of Impact: Visual impact on the users of the R40 and visitor to KPGR and River Lodge in close proximity to the proposed development		
	No mitigation	***Mitigation considered***
Extent	Local **(2)**	Local **(2)**
Duration	Long term **(4)**	Long Term **(4)**
Magnitude	Moderate **(6)**	Low **(4)**
Probability	Probable **(3)**	Improbable **(2)**
Significance	Moderate **(36)**	Low **(20)**
Status (positive or negative)	Neutral	Neutral
Reversibility	Recoverable **(3)**	Recoverable **(3)**
Irreplaceable loss of resources?	No	No
Can impacts be mitigated?	Yes	

Mitigation / Management:

Planning:

- Respond to the natural environment during the planning of buildings and infrastructure.
- Retain / re-establish and maintain large trees, natural features and noteworthy natural vegetation in all areas outside of the development footprint. Adapt the development footprint to accommodate these where necessary.
- Retain a buffer of approximately 50 m wide of intact natural vegetation between the boundary fence of Kapama and the proposed solar plant.
- Retain natural pockets (wetland, river and other sensitive vegetation zones) as buffers within the development and along the perimeter.
- Retain vegetation in all areas outside of actual built footprints wherever possible.
- Soften hard spaces and parking areas through the retention of existing vegetation or the introduction of appropriate indigenous planting.
- Make use of muted earth tones, matt surfaces and natural materials rather than primary colours, reflective surfaces and high-tech finishes for all buildings, structures and infrastructure.
- Tilt large window areas to negate reflection impact.
- Limit the overall height of all buildings to a maximum of 6m.
- Visually break up large bulky buildings into smaller, subtler, less prominent shapes and planes.
- Avoid large areas of un-shaded reflective and hard paving surfaces.
- Avoid the placement of unsightly services and infrastructure in visually prominent areas.
- Appropriately screen service areas.

Construction:

- Rehabilitate all construction areas.
- Ensure that vegetation is not cleared unnecessarily to make way for infrastructure.
- Rehabilitate all areas. Consult an ecologist regarding rehabilitation specifications.
- Monitor rehabilitated areas post construction and implement remedial actions as

required. Operations: ➢ Maintain the general appearance of the development as a whole. ➢ Monitor rehabilitated areas, and implement remedial action as and when required. Decommissioning: ➢ Remove infrastructure not required for the post-decommissioning use of the site. ➢ Rehabilitate all areas. Consult an ecologist regarding rehabilitation specifications. ➢ Monitor rehabilitated areas post-decommissioning and implement remedial actions as required.
Cumulative impacts: The construction and operation of the proposed expansion to River Lodge and Drakensig together with its associated infrastructure will increase the cumulative visual impact of built infrastructure within the region.
Residual impacts: None.

7.7.2 POTENTIAL VISUAL IMPACT OF THE SOLAR FACILITY ON SENSITIVE VISUAL RECEPTORS IN CLOSE PROXIMITY

The visual impacts on sensitive visual receptors (i.e. users of tourist roads within KPGR, commuters using a short stretch of the R40 and home/farm steads) in close proximity to the proposed solar facility at Drakensig (i.e. within 1km) are expected to be of **moderate** significance before mitigation and of **low** significance post mitigation. The limited extent of visual receptors in the area and the moderate to high VAC of the area will contribute to reducing the probability of the visual impact of the development somewhat.

The table below illustrates this impact assessment.

Table 3: Impact table summarising the significance of sensitive visual receptors in close proximity to the proposed development

Nature of Impact: Visual impact on the users of the R40 and home/farmsteads in close proximity to the proposed solar facility at Drakensig		
	No mitigation	***Mitigation considered***
Extent	Local **(2)**	Local **(2)**
Duration	Long term **(4)**	Long Term **(4)**
Magnitude	High **(8)**	Low **(4)**
Probability	H Probable **(4)**	Probable **(3)**
Significance	Moderate **(56)**	Low **(30)**
Status (positive or negative)	Neutral	Neutral
Reversibility	Recoverable **(3)**	Recoverable **(3)**
Irreplaceable loss of resources?	No	No
Can impacts be mitigated?	Yes	
Mitigation / Management: Planning: ➢ Respond to the natural environment during the planning of buildings and infrastructure. ➢ Retain / re-establish and maintain large trees, natural features and noteworthy natural vegetation in all areas outside of the development footprint. Adapt the development footprint to accommodate these where necessary. ➢ Retain a buffer of approximately 50 m wide of intact natural vegetation between the boundary fence of Kapama and the proposed solar plant. ➢ Retain natural pockets (wetland, river and other sensitive vegetation zones) as buffers within the development and along the perimeter. ➢ Retain vegetation in all areas outside of actual built footprints wherever possible. ➢ Soften hard spaces and parking areas through the retention of existing vegetation or		

the introduction of appropriate indigenous planting. ➢ Make use of muted earth tones, matt surfaces and natural materials rather than primary colours, reflective surfaces and high-tech finishes for all buildings, structures and infrastructure. ➢ Tilt large window areas to negate reflection impact. ➢ Limit the overall height of all buildings to a maximum of 6m. ➢ Visually break up large bulky buildings into smaller, subtler, less prominent shapes and planes. ➢ Avoid large areas of un-shaded reflective and hard paving surfaces. ➢ Avoid the placement of unsightly services and infrastructure in visually prominent areas. ➢ Appropriately screen service areas. <u>Construction:</u> ➢ Rehabilitate all construction areas. ➢ Ensure that vegetation is not cleared unnecessarily to make way for infrastructure. ➢ Rehabilitate all areas. Consult an ecologist regarding rehabilitation specifications. ➢ Monitor rehabilitated areas post construction and implement remedial actions as required. <u>Operations:</u> ➢ Maintain the general appearance of the development as a whole. ➢ Monitor rehabilitated areas, and implement remedial action as and when required. <u>Decommissioning:</u> ➢ Remove infrastructure not required for the post-decommissioning use of the site. ➢ Rehabilitate all areas. Consult an ecologist regarding rehabilitation specifications. ➢ Monitor rehabilitated areas post-decommissioning and implement remedial actions as required.
Cumulative impacts: The construction and operation of the proposed expansion to River Lodge and Drakensig together with its associated infrastructure will increase the cumulative visual impact of built infrastructure within the region.
Residual impacts: None.

7.7.3 POTENTIAL VISUAL IMPACT ON SENSITIVE VISUAL RECEPTORS WITHIN THE REGION

The visual impact on sensitive visual receptors (i.e. users of roads, game drive routes, existing lodges and hotels and residents of homesteads) within the region (i.e. beyond the 3km offset) is expected to be of **low** significance pre and post mitigation**.** The relatively limited extent of visual impact and the moderate VAC of the area, as well as the lack of visual receptors in the area will contribute to reducing the probability of the visual impact of the development somewhat.

The table below illustrates this impact assessment.

Table 4: Impact table summarising the significance of visual impacts on sensitive visual receptors within the region

Nature of Impact: Visual impact on the users of roads and residents of settlements on the periphery of the 3km offset and within the region beyond		
	No mitigation	***Mitigation considered***
Extent	Regional **(3)**	Regional **(3)**
Duration	Long term **(4)**	Long term **(4)**
Magnitude	Moderate **(6)**	Minor **(4)**
Probability	Improbable **(2)**	V improbable **(1)**
Significance	Low **(26)**	Low **(11)**

Status (positive or negative)	Neutral	Neutral
Reversibility	Recoverable **(3)**	Recoverable **(3)**
Irreplaceable loss of resources?	No	No
Can impacts be mitigated?	Yes	

Mitigation / Management:

Planning:

- Respond to the natural environment during the planning of buildings and infrastructure.
- Retain / re-establish and maintain large trees, natural features and noteworthy natural vegetation in all areas outside of the development footprint. Adapt the development footprint to accommodate these where necessary.
- Retain a buffer of approximately 50 m wide of intact natural vegetation between the boundary fence of Kapama and the proposed solar plant.
- Retain natural pockets (wetland, river and other sensitive vegetation zones) as buffers within the development and along the perimeter.
- Retain vegetation in all areas outside of actual built footprints wherever possible.
- Soften hard spaces and parking areas through the retention of existing vegetation or the introduction of appropriate indigenous planting.
- Make use of muted earth tones, matt surfaces and natural materials rather than primary colours, reflective surfaces and high-tech finishes for all buildings, structures and infrastructure.
- Tilt large window areas to negate reflection impact.
- Limit the overall height of all buildings to a maximum of 6m.
- Visually break up large bulky buildings into smaller, subtler, less prominent shapes and planes.
- Avoid large areas of un-shaded reflective and hard paving surfaces.
- Avoid the placement of unsightly services and infrastructure in visually prominent areas.
- Appropriately screen service areas.

Construction:

- Rehabilitate all construction areas.
- Ensure that vegetation is not cleared unnecessarily to make way for infrastructure.
- Rehabilitate all areas. Consult an ecologist regarding rehabilitation specifications.
- Monitor rehabilitated areas post construction and implement remedial actions as required.

Operations:

- Maintain the general appearance of the development as a whole.
- Monitor rehabilitated areas, and implement remedial action as and when required.

Decommissioning:

- Remove infrastructure not required for the post-decommissioning use of the site.
- Rehabilitate all areas. Consult an ecologist regarding rehabilitation specifications.
- Monitor rehabilitated areas post-decommissioning and implement remedial actions as required.

Cumulative impacts:

The construction and operation of the proposed expansion to River Lodge and Drakensig together with its associated infrastructure will increase the cumulative visual impact of built infrastructure within the region.

Residual impacts:

None.

7.7.4 POTENTIAL VISUAL IMPACT OF CONSTRUCTION ON SENSITIVE VISUAL RECEPTORS IN CLOSE PROXIMITY

During the construction period, the development sites will represent a visual disturbance. In addition, there will be an increase in heavy vehicles utilising the roads to the construction site that may cause, at the very least, a visual nuisance to other road users and landowners in the area. Mitigation entails proper

planning, management and rehabilitation of all construction sites to forego visual impacts.

The table below illustrates the assessment of the anticipated visual impact of construction on sensitive visual receptors in close proximity to the proposed developments. Visual impacts are likely to be of **moderate** significance, and may be mitigated to **low.** The limited extent of visual receptors in the area and the moderate to high VAC of the area will contribute to reducing the probability of the visual impact of the development somewhat.

The table below illustrates this impact assessment.

Table 5: Impact table summarising the significance of visual impact of construction on visual receptors in close proximity to the proposed developments

Nature of Impact: Visual impact of construction activities, vehicles and dust on sensitive visual receptors in close proximity to the proposed development.		
	No mitigation	***Mitigation considered***
Extent	Local **(2)**	Local **(2)**
Duration	Short term **(2)**	Short term **(2)**
Magnitude	Moderate **(6)**	Minor **(4)**
Probability	H Probable **(4)**	Improbable **(2)**
Significance	Moderate **(40)**	Low **(16)**
Status (positive or negative)	Negative	Negative
Reversibility	Recoverable **(3)**	Recoverable **(3)**
Irreplaceable loss of resources?	No	No
Can impacts be mitigated?	Yes	
Mitigation: <u>Construction:</u> ➢ Ensure that vegetation is not unnecessarily removed during the construction period. ➢ Reduce the construction period through careful logistical planning and productive implementation of resources. ➢ Plan the placement of lay-down areas and temporary construction equipment camps in order to minimise vegetation clearing (i.e. in already disturbed areas) wherever possible. ➢ Restrict the activities and movement of construction workers and vehicles to the immediate construction site and existing access roads. ➢ Ensure that rubble, litter, and disused construction materials are appropriately stored (if not removed daily) and then disposed regularly at licensed waste facilities. ➢ Reduce and control construction dust using approved dust suppression techniques as and when required (i.e. whenever dust becomes apparent). ➢ Restrict construction activities to daylight hours whenever possible in order to reduce lighting impacts. ➢ Rehabilitate all disturbed areas immediately after the completion of construction works.		
Cumulative impacts: None.		
Residual impacts: None, provided rehabilitation works is carried out as specified.		

7.7.5 POTENTIAL VISUAL IMPACT OF LIGHTING AT NIGHT ON SENSITIVE VISUAL RECEPTORS IN CLOSE PROXIMITY

The rural and conservation nature of the site seeing as it is located within a private reserve represents a low incidence of light sources, resulting in a low level of existing light impact.

As such, a potential negative impact may result if the lighting for the proposed new developments are not responsively and sensitively designed. The use of

floodlights and high impact lights would create a light trespass in an otherwise dark environment. This would be especially problematic for sensitive receptors in close proximity.

In addition to the above, sky glow is the condition where the night sky is illuminated when light reflects off particles in the atmosphere such as moisture, dust or smog. The sky glow intensifies with the increase in the amount of light sources. Each new light source, especially upwardly directed lighting, contributes to the increase in sky glow.

The table below illustrates the assessment of the anticipated visual impact of lighting at night on sensitive visual receptors in close proximity to the proposed development. Visual impacts are likely to be of **low** significance, and may be mitigated to **low / negligible.** The relatively limited extent of visual impact and the moderate VAC of the area will contribute to reducing the probability of the visual impact of the development somewhat.

Table 6: Impact table summarising the significance of visual impact of lighting at night on visual receptors in close proximity to the proposed development

Nature of Impact: Visual impact of direct lighting and sky glow on sensitive visual receptors in close proximity to the proposed development.		
	No mitigation	***Mitigation considered***
Extent	Local **(2)**	Local **(2)**
Duration	Long term **(4)**	Long term **(4)**
Magnitude	Low **(4)**	Minor **(2)**
Probability	Probable **(3)**	Improbable **(2)**
Significance	Low **(30)**	Low **(16)**
Status (positive or negative)	Negative	Negative
Reversibility	Recoverable **(3)**	Recoverable **(3)**
Irreplaceable loss of resources?	No	No
Can impacts be mitigated?	Yes	
Mitigation: <u>Planning & operation</u>: ➢ Shield the sources of light by physical barriers (walls, vegetation, or the structure itself). ➢ Limit mounting heights of lighting fixtures, or alternatively use foot-lights or bollard level lights. ➢ Make use of minimum lumen or wattage in fixtures. ➢ Make use of down-lighters, or shielded fixtures. ➢ Make use of Low Pressure Sodium lighting or other types of low impact lighting. ➢ Make use of motion detectors on security lighting. This will allow the site to remain in relative darkness, until lighting is required for security or maintenance purposes.		
Cumulative impacts: The construction and operation of the proposed expansion to River Lodge and Drakensig, together with its associated infrastructure will increase the cumulative visual impact of built infrastructure within the region.		
Residual impacts: None.		

7.8 VISUAL IMPACT ASSESSMENT: SECONDARY IMPACTS

7.8.1 POTENTIAL VISUAL IMPACT ON THE VISUAL CHARACTER OF THE LANDSCAPE AND SENSE OF PLACE OF THE REGION.

Sense of place refers to a unique experience of an environment by a user, based on his or her cognitive experience of the place. Visual criteria and specifically the

visual character of an area (informed by a combination of aspects such as topography, level of development, vegetation, noteworthy features, cultural / historical features, etc.) play a significant role.

A visual impact on the sense of place is one that alters the visual landscape to such an extent that the user experiences the environment differently, and more specifically, in a less appealing or less positive light.

In general the landscape character of the greater study area (i.e. the Kapama Game Reserve) presents as a conservation site comprised of savannah bushveld. The sites themselves are already impacted upon due to the established River Lodge and staff accomodation and workshop at Drakensig.

The visual quality of the region is generally high. Large tracts of intact natural vegetation characterise most of the visual environment. There is no evidence of widespread erosion or natural degradation, and development, where this occurs, is domestic in scale. Of note is that the sense of place experienced in the area and surrounds is influenced by the fact that the proposed development is located within the greater Kapama Game Reserve. The entire area is considered moderately sensitive to visual impacts due to its topography and generally low levels of transformation.

The anticipated visual impact on the visual character and sense of place of the study area is expected to be of **low** significance before and after mitigation.

The relatively limited extent of visual impact and the moderate to high VAC of the area will contribute to reducing the probability of the visual impact of the development somewhat. The table below illustrates the assessment of this anticipated impact.

Table 7: Impact table summarising the significance of visual impacts on landscape character and sense of place within the region

Nature of Impact: Visual impact of the proposed development on the visual quality of the landscape and sense of place of the region		
	No mitigation	***Mitigation considered***
Extent	Regional **(3)**	Regional **(3)**
Duration	Long term **(4)**	Long term **(4)**
Magnitude	Moderate **(6)**	Low **(4)**
Probability	Improbable **(2)**	Improbable **(2)**
Significance	Low **(26)**	Low **(22)**
Status (positive or negative)	Negative	Neutral
Reversibility	Recoverable **(3)**	Recoverable **(3)**
Irreplaceable loss of resources?	No	No
Can impacts be mitigated?	Yes	

Mitigation / Management:

Planning:

- Respond to the natural environment during the planning of buildings and infrastructure.
- Retain / re-establish and maintain large trees, natural features and noteworthy natural vegetation in all areas outside of the development footprint. Adapt the development footprint to accommodate these where necessary.
- Retain natural pockets (wetland, river and other sensitive vegetation zones) as buffers within the development and along the perimeter.
- Retain vegetation in all areas outside of actual built footprints wherever possible.
- Soften hard spaces and parking areas through the retention of existing vegetation or the introduction of appropriate indigenous planting.
- Make use of muted earth tones, matt surfaces and natural materials rather than

primary colours, reflective surfaces and high-tech finishes for all buildings, structures and infrastructure. ➢ Tilt large window areas to negate reflection impact. ➢ Limit the overall height of all buildings to a maximum of 6m. ➢ Visually break up large bulky buildings into smaller, subtler, less prominent shapes and planes. ➢ Avoid large areas of un-shaded reflective and hard paving surfaces. ➢ Avoid the placement of unsightly services and infrastructure in visually prominent areas. ➢ Appropriately screen service areas. <u>Construction:</u> ➢ Rehabilitate all construction areas. ➢ Ensure that vegetation is not cleared unnecessarily to make way for infrastructure. ➢ Rehabilitate all areas. Consult an ecologist regarding rehabilitation specifications. ➢ Monitor rehabilitated areas post construction and implement remedial actions as required. <u>Operations:</u> ➢ Maintain the general appearance of the development as a whole. ➢ Monitor rehabilitated areas, and implement remedial action as and when required. <u>Decommissioning:</u> ➢ Remove infrastructure not required for the post-decommissioning use of the site. ➢ Rehabilitate all areas. Consult an ecologist regarding rehabilitation specifications. ➢ Monitor rehabilitated areas post-decommissioning and implement remedial actions as required.
Cumulative impacts: The construction and operation of the proposed expansion to River Lodge and Drakensig together with its associated infrastructure will increase the cumulative visual impact of built infrastructure within the region.
Residual impacts: None.

7.9 THE POTENTIAL TO MITIGATE VISUAL IMPACTS

The primary visual impact, namely the presence of the River Lodge and its new proposed expansions and the expansion at Drakensig, may be mitigated from a visual perspective, due to the nature and scale of the development (i.e. development footprint and height of the buildings). This mitigation potential is further supported by the nature of the receiving environment.

The following mitigation will further contribute to reducing the magnitude of the visual impacts discussed in sections 7.7 – 7.8:

- Some mitigation of primary and secondary impacts may be achieved by ensuring that the preservation and / or re-introduction of vegetation be allowed for in the planning and implementation of the development. This measure will help to soften the appearance of the facility within its context. Such mitigation includes the following:

    - Respond to the natural environment during the planning of buildings and infrastructure.
    - Retain / re-establish and maintain large trees, natural features and noteworthy natural vegetation in all areas outside of the development footprint. Adapt the development footprint to accommodate these where necessary.

- Retain a buffer of approximately 50 m wide of intact natural vegetation between the boundary fence of Kapama and the proposed solar plant.
- Retain natural pockets (wetland, river and other sensitive vegetation zones) as buffers within the development and along the perimeter.
- Retain vegetation in all areas outside of actual built footprints wherever possible.
- Soften hard spaces and parking areas through the retention of existing vegetation or the introduction of appropriate indigenous planting.
- Make use of muted earth tones, matt surfaces and natural materials rather than primary colours, reflective surfaces and high-tech finishes for all buildings, structures and infrastructure.
- Tilt large window areas to negate reflection impact.
- Limit the overall height of all buildings.
- Visually break up large bulky buildings into smaller, subtler, less prominent shapes and planes.
- Avoid large areas of un-shaded reflective and hard paving surface.
- Avoid the placement of unsightly services and infrastructure in visually prominent areas.
- Appropriately screen service areas.
- Manufacture PV panels with an Anti-Reflective Coating (ARC).

- Mitigation of visual impacts associated with the construction phase, albeit temporary, entails proper planning, management and rehabilitation of all construction sites. Construction should be managed according to the following principles:

  - Ensure that vegetation is not unnecessarily cleared or removed during the construction period.
  - Reduce the construction period through careful logistical planning and productive implementation of resources.
  - Plan the placement of lay-down areas and any potential temporary construction camps along the corridor in order to minimise vegetation clearing.
  - Restrict the activities and movement of construction workers and vehicles to the immediate construction site and existing access roads.
  - Ensure that rubble, litter, and disused construction materials are appropriately stored (if not removed daily) and then disposed regularly at licensed waste facilities.
  - Reduce and control construction dust through the use of approved dust suppression techniques as and when required (i.e. whenever dust becomes apparent).
  - Restrict construction activities to daylight hours in order to negate or reduce the visual impacts associated with lighting.
  - Ensure that all infrastructure and the site and general surrounds are maintained and kept neat.
  - Rehabilitate all disturbed areas, construction areas, roads, slopes etc. immediately after the completion of construction works. If necessary, an ecologist should be consulted to assist or give input into rehabilitation specifications.
  - Monitor all rehabilitated areas for at least a year for rehabilitation failure and implement remedial action as required. If necessary, an ecologist should be consulted to assist or give input into rehabilitation specifications.

- Mitigation of other lighting impacts includes the pro-active design, planning and specification lighting for the development. The correct specification and placement of lighting and light fixtures will go far to contain rather than spread the light. Additional measures include the following:

    - Shielding the sources of light by physical barriers (walls, vegetation, or the structure itself);
    - Limiting mounting heights of lighting fixtures, or alternatively using foot-lights or bollard level lights;
    - Making use of minimum lumen or wattage in fixtures;
    - Making use of down-lighters, or shielded fixtures;
    - Making use of Low Pressure Sodium lighting or other types of low impact lighting.
    - Making use of motion detectors on security lighting. This will allow the site to remain in relative darkness, until lighting is required for security or maintenance purposes.

- Following construction, the maintenance of the buildings and infrastructure is critical, and will ensure that the development does not degrade or become an eyesore.

The possible mitigation of both primary and secondary visual impacts as listed above should be implemented and maintained on an on-going basis.

8 CONCLUSION AND RECOMMENDATIONS

The construction and operation of the proposed expansions to River Lodge and Drakensig will have a low visual impact on the scenic resources of the study area due to the site already having an existing visual impact.

However, mitigation of visual impact is possible and will go far in reducing the magnitude of visual impacts discussed by softening the appearance of the development within its context. The recommendations made (see Section 7.9) should be followed and the mitigation implemented on an ongoing basis.

Considering all factors, it is concluded that the development is appropriate within its context from a visual perspective, and that the anticipated visual impacts are neither unacceptable in nature nor excessive in magnitude. Potential visual impacts are therefore not considered to be a fatal flaw for this development.

The relatively limited extent of visual receptors in the area and the high to moderate VAC of the area is a strong consideration in this regard.

Based on the above, it is the recommendation of the author that the proposed expansions to River Lodge and Drakensig, including all proposed components, be supported from a visual perspective, subject to the implementation of the required and recommended optimisation and mitigation measures detailed in Section 7.9.

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