

Proposed Affordable Housing
Farm 1653, 1339 and 1158/1
La Motte
Franschhoek

Visual Impact Assessment

Draft Report ver. 1.1
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EXECUTIVE SUMMARY

The Stellenbosch Municipality are proposing affordable housing at La Motte – adjacent to existing housing.

Heritage Western Cape has requested that a visual impact assessment be undertaken. Megan Anderson Landscape Architect (MALA) has undertaken Level 3 Visual Impact Assessment (VIA) of the proposed development.

Affordable housing, 322 units on 12 ha, is proposed on a site north west of the existing area, gap housing – 106 units on 4,5ha - on a site south east of the existing housing and business on a third site adjacent to the forestry workshops, stores and fire station along the gravel road.

La Motte housing development is in and at the end of the Roberts River valley which is west of Franschhoek, immediately south of the confluence of the Roberts and Franschhoek rivers.

The scenic resources of the study area include Wilderness, Rural and Village scenes. The scenic resources of the area can be described as HIGH and of the site as MODERATE.

The visibility of most of the housing development will be restricted to the local area, < 2kms from the site, the western extent of the western pocket extends further , approximately 5kms.

The receptors of the proposed development are inclusive of those rated as MODERATELY and HIGHLY sensitive.

The La Motte's site's overall visual sensitivity is rated to be MODERATE with areas of LOW sensitivity and areas of HIGH sensitivity

The Visual Absorption Capacity (VAC) of the site to the proposed housing development is moderate to high, i.e. there will be partial screening of the development by topography and vegetation. The western extent of the western pocket is not visually screened so the VAC here is LOW.

The visual intrusion is MODERATE, the proposed development partially fits into the surroundings but will be noticeable.

The visual impacts of the preferred alternative Site Development Plan (March 2015), are:

- change in landscape character from open to built (open to village),
- visibility to sensitive receptors;
- visual intrusion into natural scenes by the western extent of development; and
- night lighting

These will be restricted to a local area, less than 2 kms, except for the western extent of the western pocket which will be visible for 5kms.

Impacts are mitigated, to a degree, by the setting and existing residential developments adjacent to the sites.

Further mitigation measures include:

- retaining existing trees on northern and western developments;
- tree planting along streets and the northern boundary of the western extent;
- a planted berm to visually screen the western extent of development;
- lighting restrictions and types; and,
- colour and style of units

1. INTRODUCTION

1.1 Background to the Report

The La Motte site has been identified, through numerous studies, for affordable housing development. The project has to undergo rezoning and environmental process's before development.

Aikman Associates were appointed by CK Rumbol and Partners Planning, Project Managers, To complete the Heritage Application to Heritage Western Cape in terms of section 38(8) of the National Heritage Resources Act. Heritage Western Cape has requested that a Heritage Impact Assessment (HIA) inclusive of a visual impact assessment (VIA) be undertaken.

Megan Anderson Landscape Architect (MALA) has been appointed to undertake the Visual Impact Assessment (VIA) of the proposed development.

1.2 Terms of Reference

The Terms of Reference for this visual assessment, are to undertake a Level 3 Visual Impact Assessment:

- Identify issues raised;
 - Undertake a site visit;
 - Describe the receiving environment and the proposed project;
 - Establish the view catchment area, view corridors, viewpoints and receptors;
 - Indicate potential visual impacts using established criteria, including night lighting; and
 - Describe alternatives, mitigation measures and monitoring programs.
-

1.3 Methodology

The method followed to produce this visual assessment has been to:

- a) Collect and review existing information;
- b) Conduct a field survey. This allowed for the opportunity to:
 - determine the actual or practical extent of potential visibility of the proposed development, by assessing the screening effect of landscape features;

- conduct a photographic survey of the landscape surrounding the development for use in visual impact evaluation; and
 - identify sensitive landscape and visual receptors.
- c) Conduct desktop mapping exercises to establish the scenic character, extent of visibility, visual exposure to viewpoints and inherent visual sensitivity of the site.
- d) Assess the proposed project against the visual impact criteria (visibility, visual exposure, sensitivity of site and receptors, visual absorption capacity and visual intrusion).
- e) Identify potential visual impacts and evaluate these against visual criteria.
- f) Recommend measures to mitigate negative visual impacts and enhance positive impacts.
- g) Establish monitoring requirements.

1.4 Assumptions and Limitations

- This visual assessment assumes that the information provided is correct.
- The visual study relies on a combination of 1:250 000 and 1:50 000 Topo-cadastral and Geological maps.
- No detail of housing and development style and lighting has been provided so assumptions are being made. The assumptions being that these will be as for similar developments around the Western Cape,

2. THE PROPOSED DEVELOPMENT

2.1 Site Location

The proposed La Motte Affordable Housing development is located in the Franschhoek Valley.

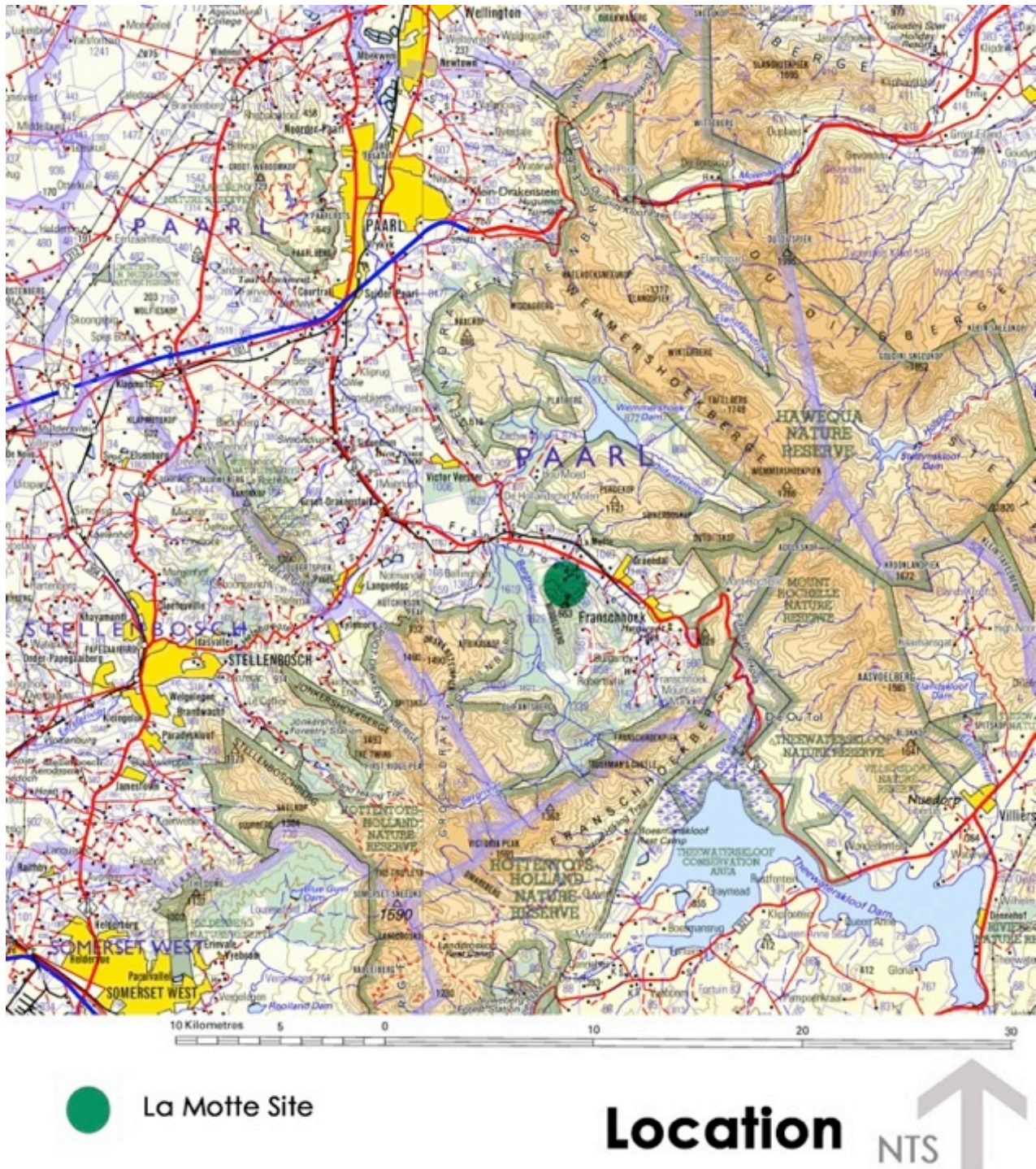


Figure 1: Location of the site on a 1:250 000 topo-cadastral map



Figure 2: Location of the site on 1:50 000 Topo-cadastral



Figure 3: Location of the site on an aerial photograph, with proposed sites of development in red (source: Aikman Associates)

The site(s) are located on Farms 1653, 1339 and 1158/1, Franschhoek.

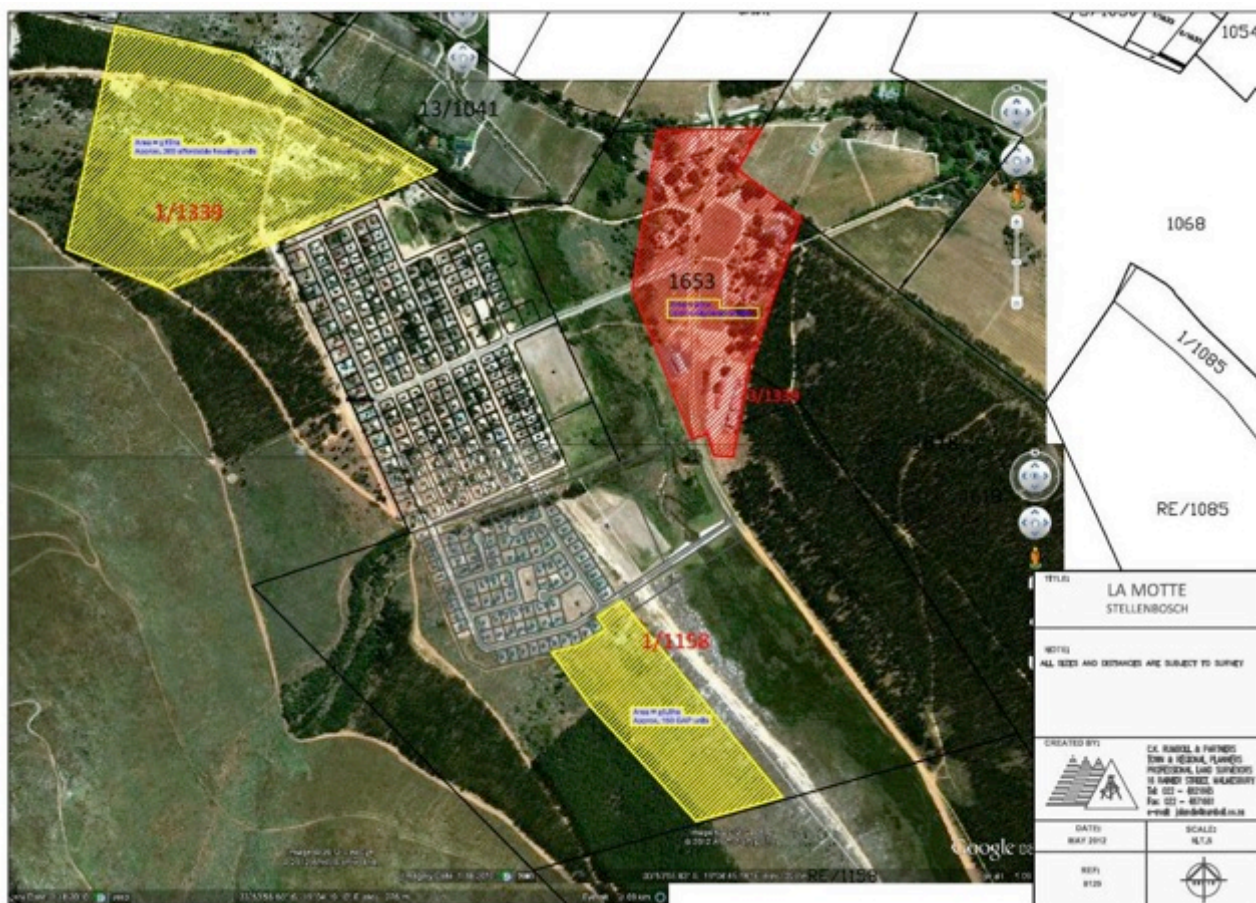


Figure 4: Location of the site on an aerial photograph, with proposed sites of development in yellow and red
(source: CK Rumboll and Partners)

2.2 Development Description

The proposed development entails the development of affordable housing and associated facilities, schools, creches, commercial development and roads, adjacent to existing La Motte housing.

Three sites of development have been identified namely:

- Farm 1/1339, north west of the existing housing - 12,42 ha on which there will be 322 housing units, 1 open space site, 1 school site, 2 crèche's, 2 churches, parking and a business site;
- Farm 1/1198, south east of the existing housing - 4,59 ha on which there will be 106 GAP housing units and 1 open space;
- Farm 1653, east of the existing housing - 6,2 ha where the existing node (forestry workshops, stores and fire station) will be formalized and 3 business sites provided.

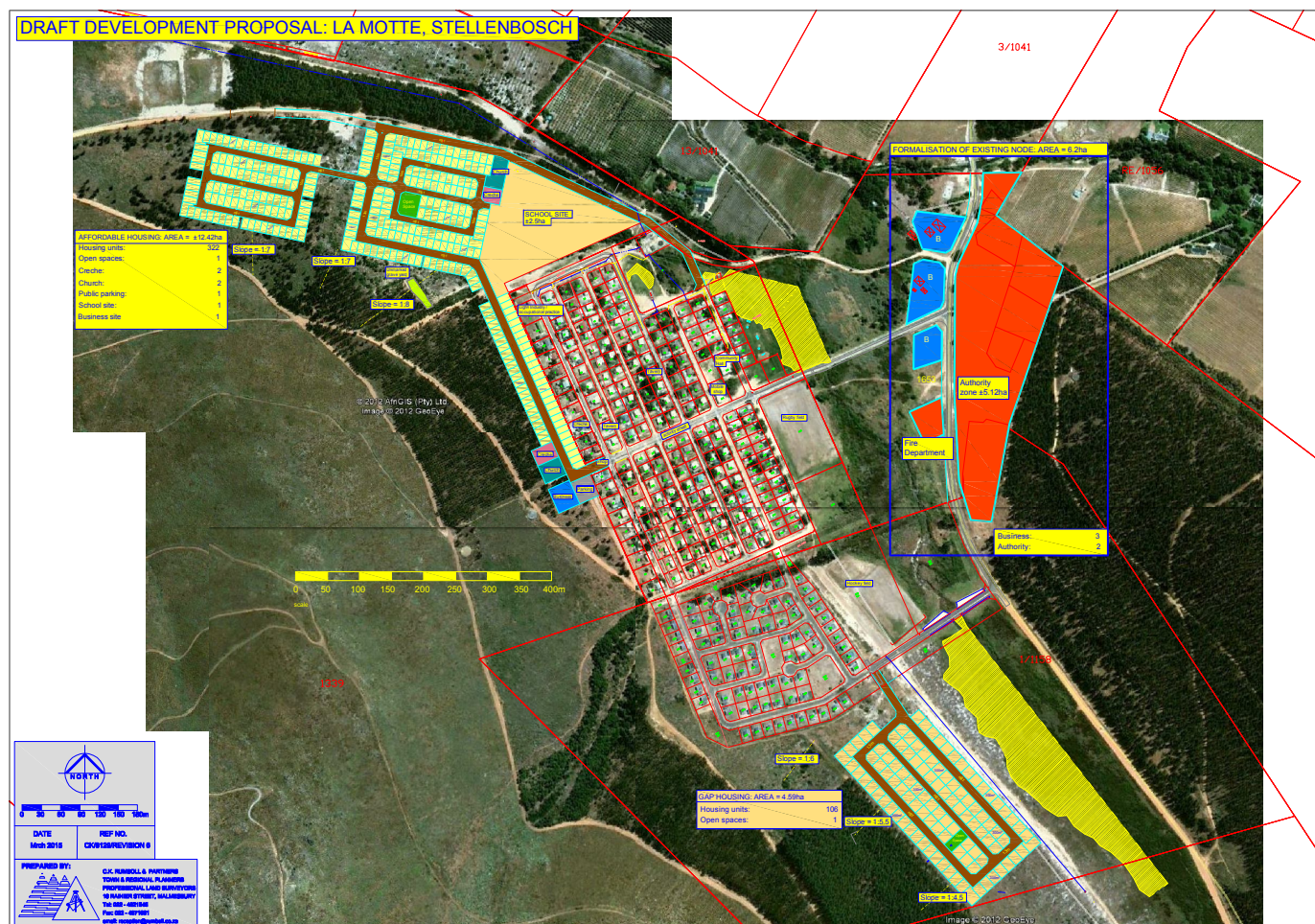


Figure 5: La Motte Draft Development Proposal (source: CK Rumboll and Partners)

3. VISUAL ASSESSMENT OF THE SITE AND PROPOSED DEVELOPMENT

3.1 Description of the Affected Area and the Scenic Resources

This section is a description of the existing visual environment that will be affected by the proposed development.

The proposed site of development falls in the Cape Winelands Area, described by Oberholzer and Winter, in a study prepared for the Western Cape Provincial Spatial Development Framework – Heritage and Scenic Resources: Inventory and Policy Framework (May 2013), as follows:

2.5 The Cape Winelands

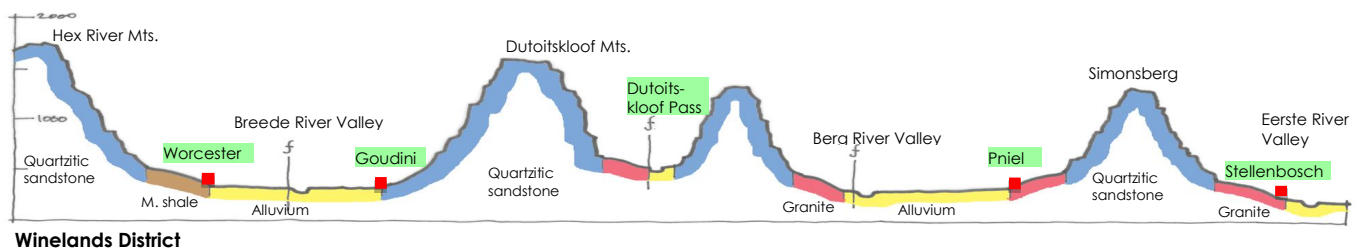
The Cape Winelands is an area of fertile valleys nestled between the Cape Fold Mountains with their rugged sandstone peaks. It is an area high in scenic and heritage significance, its famous vineyards earmarked for declaration as a World Heritage Site.

At the base of the sandstone massifs, the steep scree slopes grade into gently rolling foothills of weathered Cape granites and Malmesbury shales, which have been incised by rivers to form wide alluvial valleys in places, such as those of the Berg and Breede Rivers. Interestingly the pattern of vineyards has a strong correlation with the occurrence of the granites, the unique combination of soil and climate having made this the centre of viticulture and fruit farming.

Towns, villages and farmsteads are strung along the valleys in response to the topography, sources of water and productive agricultural soils, Stellenbosch and Paarl being two of the oldest colonial settlements. Other towns in the District with 'Heritage Areas' include Franschhoek, Wellington, Montagu, Worcester, McGregor and Tulbagh.

The combination of mountain scenery, rural landscapes, colonial architecture and wine routes make this area a prime tourism destination of critical importance to the economy of the region. The area is however also under great threat of fragmentation through creeping urbanization.

The rugged terrain and tapestry of rural landscapes have given rise a network of scenic routes and mountain passes, many of which began as wagon routes to the interior. Passes such as Bainskloof Pass (a Provincial Heritage Site), Franschhoek Pass, Mitchell's Pass and Cogmanskloof, to name a few, are a legacy from the 1700s and 1800s by road-builders such as Andrew Bain.



The sections illustrate the pronounced topography of the quartzitic sandstones (blue), as well as the location of settlements on the footslopes with access to water and productive soils of the granites, shales and alluvial valleys. River valleys often tend to follow fault lines.

Figure 6: Section through Cape Winelands (source Oberholzer and Winter))

The proposed La Motte Affordable Housing development project falls at the northern extent of the Roberts River valley, where it joins the greater Franschhoek Valley. The proposed site is immediately south of the confluence of the Roberts and Franschhoek Rivers.

The Roberts River Valley is a relatively narrow valley running from the Skerpheuwel in the south east to its confluence with the Franschhoek River in the north west. It is bound by the Middleberg Mountain on the west, which separates it from the upper Berg River and Berg River Dam, and the Dassenberg Mountain on the east, which separates it from the upper Franschhoek Valley and the Franschhoek village.



Photo Plate 1 (left) View south of the Roberts River Valley with Skerpheuwel (centre back), Dassenberg (left) and Middelberg (right) and Photo Plate 2 (right) Recently cleared Middelberg slopes

A couple of wine farms, including Glenwood, are found on the lower slopes in the upper reaches of the Roberts River Valley with remnants of the pine plantations on the steeper mountain slopes of Dassenberg. Relatively recently, large scale clearance of plantations has occurred as part of the rehabilitation of the Berg River Catchment leaving the steep slopes of the Middelberg covered in young re-emerging natural fynbos.

The lower Roberts River Valley floor supports wetlands with adjacent flat to gently sloping, sandy slopes at its northern extent, where housing for forestry workers and construction workers on the Berg River Dam has been built. The forestry houses are timber houses and date back to the 1950's, while the more recent dam workers cottages built in 2004 are white painted plastered cottages.



Photo Plate 3 Wetlands to flat and gently sloping developed areas at the foot of Middelberg Mountain



Photo Plate 4 (left) Recently built TCTA Dam Worker's houses and Photo Plate 5 (right) Timber Forestry staff houses

Larger buildings including Forestry Workshops and a Fire Station are found at the toe of the Dassenburg Mountain and mouth of the Roberts River Valley where it flows onto the greater intensively cultivated Franschhoek valley.

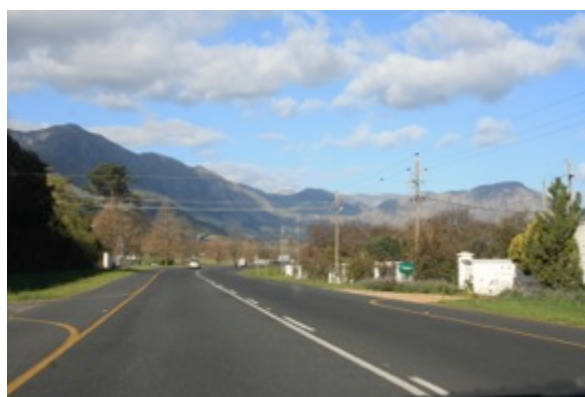


Photo Plate 6 (left) Existing Forestry Workshops and Fire Station and Photo Plate 7 (right) intensively cultivated Franschhoek Valley

The scenic resources of the study area include Wilderness areas (massive and rugged, fynbos covered, mountainous backdrop), Rural areas (rolling rural foothills), and Villages (ranging from upper to low income settlements) scenes. The scenic resources of the greater area can be described as HIGH and of the site as MODERATE.

3.2 Visibility of the proposed development

3.2.1 View Catchment

The geographical area from which the project will theoretically be visible, known as the view catchment area, is dictated primarily by topography.

The view catchment of the site is defined by ridgelines of the Wemmershoek Mountains in the north, the Franschhoek Mountains in the east, the Groot Drakenstein mountains to the south and Simonsberg to the west.

The distance of the view catchment from the site varies between 10 kms in the north, east and south to 20 kms in the west.

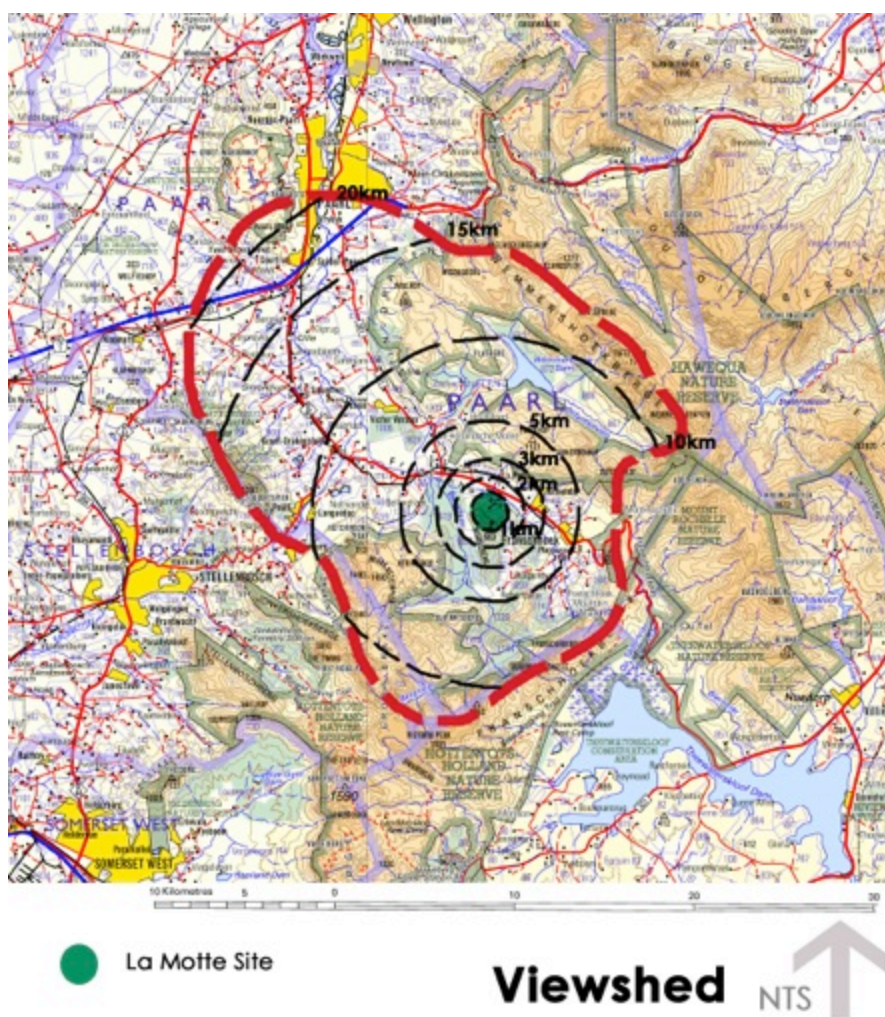


Figure 7: La Motte Affordable Housing - View Catchment Area

3.2.2 Zone of Visual Influence

Local features such as vegetation and landforms will reduce the extent of the area from which the proposed La Motte Affordable Housing development will be seen, to an area known as the Zone of Visual Influence (ZVI) of the site.

The La Motte housing development is situated on the north-facing lower slopes of a mountain, so will be mainly visible from the north.

The proposed sites for the La Motte housing development are screened from the upper Franschhoek valley and village by the Dassenberg Mountain. The south facing, pine tree covered Dassenberg mountain slope are exposed to the sites.

A local ridgeline on the Middelburg Mountain screens the upper, southern portion of Roberts River Valley from the sites of development. This includes the farms in this southern part of the valley, including Glenwood Farm which is closest to the proposed developments.

The lower lying areas of the adjacent Franschhoek Valley, including the R45, are for the most part screened from the proposed sites of development by trees along the Franschhoek River, farm roads, fields and around homesteads. However, glimpses, particularly of the extreme western portion of the affordable housing site (Farm 1/1339), will be seen from the R45, R301 southern extent and the adjacent areas.

Higher lying areas on the slopes of the Wemmersberg and Drakenstein mountains (Bridgewater school), including farmsteads and wineries on the lower slopes, will see the western most portion of the proposed development.

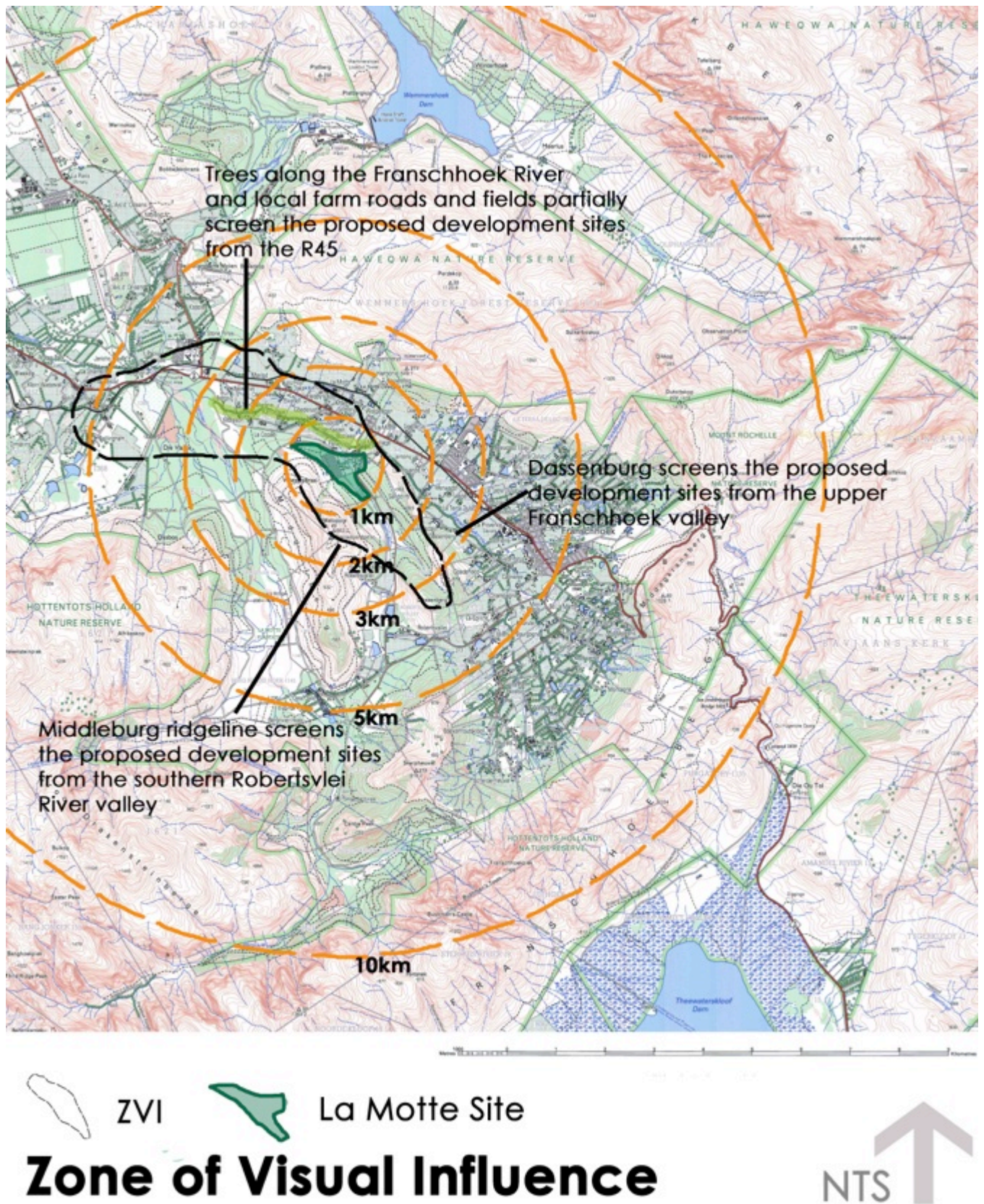


Figure 8: La Motte Housing Development - Zone of Visual Influence

The ZVI is restricted to the local area, i.e. < 5kms.

3.3 Receptors

The level of visual impact considered acceptable is dependent on the type of receptors.

- ***High sensitivity – e.g. residential areas, nature reserves and scenic routes or trails;***
- ***Moderate sensitivity – e.g. sporting or recreational areas, or places of work;***
 - ***Low sensitivity – e.g. industrial, or degraded areas.***

The receptors, who will probably see some parts of the proposed development, occurring within the ZVI are rated in the DEADP guidelines as follows:

3.3.1 Highly sensitive receptors

Highly sensitive receptors include residents of properties adjacent to and north of the proposed development, and the adjacent Roberts Vlei road, which is a wine farm route.

Immediately north of the affordable housing area are farms, in particular Le Fleur and Four Paws. The older, and more recently established La Motte Forestry and Berg River dam housing areas, are adjacent to the proposed pockets of development.

To the north and south are the Hawequa and Hottentots Holland Nature Reserves, respectively. Both have hiking trails and associated recreation facilities.

The sites border on the local road which is goes to wine farms (Four Paws and Glenwood) which are on the Franschhoek Wine Route.

3.3.2 Moderately sensitive receptors

Moderately sensitive receptors include the recreation areas and places of work in the existing housing area and forestry workshops/stores.

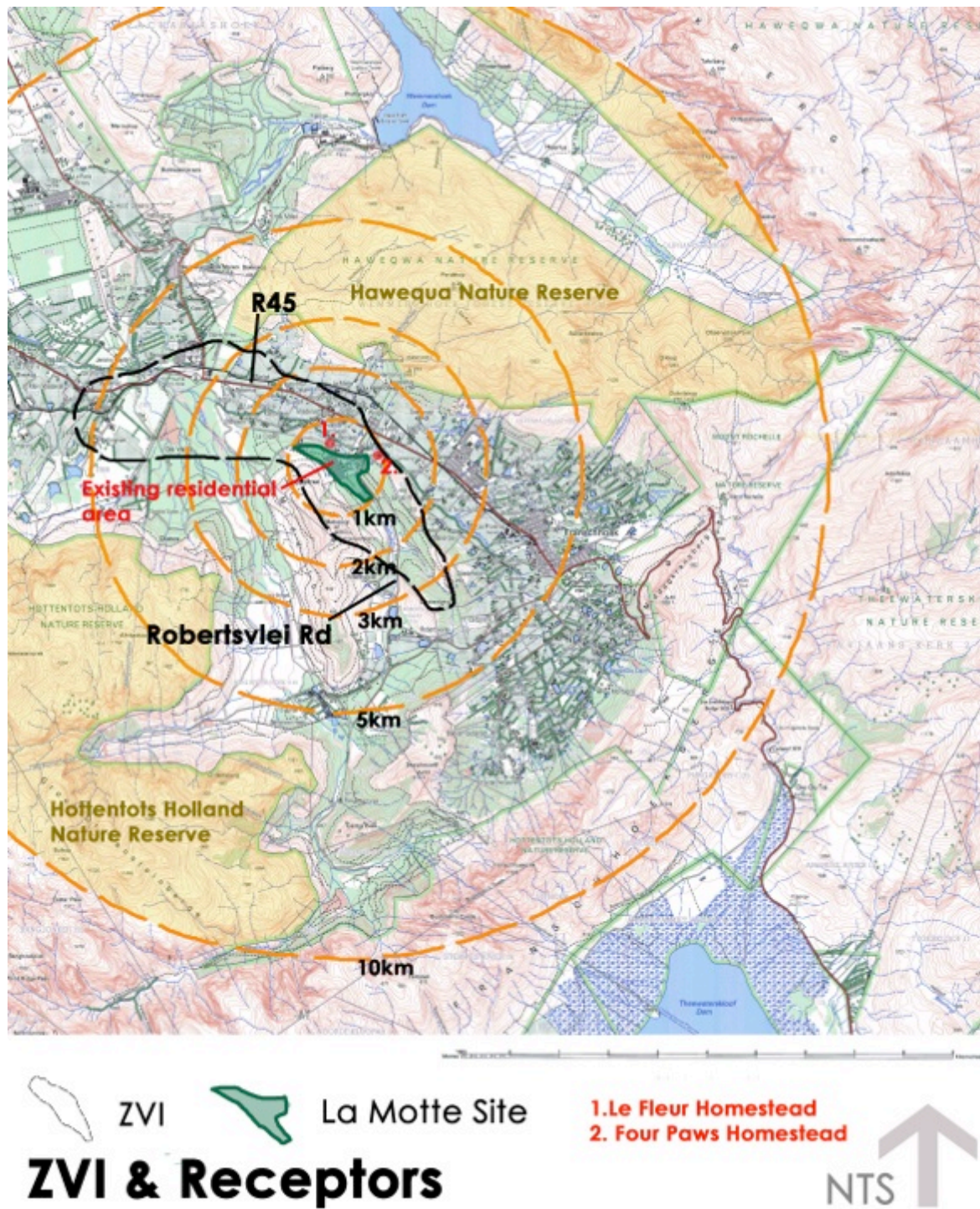


Figure 9: La Motte Housing Development - Receptors

The receptors within the ZVI are inclusive of those rated as MODERATELY and HIGHLY sensitive.

3.4 Visual Sensitivity

The inherent visibility of the sites' landscape is usually determined by a combination of topography, landform, vegetation cover, settlement pattern and special features. This translates into visual sensitivity.

- **High visual sensitivity – highly visible and potentially sensitive areas in the landscape,**
- **Moderate visual sensitivity – moderately visible areas in the landscape,**
- **Low visual sensitivity – minimally visible areas in the landscape**

A visual assessment of the proposed sites was done, to provide an overall sensitivity of the area applied for development, in terms of topography, landform, vegetation cover, settlement pattern and special features.

3.4.1 Topography

The sites of the proposed La Motte housing developments are on the alluvial plains adjacent to the Roberts River and the lower lying slopes of the Middelberg mountain. The former portion of the site is a minimally visible area in the landscape and has a **low visual sensitivity**. The latter portion of the site is a moderately visible area in the landscape and has a **moderate visual sensitivity**.

The slope gradients on which the development will take place are predominantly less steep than 1: 5. The slope gradients result in the site having a **moderate to low visual sensitivity**.

3.4.2 Landform

The larger portion of site of the proposed La Motte housing development is on an alluvial plain which renders that portion of the site a minimally visible area. The western extent of the western portion is on the lower slopes of the mountain, this landform renders the site a moderately visible area in the landscape. Landforms have a **moderate to low visual sensitivity**.

3.4.3 Vegetation Cover

For the purposes of this visual report, vegetation is evaluated in terms of its ability to screen development, and not in terms of its botanical value.

The vegetation on the site is both low, 0,5 m high re-emerging fynbos, and tall (12m +) predominantly exotic tree species. The tall tree species in the western and northern sites will provide some screening if retained.

The vegetation in the south eastern site (gap housing) is low and will not provide visual screening, therefore the sensitivity of that site as a result of vegetation screening will be **high**.

For the north eastern site (authority/business node) the vegetation, if retained will provide moderate screening, and the sensitivity of that site as a result of vegetation screening will be **moderate**.

For the north western site (affordable housing), the vegetation is predominantly low and will provide minimal screening, and the sensitivity of that site as a result of vegetation screening will be **high**.

3.4.4 Landuse

The land use adjacent to the proposed site of development includes residential and rural development with natural areas to the south west.

The residential nature of the adjacent landuse results in the visual sensitivity being **low to moderate** adjacent to those immediate areas.

The rural nature of the adjacent landuse results in visual sensitivity being **moderate to high** in those immediate areas.

The natural areas to the south results in visual sensitivity being **high** in those immediate areas.

The overall visual sensitivity as a result of landuse ranges from low to high

3.4.5 Special Features

The Roberts River, associated wetlands, mountains, rock outcrops and exotic oak trees are special features appreciated for their scenic values and space making qualities.

Therefore the visual sensitivity of the site will be **moderate to high**.

3.4.6 Visual Sensitivity

The La Motte site's overall visual sensitivity is rated to be MODERATE, with areas of LOW sensitivity and areas of HIGH sensitivity

Visual Absorption Capacity is the potential of the landscape to conceal the proposed project

- **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.**

Visual Absorption Capacity (VAC) is the capacity for the landscape to conceal the proposed development. The VAC of a landscape depends on its topography and on the type of vegetation that occurs in the landscape. The size and type of the development also plays a role.

The visually absorbing topographical features in the landscape is the Dassenberg Mountain. The taller trees along the Franschhoek river and on the northern site will provide partial screening.

The lack of tall screening vegetation and the nature of the low lying flat slopes in the north west results in this area having a low VAC.

The VAC of the site to the proposed La Motte affordable housing development is low to high, i.e. there will be little to effective screening of the development by topography and vegetation.

Visual Intrusion is defined as the level of compatibility or congruence of the project with the particular qualities of the area, or its 'sense of place'. This is related to the idea of context and maintaining the integrity of the landscape or townscape.

- ***High visual intrusion* – results in a noticeable change or is discordant with the surroundings;**
 - ***Moderate visual intrusion* – partially fits into the surroundings, but clearly noticeable;**
 - ***Low visual intrusion* – minimal change or blends in well with the surroundings.**

The existing La Motte housing creates a small village with predominantly single storey residential buildings and some taller community centres and the larger scaled service type buildings – firestation and forestry workshops and stores – last mentioned arguably rural in nature.

The proposed development structure endeavours to continue the nature of the development, i.e. low key and in small pockets.

However, the developed area will be doubled in size and will be noticeable from the local area.

The visual intrusion is moderate, the proposed development partially fits into the surroundings will be clearly noticeable.

4. POTENTIAL VISUAL IMPACTS OF THE PROPOSED DEVELOPMENT

These visual impacts will be assessed based on a synthesis of criteria (nature of impact, extent, duration, probability, intensity, status, degree of confidence, level of significance and significance after mitigation) as defined by the NEMA regulations. (See Appendix 1)

The nature of the visual impacts will be the visual effect the activity would have on the receiving environment. These visual impacts will be:

4.1 Change from open space to built residential area

The proposed La Motte housing (and other development) is to take place in and on 3 separate sites. The north eastern development, which includes pockets of business along the road is on a predominantly disturbed site with some buildings and large trees. The south eastern (gap housing) and north western (affordable housing) developments are on recently cleared plantation areas and are un-built, with the exception of gravel roads, concrete markers and ruins.

The south eastern and north western areas will result in a noticeable change from unbuilt to built while the north eastern pocket will be less noticeable due to existing buildings

Nature of the impact	Extent	Duration	Intensity	Probability	Significance	Significance after mitigation
Change from open space to built area						
Preferred Proposal North eastern portion	Local: 2km	Short term: until screening vegetation grows but will still be visible for the life of the project	Medium to low: the scenic resources will be affected	Highly probable: most likely that the visual impact will occur	Medium to low Mitigation must be implemented	Low
Preferred Proposals – south eastern area	Local: 2km	Medium term: until screening vegetation grows but will still be visible for the life of the project	Medium: the scenic resources will be affected	Highly probable: most likely that the visual impact will occur	Medium to low Mitigation must be implemented	Low
Preferred Proposals – north western area	Local 5kms	Medium – Long term: until screening vegetation grows but will still be visible for the life of the project	Medium to high: The scenic resources will be severely altered	Probable: most likely that the visual impact will occur	Medium to high Mitigation must be implemented	Medium
No-Go Option	No change to existing, no visual impact					

4.2 Visibility from sensitive receptors

The sensitive receptors include residents of adjacent properties, on farms to the north and to users of the scenic routes (R45) and Roberts Vlei Road.

Last mentioned is a wine tourist route and also provides access to the existing development. This will be straddled by the north eastern development and pass by the Gap Housing development to the south east.

The western extent will be seen by the users of the R45, farmsteads and Bridgewater School, beyond and to the west of the Berg River, as well as the the R301 at the Wemmershoek Wetland and settlements and nature reserves on the Wemmershoek mountain slopes.

Nature of the impact	Extent	Duration	Intensity	Probability	Significance	Significance after mitigation
Visible to receptors						
Preferred Proposal North eastern development - business	Local: 2kms	Long Term : until screening vegetation grows	Medium to High: the visual and scenic resources will be affected	Highly probable: most likely that the visual impact will occur	Medium Mitigation must be implemented	Medium - Low
Preferred Proposals – south eastern area – Gap Housing	Local: 2km	Medium term: until screening vegetation/street trees grow, but will still be visible for the life of the project by users of the Roberts vlei Road	Medium: the scenic resources will be affected	Highly probable: most likely that the visual impact will occur	Medium Mitigation must be implemented	Medium - Low
Preferred Proposal North western Site – Affordable housing	Local - Regional 5kms	Long Term : for duration of project	High: the visual and scenic resources will be affected particularly by the most western pocket	Highly probable: most likely that the visual impact will occur	High – Mitigation must be implemented	Medium to low
No Go Option	No change to existing, no visual impact					

4.3 Visual Intrusion

The western pocket/extent of the north western site (affordable housing) extends into the Berg River valley and as such visually intrudes into a 'natural and wilderness scene' thereby visually intruding on that.

Nature of the impact	Extent	Duration	Intensity	Probability	Significance	Significance after mitigation
Visual Intrusion into natural and wilderness area:						
Preferred Proposal	Local: < 5kms	Long term: until screening vegetation grows but will still be partially visible for the life of the project	Medium to High: the scenic and visual resources will be affected	Highly Probable: most likely that the visual impact will occur	Medium Mitigation must be implemented	Medium - Low
No-Go Option	No change to existing, no visual impact					

4.4 Night Light

The proposed development will require additional lighting on and in buildings and possibly along roads. This will change the night landscape from unlit to lit.

Nature of the impact	Extent	Duration	Intensity	Probability	Significance	Significance after mitigation
Night Light:						
Preferred Proposal for all 3 development pockets	Local: < 5kms	Long term: until screening vegetation grows but will still be partially visible for the life of the project	Medium to High: the scenic and visual resources will be affected	Highly Probable: most likely that the visual impact will occur	Medium Mitigation must be implemented	Medium - Low
No-Go Option	No change to existing, no visual impact					

5. MITIGATION MEASURES

The visibility and visual impact of the development may be reduced through the implementation of mitigation measures which would reduce negative visual impacts and enhance positive visual impacts.

Mitigation measures that will assist in minimising visual impacts are:

- a) The large trees should, where possible, be retained on site, particularly the oak trees. The existing vegetation should be surveyed and included on the development plan with trees retained in landscaped, street and or parking areas.
- b) New trees should be planted along roadways to help soften the new built landscape – the proposed roadways are generous in width and should accommodate the roadway, nmt facilities, services AND tree planting.
- c) Along the western extent of the north western affordable housing development, a screen of indigenous trees, shrubs and fynbos, must be planted on a raised berm which will screen this development from areas to the west.
- d) Boundary treatments if required must be visually permeable
- e) Street lighting should be minimized and the height thereof must be post top – no higher than 3m. Where possible the lighting should be bollard lighting which will light up the local paths sufficiently but no be visible from other areas of the valley. The luminaires must be top covered, low spill type lights to minimize light spill and pollution.
- e) Building colours should be muted, earthy colours that blend the building into the surrounds rather than accentuates them.

6. CONCLUSIONS

The proposed La Motte housing and business development is located adjacent to existing housing and authority development in an area recently cleared of plantations in the north western extent of Roberts River Valley where it joins the Franschhoek River Valley.

The proposed development will change the scenic resources of the local area from an undeveloped site to a residential area of gap housing, affordable housing and some commercial development.

The visibility of the La Motte development will be restricted to the local area, for the most part to an area < 2kms from the site with this extending to 5kms to the west, where the western pocket of affordable housing will be seen. There will be additional lighting in the area, visible to receptors around the site.

Visually sensitive receptors include the existing residents in the Forestry and Berg River dam housing areas, the adjacent farm residents at Le Fleur and Four Paws, users of the Roberts Vlei Road, farmsteads on the foothills of the Wemmershoek Mountain (Topiary), the Hottentots Holland and Hawequa Nature Reserves.

The visual impacts of proposed La Motte Affordable Housing (et al) development, namely visibility, change in landscape character from open to built, visual intrusion and night lighting, will be restricted to a local area, predominantly less than 2 kms but extending to 5kms for the western pocket of the affordable housing, and are mitigated, to a degree, by the existing residential developments surrounding the site.

The visual impact can be mitigated through:

- retaining the large trees on the sites;
- by planting trees along the new roads in the proposed developments;
- by constructing a berm and planting this with indigenous trees and shrubs to visually screen the affordable housing to the west;
- by using top covered luminaires on light posts to provide low-spill lighting; and
- by using muted colours on the building such that they blend into the surrounding.

Appendix 1. – NEMA Regulations

Extent of the Impact

The size of the area that will be affected by the visual impact:

- *Site specific*
- *Local - < 2km from site*
- *Regional - within 30km of site*
- *National*

Intensity of the Impact

The anticipated severity of the impact:

- *High - severe alteration of natural systems, patterns or processes*
- *Medium - notable alteration of natural systems, patterns or processes*
- *Low - negligible alteration of natural systems, patterns or processes*

Duration of the Project

The timeframe during which the visual impact will be experienced:

- *Temporary - less than 1 year*
- *Short term - 1 to 6 years*
- *Medium term - 6 to 15 years*
- *Long term - the impact will cease after the operational life of the activity*
- *Permanent – mitigation will not occur in such a way or in such a time span that the impact can be considered transient*

Probability of the Impact

The degree of possibility of the visual impact occurring:

- *Improbable - little or no chance of occurring*
- *Probable - < 50% chance of occurring*
- *Highly probable - 50 – 90% chance of occurring*
- *Definite - > 90% chance of occurring*

Significance

The significance of impacts can be determined through a synthesis of the aspects produced in terms of their duration, intensity, and extent and be described as:

- *Low to very low - the impact may result in minor alterations of the environment and can be easily avoided by implementing the appropriate mitigation measures, and will not have an influence on decision-making*

- *Medium - the impact will result in moderate alteration of the environment and can be reduced or avoided by implementing the appropriate mitigation measures, and will only have an influence on the decision-making if not mitigated*
- *High - the impacts will result in major alteration to the environment even with the implementation on the appropriate mitigation measures and will have an influence on decision-making*

Status

Whether the visual impact on the overall environment will be:

- *Positive - environment overall will benefit from the impact*
- *Negative - environment overall will be adversely affected by the impact*
- *Neutral - environment overall not be affected*

Confidence

The degree of confidence in predictions based on available information and specialist knowledge:

- *Low*
- *Medium*
- *High*