VISUAL IMPACT ASSESSMENT

PROTEA RIDGE RESIDENTIAL DEVELOPMENT
CAPE FARM 'THE KOMMETJE ESTATES' NO. 948
KOMMETJIE
CAPE TOWN

2nd DRAFT

Prepared for

Doug Jeffery Environmental Consultants

On behalf of

Kommetjie Estates Ltd

By

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FIGURES:

EXECUTIVE SUMMARY

The author was approached by Doug Jeffery Environmental Consultants on behalf of Kommetjie Estates to provide a visual impact assessment as part of the overall environmental submission for the development of a residential estate on Cape Farm 'The Kommetje Estates' No 948 Kommetjie Cape Town.

The no development alternative and three development alternatives will be assessed in this report. Development alternative three is the preferred alternative as it is the only alternative which has fully implemented the requirements of the environmental team.

The site is bounded to the west by Wireless Road, to the north by the Kommetjie caravan park and the Klein Slangkop development, to the east by the Table Mountain National Park, and to the south by the development at the eastern end of Riverside Drive, and the naval radio station.

The site forms part of the eastern boundary of Kommetjie with the Table Mountain National Park and therefore any development on the site must minimise any visual impacts on the park.

Kommetjie has a very distinct 'village' sense of place surrounded by the natural areas of the coast and the TMNP. It is important for any new development to be sensitive to the visual environment and only be approved if the sense of place can be maintained with minimal disturbance.

The area directly along Wireless Road that will be affected is approximately 80m in length. In development Alternatives 1 and 2 this entire area is divided into erven which will result in the complete blocking of views towards the east and the TMNP. Alternative three has pulled the houses slightly back from the Wireless Road edge, and only approximately half of the available 80m will be used thus allowing for a green corridor that will enable lines of site towards Protea Ridge and the TMNP.

The Wireless Road edge is the only area that will be visually affected that has regular general public access apart from the small area at the end of Riverside Drive. The other edges of the site are situated away from general public access and tucked away behind the caravan park and the naval site thus limiting the number of viewers who will be directly affected.

Along the two boundaries that the caravan park shares with the site there are existing tree lines that will shield the development from most of the caravan park thus significantly lowering the visual impacts on the caravan park.

In Alternative 3 the erven have been situated lower on the slopes of Protea Ridge and a buffer zone has been left between the houses and the park thus ensuring that the visual impact on the TMNP will be minimal and confined mainly to the area between the Protea Ridge ridgeline and the site. Protea Ridge will shield the rest of the development to views from the east in the TMNP.

The overall significance of the visual impact has been assessed at medium-high for Alternative 1, medium for Alternative 2 and medium-low for Alternative 3.

As the site is the last area to the east of Wireless Road that can still be developed, the visual impacts associated with the development will cap the potential changes to the local visual environment for the foreseeable future.

The overall significance rating of Medium-low for Alternative 3 with full mitigation is considered acceptable for a development of this nature and extent, and therefore it is recommended that, purely in terms of visual issues, the implementation of Alternative 3 be allowed to proceed provided that the mitigation measures are implemented in full.

1 INTRODUCTION

The author was approached by Doug Jeffery Environmental Consultants on behalf of Kommetjie Estates to provide a visual impact assessment as part of the overall environmental submission for the development of a residential estate on Cape Farm 'The Kommetje Estates' No 948 Kommetjie, Cape Town.

1.1 VISUAL ASSESSMENT EXPERIENCE AND EXPERTISE

Over the past 14 years the author has been involved in the compilation of more than one hundred visual impact assessments. These included such high profile studies as:

- The Green Point Stadium
- The Berg River Water Project
- Agulhas Golf Estate
- Several large scale Eskom projects
- Two large scale projects in the Waterfront
- PPC Cement Factory Riebeek West
- Upgrade of Zanzibar waterfront
- 2 solar facilities Kenhardt Northern Cape
- Wind Farm Caledon Western Cape (71 3Mw turbines)
- 2 wind farms Swellendam District Western Cape

1.2 STATEMENT OF INDEPENDENCE

I hereby declare that I have no conflicts of interest related to the work of this report. Specifically, I declare that I have no personal financial interests in the property and/or development being assessed in this report, and that I have no personal or financial connections to the relevant property owners, developers, planners, financiers or consultants of the development other than the fees obtained for compiling this report.

I declare that the opinions expressed in this report are my own and a true reflection of my professional expertise.

1.3 COPYRIGHT

1.4 ASSUMPTIONS AND LIMITATIONS

This report has been compiled according to the requirements of the document 'Guidelines for Involving Visual and Aesthetic Specialists in EIA Processes' issued by the Department of Environmental Affairs and Development Planning of the Provincial Government of the Western Cape, dated June 2005.

The assessment criteria that have been used in this report conform to the requirements of the above mentioned guidelines and may differ from those used by the other assessment specialists. Certain assessment criteria are specific to visual impacts, but not to other disciplines. The visual absorption capacity of the local environment, the compatibility of the development with the local visual environment and the sensitivity of the viewers are not part of the generic methodology but are essential in understanding the visual implications of any development and have therefore played a vital part in the findings of this visual impact assessment.

This report will assess the no-development alternative and three development alternatives. It will be noted that in several of the assessment categories the no-development alternative has a rating of 'low'. This is because there are visual impacts associated with the site as it is at present. i.e. the presence of alien vegetation on site. The assessment cannot therefore be non-existent as this would only apply to a pristine site.

The no development alternative is used as a baseline from which to assess the other alternatives.

Alternative 1 is a typical suburban layout that maximises the use of the land on the site. This alternative was developed before any environmental studies were undertaken and is now considered to be unworkable in terms of its environmental footprint.

Alternative 2 was a reworking of the layout plan to take certain environmental issues into consideration but was still considered to be environmentally unsound.

Alternative 3 was developed as a response to all the environmental input, and as a result a different type of development was proposed with smaller dwelling units and the maximization of the green areas which are to be rehabilitated and used as private open space.

It must be understood that the design work for alternatives one and two, especially in terms of the architectural solutions and landscaping, was not taken to the same level as for alternative 3 and therefore the visual impacts of these alternatives has had to be estimated based on what might have pertained if these alternatives had been implemented.

The mitigation measures are applicable specifically to alternative 3 as this is now the preferred alternative.

1.5 METHODOLOGY

The following sequence was employed in this visual impact assessment.

- A desktop survey was made using maps and aerial photographs. These were used to identify landforms and landscape patterns and areas of potential visual impact.
- A photographic survey of the site and surrounding areas was conducted.
- Significant viewpoints and areas where views of the site will be possible were identified and the visual impact on these was analysed.
- An evaluation was made of potential visual impacts on all areas where visual influence is anticipated.
- Relevant mitigation measures were proposed.

2 LOCALITY AND STATUS OF THE STUDY AREA

See Figures 1 - 3

The site, which is approximately ±10,35ha in extent, is a portion of the remainder of a Cape farm known as Kommetje Estates, no 948.

It is situated to the east of Wireless Road and is the last portion of land available for development between the existing portions of Kommetjie and the Table Mountain National Park.

At present the site is zoned Rural. Suitable rezoning is being sought to enable the implementation of the Alternative 3 plans. (See planning report by Headland Planners.)

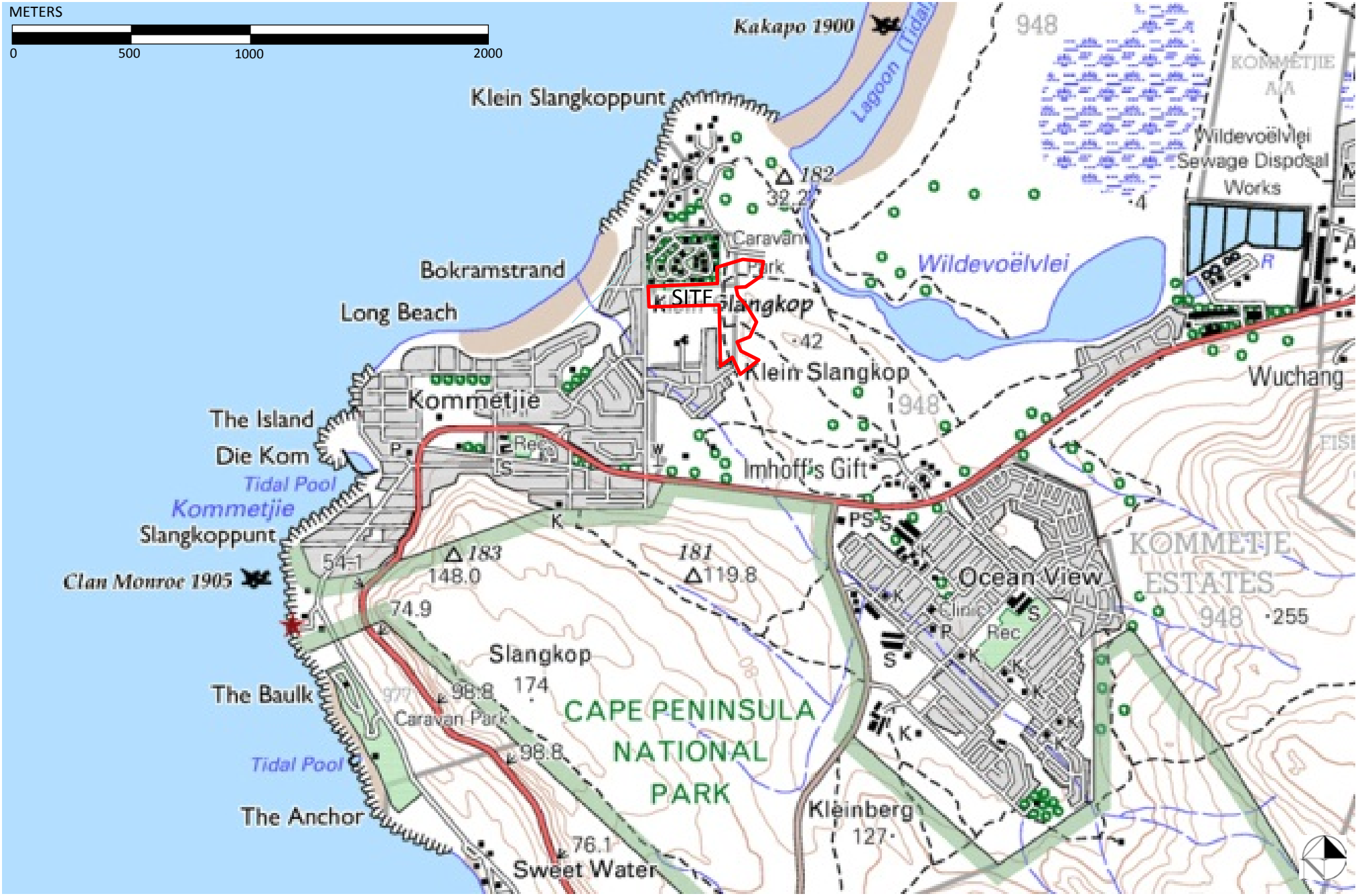
The site lies within the urban edge.

The site has a 6m sewage servitude running north to south parallel to the eastern boundaries of the caravan park and the naval site which then turns eastwards along the Klein Slangkop development boundary.

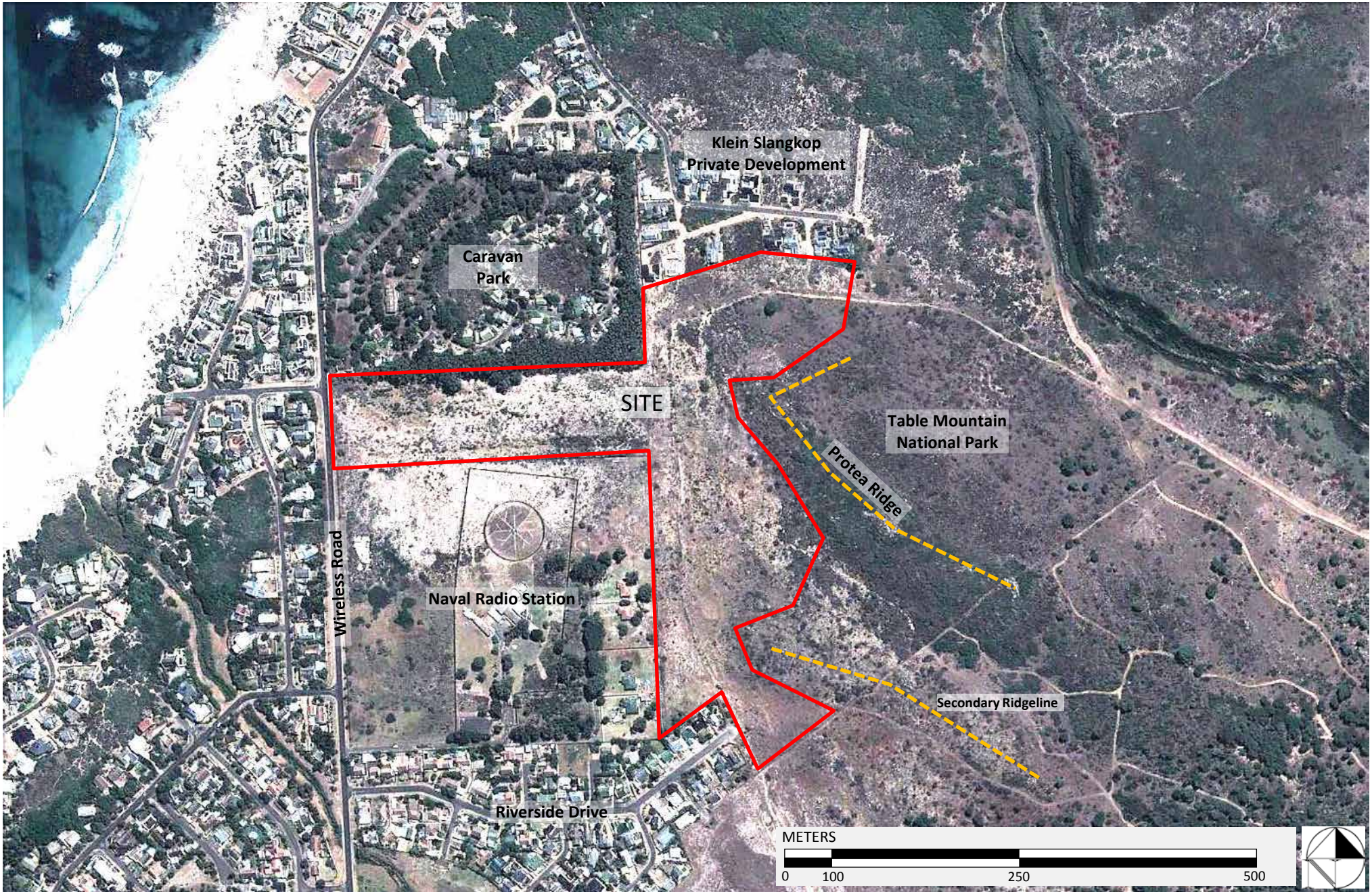
At present the site is unused and parts are covered in invasive alien vegetation.

Plans for development on this site have a long history going back to 1998 at which time the boundaries of the Table Mountain National Park had not been defined and so the development area was far larger.

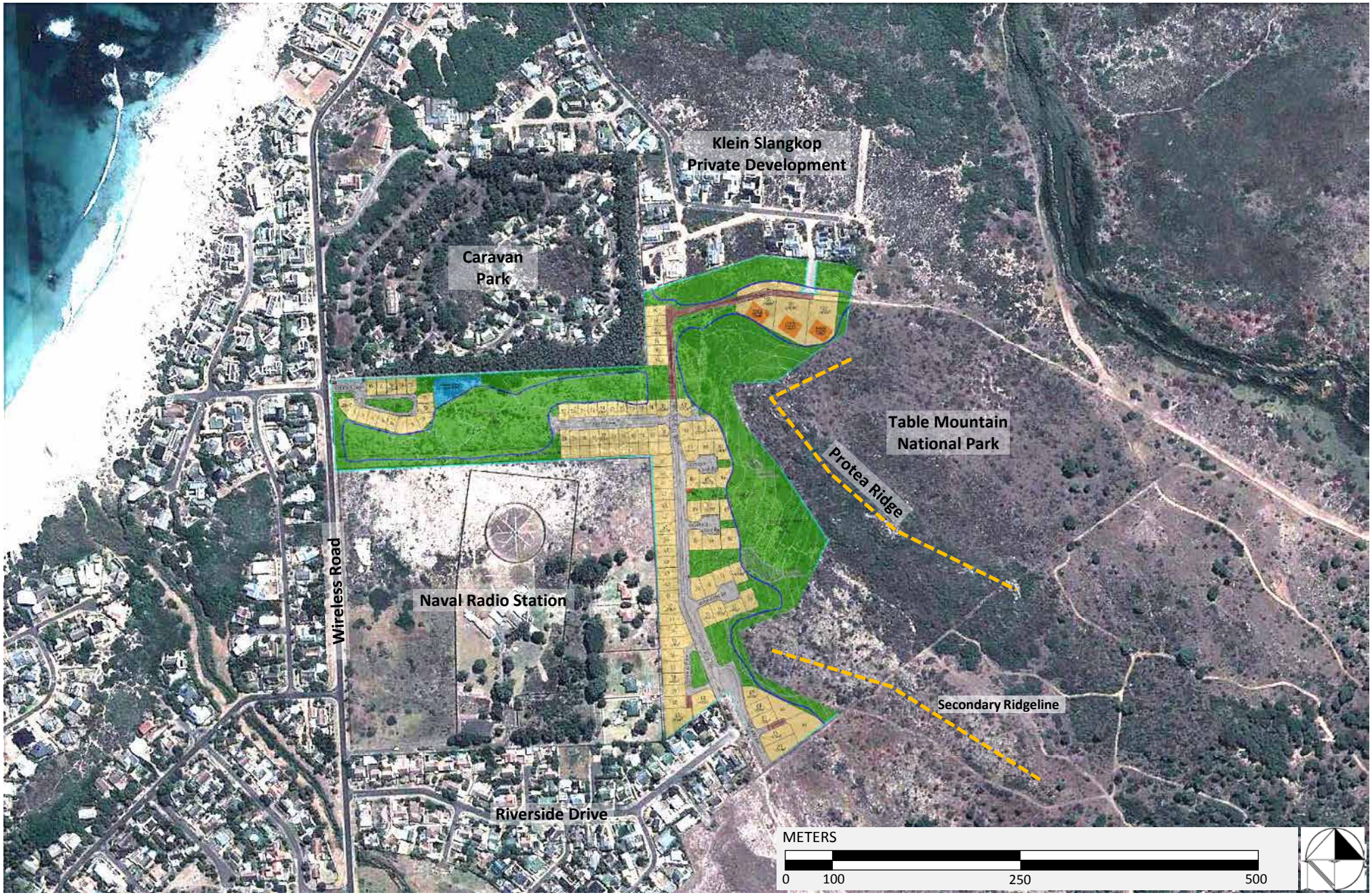
Please read the planning report by Headland Planners for details concerning the history of the submission and the rezoning that is being sought.



REGIONAL LOCALITY FIGURE 1



AERIAL VIEW SHOWING OVERALL LANDSCAPE CHARACTER FIGURE 2



AERIAL VIEW WITH OVERLAY OF PROPOSED DEVELOPMENT ALTERNATIVE 3 FIGURE 3

3 DESCRIPTION OF VISUAL CHARACTERISTICS

3.1 GENERAL DESCRIPTION OF SITE AND SURROUNDING AREA

See Figures 1 to 3

The site is roughly T shaped with the foot of the T being along Wireless Road at the intersection with Pelican Place, and the stem of the T running eastwards between the caravan park to the north and the naval site to the south. Where these two properties end the site broadens into the top of the T stretching along the eastern boundary of the caravan park as far as the Klein Slangkop development in the north, and along the naval site boundary to the existing development along Riverside Drive in the south. The eastern boundary is a staggered line below Protea Ridge that is shared with the Table Mountain National Park.

The boundary along Wireless Road is approximately 80m in length and this is the only area accessed by the general public which will be visually affected by the development other than the small area adjacent to the end of Riverside Drive.

The site is covered in fynbos but there are some patches of dense alien vegetation.

The site is relatively flat with gentle slopes towards the east that get steeper as one approaches Protea Ridge. The site does not include this ridgeline but some of the erven closer to the ridgeline, specifically the three larger erven adjacent to the Klein Slangkop development, are elevated enough to allow for panoramic views.

On the two sides of its boundary that the caravan park shares with the site there are significant tree lines that provide visual screening of the site from within the caravan park. Just inside of these tree lines the caravan park has a series of dwellings/cottages some of which have permanent occupants. The area of trees forms the 'backyards' of these dwellings.

At the northeastern corner of the caravan park the site boundary turns east along the edge of the Klein Slangkop development. Several of the existing houses adjacent to the boundary have views over the site towards Protea Ridge although it appears that most views from these houses are orientated towards the north and the area across the bay towards Chapman's Peak.

The jagged eastern boundary of the site adjacent to the Table Mountain National Park runs from the corner of the Klein Slangkop development in a crooked line along the western slopes of Protea Ridge, the ridgeline being entirely within the park. This ridgeline forms a visual barrier which prevents views of the site from most areas within the park. It is only when climbing Protea Ridge that the site will be significantly visible from the park.

The naval radio station is largely empty although there are several houses along the eastern boundary adjacent to the site and some larger buildings closer to the center of the site. There are a few mature trees associated with the buildings but the rest of the site is kept clear of tall vegetation. The site is fenced with a simple wire mesh fence.

There are four houses at the eastern end of Riverside Drive which look northwards over the site along the line of the naval radio station fence. The easternmost house in this line and one other house on the opposite side of Riverside Drive also have views towards the east across the road reserve that will carry the main entrance road to the site.

The visual environment is completed by the Slangkop Ridgeline to the south, Rooikrans to the east and Chapman's Peak, Noordhoek Peak, Karbonkelberg above Hout Bay, and Table Mountain in the distance to the north.

3.2 THE VISUAL ENVIRONMENT AND SENSE OF PLACE

Kommetjie has a very special sense of place that is highly prized by those who live in and visit the area. It has a village feel and in general the natural features have been respected, with development taking its form from the shoreline and other features in the landscape.

The Kommetjie area is separated from other urban development by large natural areas many of which have now been included in the Table Mountain National Park. This defines the area in which development will be allowed and limits the amount of development that is possible. As the site is the last large area between Kommetjie and the TMNP that can still be developed, the need for a visually sensitive approach is imperative as, the development will form part of the local interface with the park.

In general, the sense of place that is experienced by those living in, and those visiting the area, will only be minimally affected by the proposed development as it is only the small group of houses along Wireless Road, (Squires Lane,) that will directly affect the visual environment, the houses in the rest of the site having the advantage of the visual buffering of the caravan park with its shielding tree lines and the expanse of the naval radio station, however, several houses in Klein Slangkop, and more significantly, a few of the houses at the end of Riverside drive will experience a marked change in their sense of place.

As far as the Table Mountain National Park is concerned, the development will be shielded to views from most of the park adjacent to the site except in the limited area between the Protea Ridge ridgeline and the eastern boundary of the site where the change to the sense of place will be significant, but not overly so as the development will be experienced within the context of the existing suburban development which is already clearly visible from these viewpoints.

3.3 DESCRIPTION OF THE PROPOSED DEVELOPMENT

See Figures 4 –6 and Addenda 1 and 2

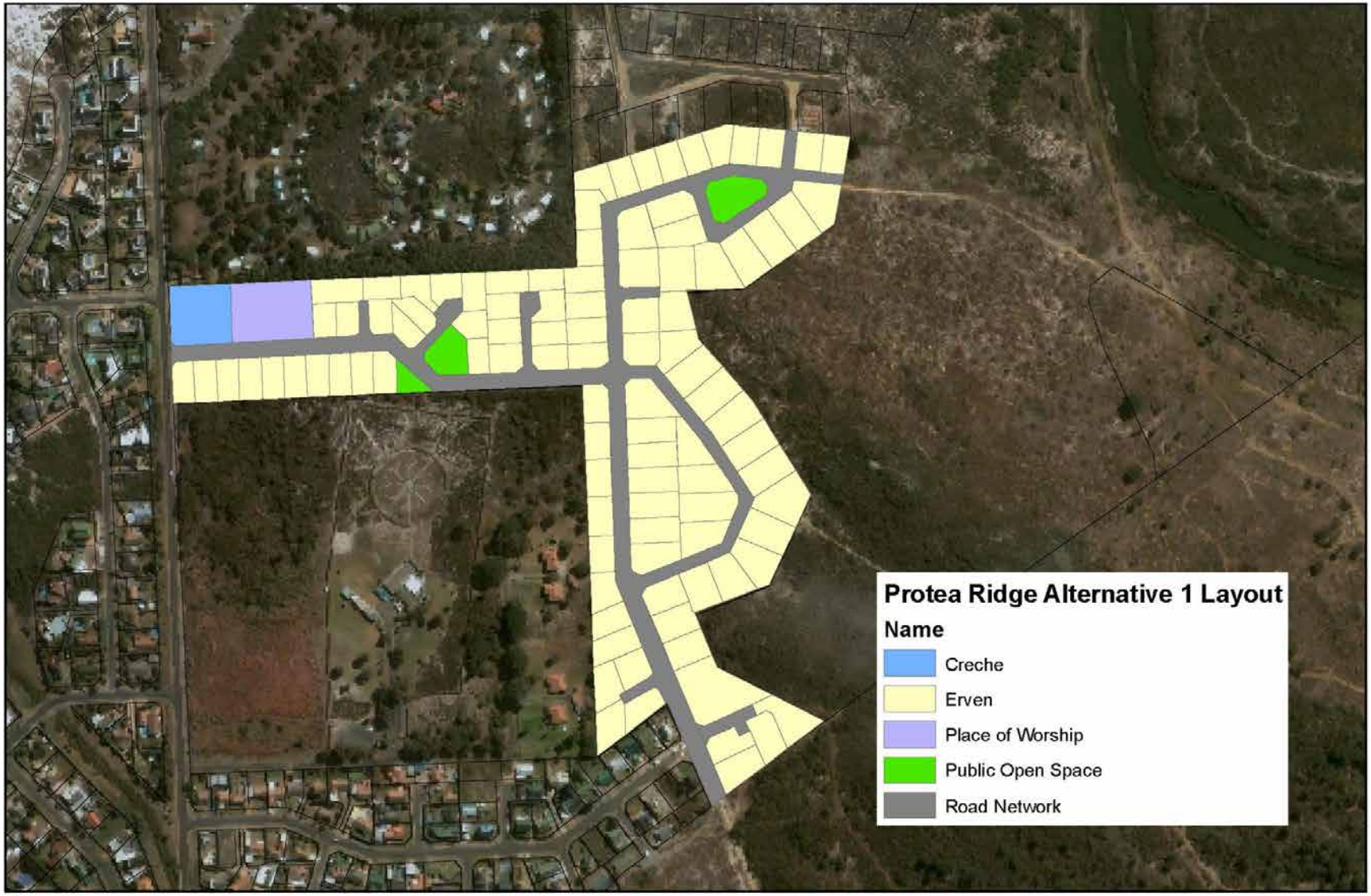
The following elements that have visual implications were identified for each of the alternatives:

3.3.1 Alternative 1

See Figure 4

- This alternative calls for the whole site to be divided between road reserves, private erven, and some community sites, the total number of erven being 101 and the community sites being for a crèche and place of worship.
- Access to the erven will be via an internal road system that connects with Wireless Road in the west and with Riverside Drive in the south-east. A further connection in the northeast through the Klein Slangkop development also appears on the plan although it is unlikely that this would have been implemented as the roads in Klein Slangkop are private.
- Although no architectural details were available it is presumed that the larger erven would allow for houses that would be larger than those proposed in Alternative 3 thus giving rise visually to a sense of greater density.
- The crèche and place of worship are situated close to wireless road and could potentially have a high visual impact on Wireless Road as a result of the larger buildings associated with these usages.

Doug Jeffery Environmental Consultants (Pty) Ltd



0 50 100 200 300 400 Meters

Map Scale is 1 : 3000 when printed on A3.
Source: Aerial Image courtesy of Google Earth Pro.

®

Layout Alternative 1
Protea Ridge Residential Development
Remainder of Farm 948 Kommetjie Estates

Date: August 2008

ALTERNATIVE 1 LAYOUT FIGURE 4

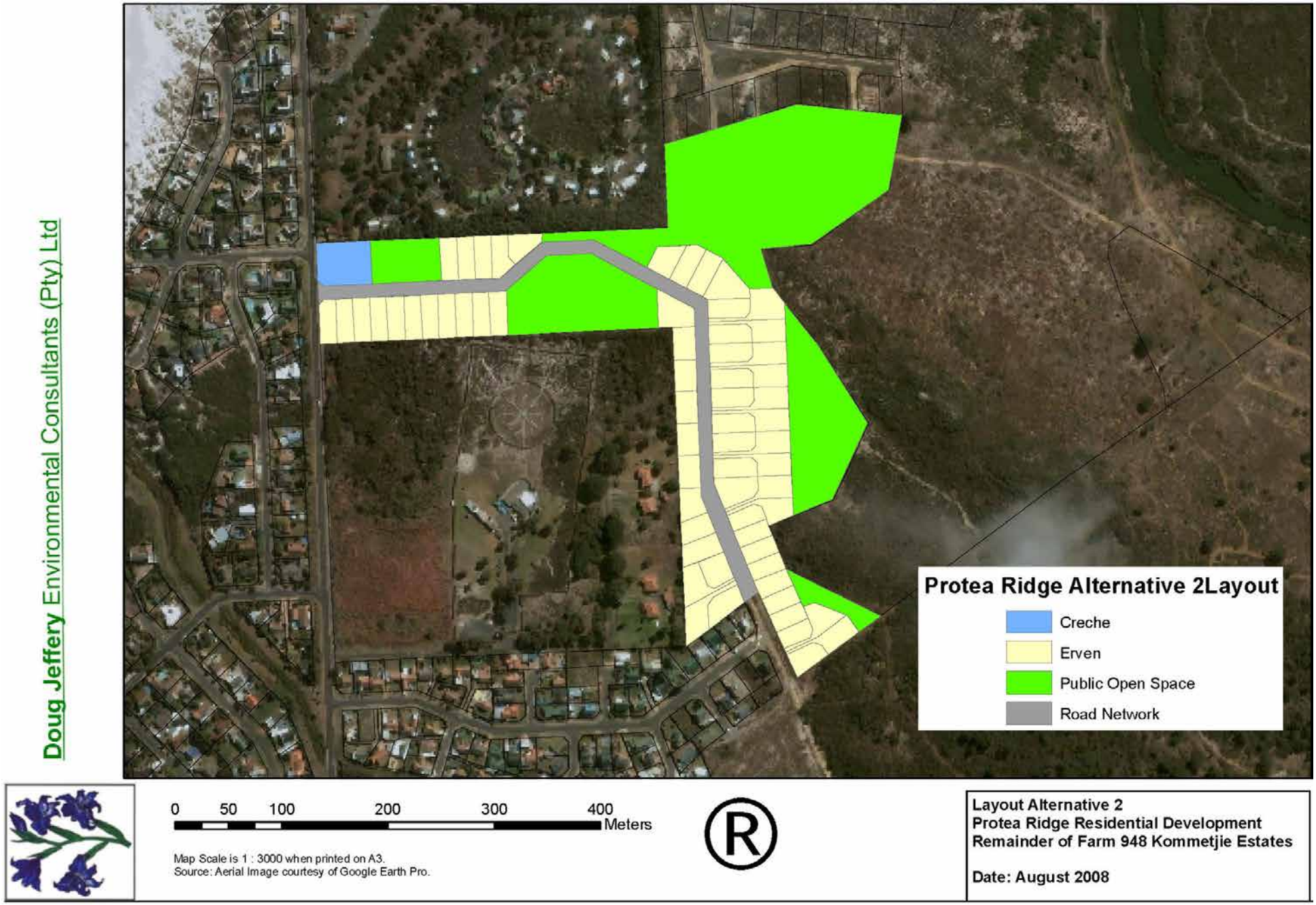
- The entire area between the caravan park and the naval radio station would be utilized removing any visual and environmental link between Wireless Road and Protea Ridge.
- The increased number of units and their increased density along the boundary with the Klein Slangkop development would greatly increase the visual impact on the existing houses along the boundary.
- The naval base would be completely surrounded by development as would the houses at the end of Riverside Drive.
- Development would take place up to the interface with the Table Mountain National Park resulting in a 'hard' urban edge without any visual buffer zone which would be difficult to mitigate.

3.3.2 Alternative 2

- This alternative is for 63 housing erven, a site for a crèche and road reserves and public open space areas.
- Access would also be from Wireless Road and the end of Riverside Drive. The connection via the Klein Slangkop development is removed.
- Although, as for alternative 1, no architectural details were available it is presumed that the larger erven would allow for houses that would be larger than those proposed in Alternative 3 thus giving rise visually to a sense of greater density in the areas where housing is planned.
- The crèche is situated adjacent to Wireless Road and could potentially have a high visual impact on Wireless Road as a result of the larger buildings associated with this usage. The place of worship is however replaced by an open space.
- The entire area between the caravan park and the naval radio station adjacent to Wireless Road would be utilized removing any visual and environmental link between Wireless Road and Protea Ridge. Internally this visual impact would be reduced as a result of the greater open spaces.
- The removal of the erven adjacent to the Klein Slangkop development will result in a reduction of the visual impact in this area.
- The naval base would be almost completely surrounded by development and the houses at the end of Riverside Drive would experience the same visual impact as for Alternative 1.
- Although there is less development immediately adjacent to the TMNP, the straight line of development along the eastern edge does not respond to the topography imposing a geometric line on the landscape that would be difficult to mitigate. However, the omission of erven in the north-western part of the site will reduce the potential visual impacts on the park from areas close to the adjacent boundary.

3.3.3 Alternative 3

- The layout for Alternative 3 has been determined by the findings of the various environmental studies undertaken on the site with the botanical study taking precedence in determining the areas where development could take place. This has resulted in a far larger green area for the development and a change in the type of development that is being submitted.



ALTERNATIVE 2 LAYOUT FIGURE 5

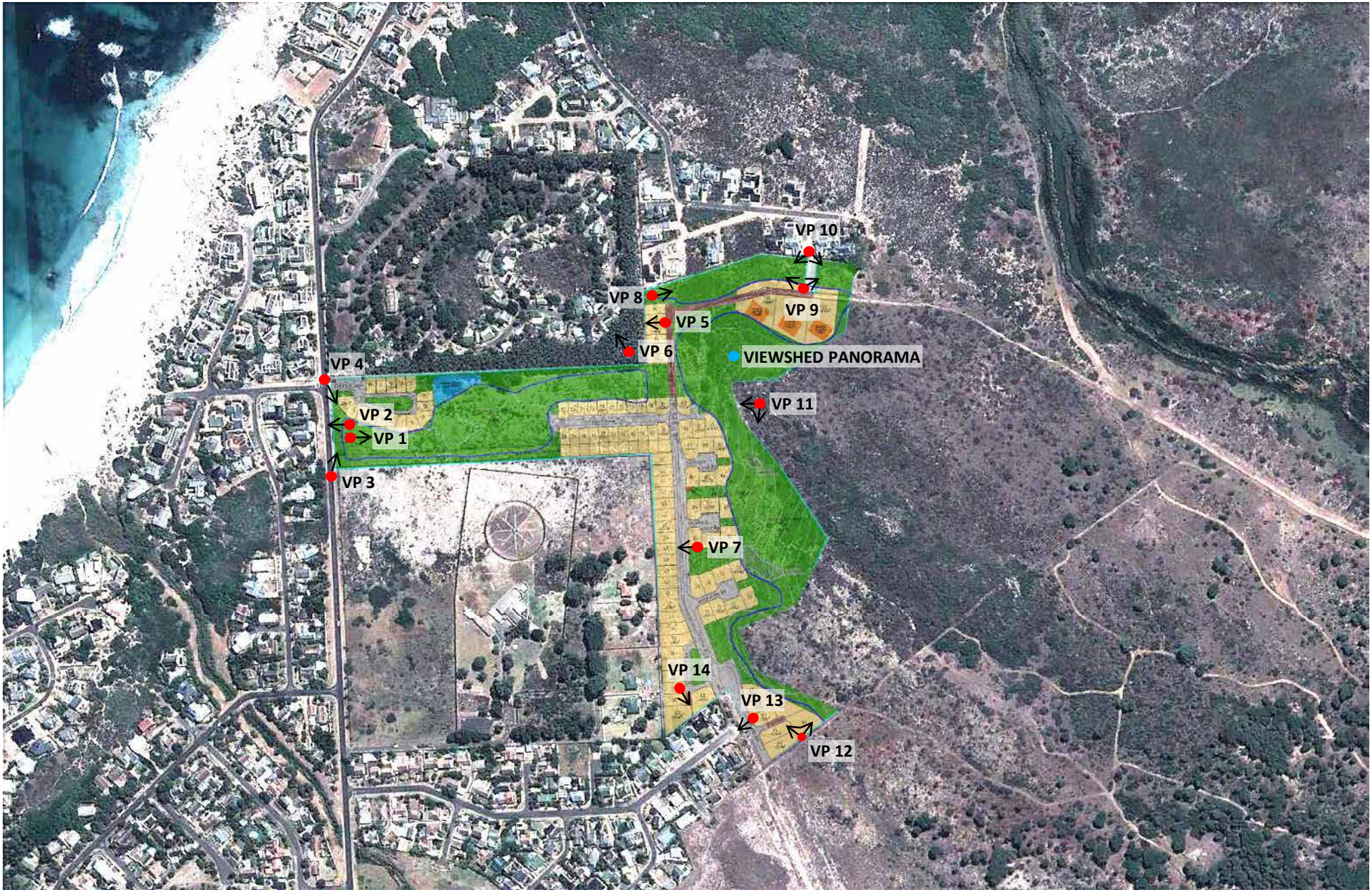
Land Use Analysis Table

Colour	Land Use	Number	Units	Area (±ha)	%
	Single Residential	1 - 102	102	3,305	32
	Private Open Space	103 - 105	3	5,944	57
	Electrical Sub-station	106 & 107	2	0,004	-
	Private Road	108 & 109	2	1,1099	11
Total			109	10,3629	100

ALTERNATIVE 3 LAYOUT – PREFERRED ALTERNATIVE

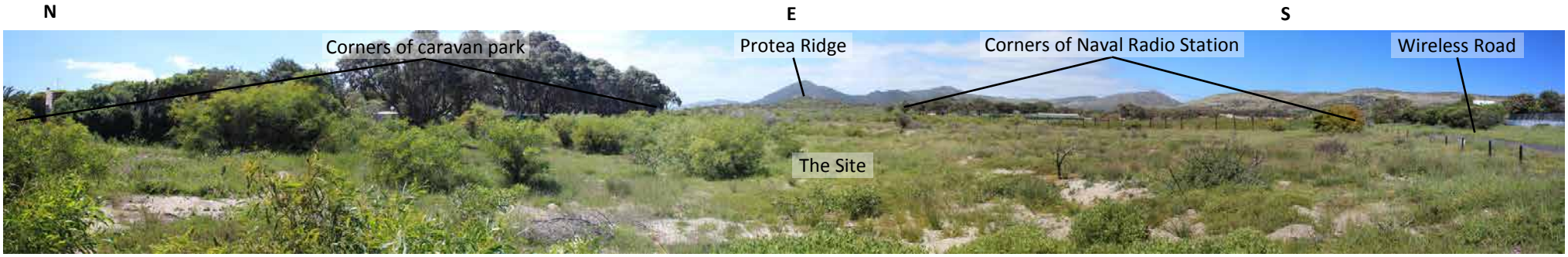
FIGURE 6

- The plan is for 102 residential erven broken up into two distinct sections: Squires lane with 16 erven with its entrance off Wireless Road, and the remainder of the development with access off Riverside Drive.
- 57 percent of the site will remain undeveloped and be rehabilitated. This area will be private open space and contain paths so that the inhabitants can access the fynbos areas. (See Landscape Masterplan Addendum 2)
- Three larger erven have been planned in the north-western corner of the site and the building footprints of maximum 300m^2 on these erven have been determined so as to allow for panoramic views to the north, but still result in the houses being below the level of the ridgeline.
- In general the erven are much smaller and the houses have been grouped close together thus allowing for the maximization of the green spaces.
- The caravan park will be less visually affected than for alternatives 1 and 2 as there will be open space along much of its boundary.
- The visual influence on the Klein Slangkop development will be significantly less than for Alternative 1 as a result in the reduced number of erven and the buffer zone along the boundary, however, these houses will experience a higher visual impact when compared to Alternative 2 as Alternative 2 has no houses in this area.
- The naval radio station will still be largely surrounded by new erven although the section nearest Wireless Road will remain open.
- The exclusion of development along the naval radio station boundary nearest to Wireless Road will allow for the sense of visual a link between Wireless Road and Protea Ridge although the houses near the corner of the naval radio station will prevent this link to the ridge being entirely open.
- A similar visual situation to alternatives 1 and 2 will pertain to the houses at the end of Riverside Drive in that they will be completely surrounded by new development.
- The interface with the Table Mountain National Park is more responsive to the topography and the broken nature of the development line with its fingers of green between some erven will result in a far better visual solution when compared to Alternatives 1 and 2 and will be easier to mitigate. The houses will also be lower in the landscape which will result in a smaller area being visually affected. The larger buffer zone will also aid in mitigating the visual impacts on the TMNP.
- An architectural design manual has been produced which will limit the size and style of houses and achieve a development that is visually harmonious. (See Addendum 1)



KEY TO VIEWPOINTS

FIGURE 7



Viewpoint 1 from just inside the Wireless Road boundary looking east into the site

Please be aware of the 'fish-eye effect in this and all subsequent panoramas that results from joining several photographs together. The road is straight.

Viewpoint 2 from inside the site looking west at Wireless Road showing houses that will be visually affected

VIEWPOINTS 1 – WIRELESS ROAD INTERFACE FIGURE 8

Viewpoint 3 looking north along the Wireless Road boundary

Viewpoint 4 looking south along the Wireless Road boundary from the position of the proposed Squires Lane entrance structure

Viewpoint 5 from within the site looking west showing the eastern caravan park boundary with its tree line

Viewpoint 6 from within the tree line along the boundary of the caravan park looking into the caravan park showing character of buffer area in the tree line and orientation of dwellings

Viewpoint 7 looking west along the naval radio station boundary

Please be aware of the 'fish-eye effect in this and all subsequent panoramas that results from joining several photographs together. The fence is straight.

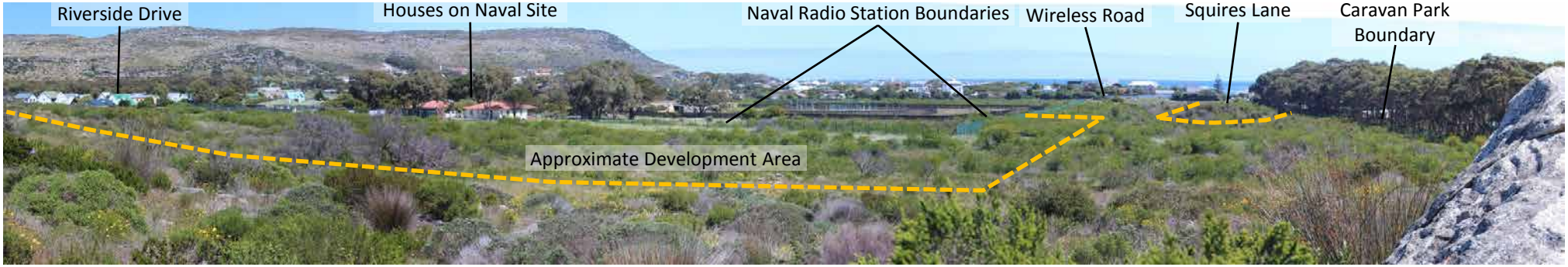
VIEWPOINTS 3 – CARAVAN PARK AND NAVAL SITE FIGURE 10

Viewpoint 8 From near caravan park boundary looking north and east along the Klein Slangkop boundary showing houses that will be visually affected

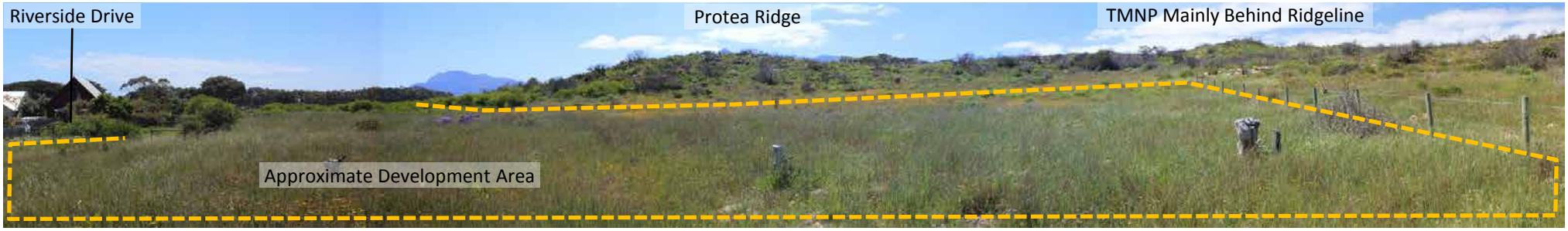
Viewpoint 9 from position of three large erven along the Klein Slangkop boundary showing houses that will be visually affected

Viewpoint 10 Looking south from the gateway in Klein Slangkop showing backdrop of Protea Ridge.

VIEWPOINTS 4 – KLEIN SLANGKOP FIGURE 11



Viewpoint 11 over the site from the slopes of Protea Ridge showing approximate Development Areas

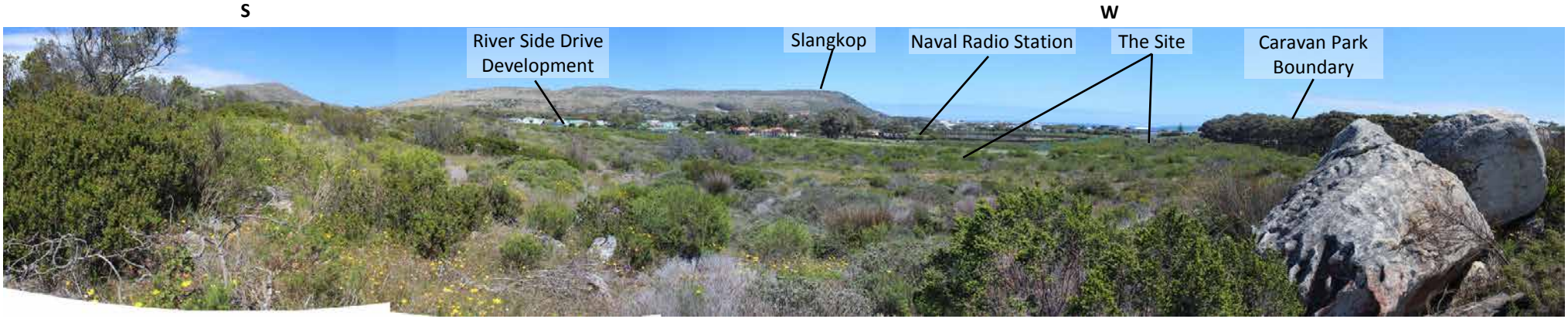


Viewpoint 12 Near Riverside Drive showing the shielding nature of the Protea Ridge ridgeline to views from the TMNP

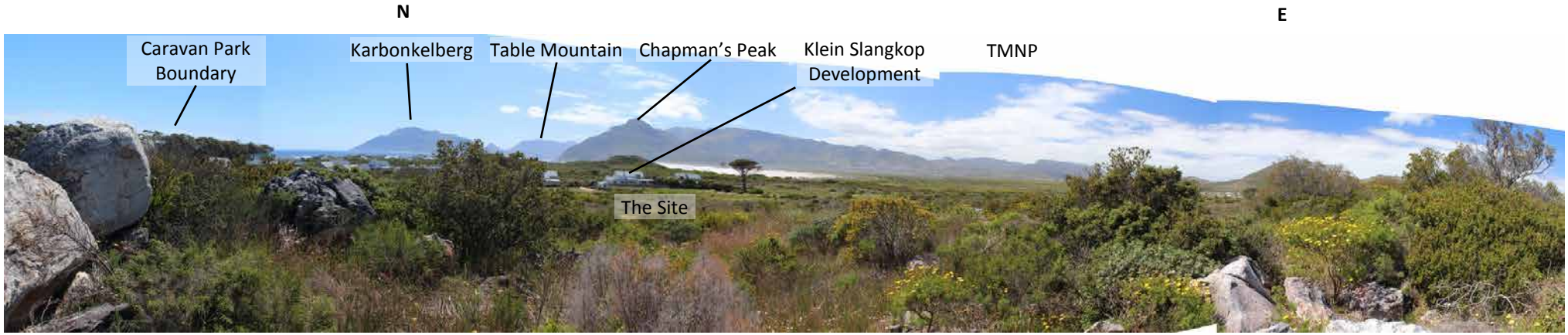
Viewpoint 13 from inside the site looking west along Riverside Drive towards Wireless Road

Viewpoint 14 from inside the site showing the houses along Riverside Drive that will have their views significantly affected

Viewpoint 15 from Chapman's Peak Drive showing overall visual context and how, where the development is visible, it will be seen in the context of surrounding development



Viewpoint 16 from Protea Ridge showing southern and western viewshed



Viewpoint 17 from Protea Ridge showing northern and eastern viewshed

NOTE: These panoramas together form a 360 degree view. All the areas that are visible in these photographs contain viewpoints from which the site will be visible, and no views of the point from which the photograph was taken are possible from areas that are hidden in these photographs. These images are taken from a point on Protea Ridge which is above the level of the houses in the development. The viewshed depicted is therefore the worst case scenario.

VISUAL IMPACT ASSESSMENT

4.1 VIEWSHED

The "viewshed" refers to the theoretical outer-most extent or area from which the subject can be seen.

There are two types of viewshed:

- *A defined viewshed; this is when topographical features such as mountain peaks or ridgelines create a situation in which the subject is visible from one side of the ridgeline but not from the other. This is similar to the concept of a watershed and can usually be described as a line on a map. This type of viewshed usually occurs in mountainous or hilly terrain.*
- *An indeterminate viewshed: this occurs in a terrain where there are no defining topographical features and the subject becomes visible from high points in the terrain and is shielded from view in low points in the terrain. The local vegetation and structures can completely or partially shield the subject from view even over fairly short distances. In this type of viewshed distance becomes the main limiting factor to visibility and it is not possible to show the extents of the viewshed with a line on a map. This type of viewshed usually occurs in relatively flat terrain.*

See Figure 14

The **defined** viewshed for the site consists of two distinct parts.

The proximate viewshed: this is determined by the Protea Ridge ridgeline to the east of the site which will prevent all views of the development from further east. The viewshed in the other three directions is indeterminate.

The overall viewshed: this is defined by the ridgelines associated with Slangkop and the rest of the range to the south of the Kommetjie Valley to the south, (1.2km and further,) Rooikrans and Brakkloofrand to the east, (2,5km and further,) and the ridgelines of Chapman's Peak, Noordhoek Peak, (4,8km and further,) the Hout Bay mountains, (10km and further,) and Table Mountain to the north, (20km). This defines a large area but most possible views from these elevated areas will be mitigated by distance resulting in a low visual impact on these areas.

The areas immediately to the north, west and south of the site have an indeterminate viewshed in which the development will be easily shielded from view by the local topography, vegetation and structures however; partial views will be possible from any elevated points in the landscape. The viewshed in this area is determined by such things as the tree line around the caravan park and other local vegetation which at the moment shields the site from view but this could change should the vegetation be removed.

4.2 ASSESSMENT

Note: As no architectural details and landscape plans were available for alternatives 1 and 2, the visual impacts of these alternatives has had to be estimated. It has been assumed that, as a result of the larger erven, the houses would be larger than those planned for Alternative 3 and therefore the perceived density would be greater.

4.2.1 EXTENT OF THE IMPACT

This assessment measures the extent of geographical area that will be impacted by the development.

Extent of Visual Impact	
Rating	*Definition of Rating*
Site Specific	*Very small extent of visual influence – usually limited to the site*
Local	*Limited to the site and immediate surrounding area (1-5km)*
Sub Regional	*The visual influence covers a greater area (6-10km)*
Regional	*The influence covers an area that includes an entire geographic region or allows the visual impact to be extend beyond one region into another*
National	*The visual impact can be experienced across national boundaries and has national implications.*

The extent of the visual impact is considered local with all significant visual impacts being confined to the area adjacent to or near the site and the row of hills to the south of the Kommetjie Valley.

Although views of the development will be possible from Chapman's Peak Drive and the associated mountain slopes above the drive at a minimum distance of 4,8 km, the mountains around Hout Bay at a distance of 10km and further, and even as far as Table Mountain at a distance of 20km , these viewpoints will only be minimally affected in terms of visual impact.

Table 4.1 Extent of Impact

	Construction	**Operational**	**Night***
No Development Alternative	-	-	-
Development Alternatives **	Local	Local	Local

*The night time column is included to assess the potential affect of any lighting at night.
** This assessment assesses the area around the developments and is therefore valid for all development alternatives.

4.2.2 ZONES OF VISUAL INFLUENCE – VISUAL ANALYSIS

This assessment describes the significant areas within the viewshed from which the development may be visible and estimates the degree to which these areas will be visually influenced.

Zones of Visual Influence – estimate of visibility	
Rating	*Definition of Rating*
Low	*The proposed development will only be partially and or, (in the case of movement along roads etc.) intermittently visible and take up a relatively small percentage of the overall vista.*
Medium	*The proposed development will be readily visible but its visual influence will be limited by distance, compatibility etc.*
High	*The entire or a large portion of the proposed development will be visible in a way that seriously changes the visual nature of the area when viewed from the identified viewpoints.*

4.2.2.1 Wireless Road and Surrounding Properties

See Figures 8 and 9

The views from along Wireless Road are the only views where the general public will be affected. This includes those who live in the area and use Wireless road to commute; and the visitors to the area that access the beaches at the end of Wireless road.

At present when traveling along Wireless Road the areas to the west of the road are experienced as urban with the houses and fencing along the road blocking any views further west towards the shoreline, whereas the areas to the east of the road are a mixture of urban, (the Riverside Drive development etc.) and seemingly open areas which include the naval radio station and the caravan park. Application has been made for a development on the site between the intersection with Kommetjie Road and Bokramspruit. This development, if implemented, will bring more urban development to the east side of Wireless Road and block some views towards the Table Mountain National Park. The area on either side of the Bokramspruit and the river itself will remain as a green corridor into the Table Mountain National Park.

The proposed development that is the subject of this report will add to the development on the eastern side of the road and the closing off of views from Wireless Road towards the TMNP but it will also be the last area to the east of the road that can be developed.

In alternatives 1 and 2 the entire gap of approximately 80m between the naval radio station and the caravan park will be taken up by development directly adjacent to the road. This includes the crèche structure which could be larger than the houses. The entrance to the development will turn off of Wireless Road, this entrance will not be aligned with Pelican Place on the opposite side of the road thus creating a staggered intersection and increasing the visual impact. When traveling north towards the beach the development will be seen over the cleared areas of the naval radio station and against the backdrop of the tree line inside the caravan park. When traveling southwards the same tree lines will shield the development from view until the viewer is almost adjacent to the site.

In Alternative 3, except for the entrance structure, the houses are set back from Wireless Road and only just over half of the site area between the caravan park and the naval radio station is used, a green corridor being left along the naval radio station boundary. The cluster of houses will have a higher density compared to alternatives 1 and 2, but the individual structures will be smaller and it will be possible to mitigate the perceived density by means of tree planting within the erven. When traveling north the green space will act as a visual buffer and as a space for mitigation planting, and the result of moving the cluster of houses off the Wireless Road boundary will mean that, when travelling south, the houses will be entirely shielded from view and only come into view when the viewer is adjacent to the site and looking perpendicular to the road.

Although there are views from some of the windows of the houses on the western side of Wireless road, it does not appear that any of the houses have been specifically designed with views over the site as a major design informant. The walls and vegetation separating these erven from Wireless Road emphasize this. (See Viewpoint 2 Figure 8)

The opening up of a green corridor along the naval radio station boundary and the stepping back of the houses in Alternative 3 will result in this alternative having a significantly lower visual influence on the users of Wireless Road and those that live adjacent to it.

Table 4.2 - Zones of Visual Influence – Wireless Road and Surrounding Properties

Alternative	Distance	Mitigation	Construction	Operational	Night
No development Alternative	±0m and further	-	-	Low*	-
Alternative 1		Without mitigation	High	High	High
		With mitigation	Medium	Medium	Low
Alternative 2		Without mitigation	High	High	High
		With mitigation	Medium	Medium	Low
Alternative 3		Without mitigation	Medium-high	Medium	High
		With mitigation	Medium	Medium-low	Low

*** The assessment for this and all other no-development alternatives is not non-existent because there are some visual impacts associated with the site as it stands at present. i.e. the visual impact of the alien vegetation. An assessment of non-existent can only be used if the site is pristine.**

4.2.2.2 Caravan Park

See figure 10

Views from inside the caravan park onto the site are limited by the mature tree lines that surround the caravan park along its two boundaries with the site. This tree line varies between 10 and 20m in width and, although not very densely planted, represents a very effective visual screen between the caravan park and the site.

There are a series of cottages/parked caravans inside this tree line some of which are permanently occupied and all of which face away from the site onto the internal road system in the caravan park. The area between these houses and the caravan park boundary is mostly not used, but there are some braai areas and washing lines under the trees. There do not appear to be any amenities that make use of the views over the site.

The addition of houses on the site along the boundaries with the caravan park will have virtually no visual effect on those who use the caravan park although the greater density of Alternative 1 and the potentially larger houses in alternatives 1 and 2, and the presence of the crèche and place of worship, will increase the visual influence of these two alternatives when compared to Alternative 3.

Table 4.3 - Zones of Visual Influence – The Caravan Park

Alternative	Distance	Mitigation	Construction	Operational	Night
No development Alternative	±0m and further	-	-	low	-
Alternative 1		Without mitigation	Medium	Medium-low	High
		With mitigation	Medium-low	Low	Low
Alternative 2		Without mitigation	Medium	Medium-low	High
		With mitigation	Medium-low	Low	Low
Alternative 3		Without mitigation	Medium	Medium	High
		With mitigation	Medium-low	low	Low

4.2.2.3 Naval Radio Station

See Figure 10 Viewpoint 7

In all three alternatives the naval radio station will be surrounded by development along its common boundaries with the development site. For Alternative 1 this will be along the entire common boundary, in Alternative 2 there will be a gap along the northern boundary away from Wireless Road, and in Alternative 3 the gap along the boundary will be larger and moved adjacent to Wireless road allowing for a green corridor to be visible from the road.

The open nature of the naval radio station will allow for views of the houses along the boundaries over the site from Wireless Road although the trees and structures along the southern part of the eastern boundary will allow for a certain amount of screening of the development adjacent to this area.

In all alternatives the naval radio station will be cut off from its existing interface with the open land to the east and those on the site will experience the feeling of being enclosed by developed areas. This has already happened along the naval site's boundary with the Riverside development.

Table 4.4 - Zones of Visual Influence – Naval Radio Station

Alternative	Distance	Mitigation	Construction	Operational	Night
No development Alternative	±0m and further	-	-	Low	-
Alternative 1		Without mitigation	High	High	High
		With mitigation	Medium-high	Medium-high	Low
Alternative 2		Without mitigation	High	High	High
		With mitigation	Medium-high	Medium-high	Low
Alternative 3		Without mitigation	High	High	High
		With mitigation	Medium	Medium	Low

4.2.2.4 Klein Slangkop Development

See Figure 11

Most of the houses along the Klein Slangkop boundary are orientated away from the site with the primary views being towards the north and the mountains around Chapman's Peak and Hout Bay with only the necessary windows overlooking the site. The height of the fences on most of the properties, which can be seen in Viewpoints 8 and 9 in Figure 11, seem to indicate that views over the site are not a high priority for the home owners. However some of the views from the existing windows must be prized by the inhabitants and the Protea Ridge development will affect these to a certain extent.

In Alternative 1 the number of houses, the fact that they extend along the entire boundary, and the fact that they extend up the slope of Protea Ridge in a way that would make them break the skyline when viewed from Klein Slangkop means that the existing houses would experience a significant visual impact and the sense of place would be considerably altered.

The removal of all the houses in this area in Alternative 2 would remove the visual impact on these houses.

The compromise reached in Alternative 3 in which there is a short line of houses along the caravan park boundary that does not extend up to the Klein Slangkop boundary, and three larger erven which are situated lower on the slopes of Protea Ridge in a way that they should not break the skyline and with a significant buffer zone will greatly reduce the visual impacts on Klein Slangkop when compared with Alternative 1.

Table 4.5 - Zones of Visual Influence – Klein Slangkop Development

Alternative	Distance	Mitigation	Construction	Operational	Night
No development Alternative	±0m and further	-	-	Low	-
Alternative 1		Without mitigation	High	High	High
		With mitigation	High	High	Low
Alternative 2		Without mitigation	Low	Low	Low
		With mitigation	Low	Low	Low
Alternative 3		Without mitigation	High	Medium-high	High
		With mitigation	Medium-high	Medium	Low

4.2.2.5 Table Mountain National Park

See Figure 16

It is important that the visual impacts on the Table Mountain National Park be minimised as the eastern boundary of the site will be the new and permanent interface with the park.

Protea Ridge falls entirely within the park forming an L shaped visual barrier to views of the site from the east and the south. The only area of the park that will be significantly visually affected will be the portion of land between the ridgeline and the development boundary.

In Alternative 1 the siting of some of the erven further up the slopes than in alternative 3 could have led to some of the roofs being visible from the park over the ridgeline. This includes erven to the north and the west of the ridgeline.

In Alternative 2 the houses along the northern boundary have been removed but some of the houses along the eastern boundary may have also protruded above the ridgeline affecting a greater area of the park.

In Alternative 3 the erven on the western slopes of Protea Ridge have all been removed and placed lower in the landscape thus shielding them all behind the ridgeline to views from the park.

The three erven on the northern slopes have also been moved down and one of the mitigation measures will be for the final designs to be such that no part of the house exceeds the height of the portion of the ridgeline immediately south of the erven. The entire development will then not be visible from the bulk of the park and the visual impacts on the park minimised.

It may be possible that there are some partial views of the three larger houses from the more elevated viewpoints to their east but the existing houses in Klein Slangkop will be visible from these same viewpoints and therefore the sense of place will be affected but not changed significantly.

The houses to the east of the end of Riverside Drive may also be partially visible from elevated points in the landscape to their east, but once again, the existing development along Riverside Drive will also be visible in these views and so a significant change in the sense of place will not occur.

The fact that, in Alternative 3, the houses have been pulled back from the boundary with the park has created a significant visual buffer zone, and the intention to maintain this area as rehabilitated fynbos will ensure that there is an adequate transition between the park and the urban elements.

Table 4.6 - Zones of Visual Influence – Table Mountain National Park

Alternative	Distance	Mitigation	Construction	Operational	Night
No development Alternative	±0m and further	-	-	Low	-
Alternative 1		Without mitigation	High	High	High
		With mitigation	High	Medium-high	Low
Alternative 2		Without mitigation	High	Medium-High	High
		With mitigation	Medium	Medium	Low
Alternative 3		Without mitigation	Medium	Medium	High
		With mitigation	Medium	Medium-low	Low

4.2.2.6 Riverside Drive and Surrounding Houses

See Figure Viewpoints 13 and 14 Figure 13

The new access road to the development will be from a T junction at the end of Riverside Drive. Seven of the houses in the development will form a group to the east of the end of the drive across a section of public road and a second private road reserve within the development that gives access to the new houses. The two houses at the end of the Riverside Drive, (Erven 4549 and 4553,) will have their eastward views affected by the new cluster of houses and experience a medium-high visual impact.

The highest visual impacts associated with the development will be experienced by the last four houses on the northern side of Riverside Drive. (Erven 4566, 4567, 4548 and 4549) These houses are used to the northward views they have at present over the site along the line of the fence of the naval radio station which has given them the sense of being on the edge of the urban development.

These houses will now be entirely built in and their natural views will be replaced by views into the back gardens of the new houses. For these houses the visual impact and change in sense of place will be very high.

There is very little possibility of mitigating these visual impacts other than the choice of fencing that will separate the new houses from the existing ones.

The visual influence of all three alternatives on this area of Riverside Drive will be similar except that for Alternative 3 the last houses in the row on the northern side of Riverside Drive will retain limited views towards the north and north-east over a green corridor which is omitted in the other two alternatives.

Table 4.7 - Zones of Visual Influence – Riverside Drive and Surrounding Houses

Alternative	Distance	Mitigation	Construction	Operational	Night
No development Alternative	±0m and further	-	-	Low	-
Alternative 1		Without mitigation	High	High	High
		With mitigation	High	High	Low
Alternative 2		Without mitigation	High	High	High
		With mitigation	High	High	Low
Alternative 3		Without mitigation	High	High	High
		With mitigation	High to Medium-high	High to Medium	Low

4.2.2.7 Other Areas

The local topography, i.e. the flat terrain to the north-west and south, and Protea Ridge to the east, results in a situation where the terrain, vegetation and existing structures surrounding the site shields any visual impacts within a short distance of the site. This forms an area of 'shadow' in which the development will not be visible. Beyond this area, however, the relatively higher elevation of the various mountains and hills to the south, east and north at a greater distance from the site result in views of the site being possible from these elevated areas.

The visual influence on these areas is not expected to be great, mainly because the distances involved will result in the development being a relatively small part of the larger overall view.

All of the viewpoints in these areas are more elevated that the development, i.e.; the viewer will be looking down on the development, and therefore it will not affect views of the skyline or the shoreline. Additionally the development will be seen in the context of the existing surrounding development, linking the houses in the Klein Slangkop development with those at the end of Riverside Drive. The limited size of the structures in Alternative 3 and the staggered shape of the eastern part of the development with its green corridors will aid in lowering the intensity of the visual influence.

It is to be remembered that many viewpoints within these areas fall within the Table Mountain National Park.

Table 4.8 - Zones of Visual Influence – Other Areas

Alternative	Distance	Mitigation	Construction	Operational	Night
No development Alternative	±0m and further	-	-	Low	-
Alternative 1		Without mitigation	Medium	Medium	High
		With mitigation	Medium-low	Medium-low	Low
Alternative 2		Without mitigation	Medium	Medium	High
		With mitigation	Medium-low	Medium-low	Low
Alternative 3		Without mitigation	High	Medium	High
		With mitigation	Medium-high	Low	Low

4.2.3 VISUAL ABSORPTION CAPACITY OF THE AREA

This assessment rates the area surrounding the project in terms of its basic landscape character with respect to its ability to visually absorb the proposed project.
*This concept is closely linked to the concept of compatibility with the surrounding landscape, but the emphasis is on the **area's** ability to absorb the development and **not** on the **development's** ability to fit into the surroundings*

Visual Absorption Capacity	
Rating	*Definition of Rating*
Low	*The landscape is very sensitive to alterations in its visual nature*
Medium	*The landscape can visually absorb small to medium sized alterations in its character.*
High	*The landscape can visually absorb medium to large changes in its character.*

***Note**: In this category 'low' is considered problematic and 'high' is considered desirable.*

The limited proximate viewshed, the relatively even landscape to the north, west and south, the shielding nature of Protea Ridge in the east, and the presence of many trees in the landscape result in the visual absorption capacity being assessed at medium.

The uncontrolled usage of light at night will not be well absorbed however full mitigation will mean that the visual absorption capacity can be maintained at night.

Table 4.9 - Visual Absorption Capacity

Alternative	Mitigation	Construction	Operational	Night
No development Alternative	-	-	-	-
Development Alternatives**	Without mitigation	Medium	Medium	Low
	With mitigation	Medium	Medium	High

* ***Note**: In this category 'low' is considered problematic and 'high' is considered desirable.*
**This category assesses the land around the site and not the development itself. It therefore applies to all development alternatives.

4.2.4 COMPATIBILITY WITH THE SURROUNDING LANDSCAPE

*This assessment evaluates the extent to which the **proposed development** conforms to usages in the surrounding landscape. Important to this assessment are the concepts of sameness, scale, diversity, texture, colour etc.*

Compatibility with surrounding Landscape	
Rating	*Definition of Rating*
High - Appropriate	*The proposed development fits in well with the type and style of the surrounding landscape and no new or different elements are introduced.*
Medium - Moderately Appropriate	*The proposed development can blend into the surrounding landscape but its type and style may be different and new elements are introduced but not in a jarring way.*
Low - Inappropriate	*The proposed development is at odds with the type and style of development in the surroundings, and new and jarring elements are introduced*

***Note**: In this category 'low' is considered problematic and 'high' is considered desirable.*

The development will not be introducing any new elements into the visual environment, all of the various visual elements already being evident in the surrounding landscape.

The compatibility of the development is assessed at medium for Alternative 3 but the other alternatives will be less appropriate as a result of the larger structures and greater development footprint.

Table 4.10 - Compatibility with the Surrounding Landscape

Alternative	Mitigation	Construction	Operational	Night
No development Alternative	-	-	High	-
Alternative 1	Without mitigation	Low	Low	Low
	With mitigation	Medium-low	Medium-low	High
Alternative 2	Without mitigation	Low	Low	Low
	With mitigation	Medium-low	Medium-low	High
Alternative 3	Without mitigation	Medium-low	Medium-low	Low
	With mitigation	Medium	Medium	High

***Note**: In this category 'low' is considered problematic and 'high' is considered desirable.*

4.2.5 INTENSITY OF VISUAL IMPACT

This assessment refers to the intensity with which the visual nature of the landscape will be altered.

Intensity of Visual Impact	
Rating	*Definition of Rating*
Low	*The sense of place and visual functions of the area are negligibly altered and the perceived character of the area is not qualitatively changed.*
Medium	*The sense of place and visual functions of the area are altered and the perceived visual character of the area is altered but not in an unacceptable way.*
High	*The sense of place and visual functions of the area are severely altered in a way that changes the perceived character of the area.*

4.2.5.1 Wireless Road and Adjacent Houses

The intensity of the visual impact on Wireless Road for alternatives 1 and 2 is assessed at high as a result of the fact that the entire Wireless Road interface will be occupied by development. The inclusion of the crèche and place of worship, (Alternative 1) will also emphasize the change in use of the property.

The tree lines in the caravan park will shield views when travelling from the north towards Kommetjie Road, but the row of houses along the naval radio station boundary will present a high intensity impact to those travelling from the south which will be difficult to mitigate.

The moving of the houses away from the naval boundary and back from the Wireless Road edge, and the lowering of the number of units in favour of creating a green corridor mean that the intensity of the impact for Alternative 3 will be significantly reduced and mitigation will be possible.

The intensity of the visual impact on the views from the houses on the opposite side of Wireless Road and the views towards the site along Pelican Place will also be considerably less for Alternative 3.

Table 4.11 - Intensity of Visual Impact – Wireless Road and Adjacent Houses

Alternative	Distance	Mitigation	Construction	Operational	Night
No development Alternative	±0m and further	-	-	Low	-
Alternative 1		Without mitigation	High	High	High
		With mitigation	Medium	Medium	Low
Alternative 2		Without mitigation	High	High	High
		With mitigation	Medium	Medium	Low
Alternative 3		Without mitigation	Medium-high	Medium	High
		With mitigation	Medium	Medium-low	Low

4.2.5.2 Caravan Park

The intensity of the visual impact on the caravan park is significantly mitigated by the tree lines in the caravan park; however, the green areas created along parts of the boundary in Alternative 3 will result in the visual impact of this alternative having a lower intensity.

Table 4.12 - Intensity of Visual Impact – Caravan Park

Alternative	Distance	Mitigation	Construction	Operational	Night
No development Alternative	±0m and further	-	-	Low	-
Alternative 1		Without mitigation	Medium	Medium	Medium
		With mitigation	Medium	Medium	Low
Alternative 2		Without mitigation	Medium	Medium	Medium
		With mitigation	Medium	Medium	Low
Alternative 3		Without mitigation	Medium-low	Medium-low	Medium
		With mitigation	Low	Low	Low

4.2.5.3 Naval Radio Station

The intensity of the visual impact on the naval site will be relatively high as the edge conditions on two of the site's boundaries will be entirely altered. Alternative 3 will have the lowest intensity as less of the naval site's boundary will be affected.

Table 4.13 - Intensity of Visual Impact – Naval Radio Station

Alternative	Distance	Mitigation	Construction	Operational	Night
No development Alternative	±0m and further	-	-	Low	-
Alternative 1		Without mitigation	High	High	High
		With mitigation	Medium-high	Medium-high	Low
Alternative 2		Without mitigation	High	High	High
		With mitigation	Medium	Medium	Low
Alternative 3		Without mitigation	Medium-high	Medium	High
		With mitigation	Medium-Low	Medium-low	Low

4.2.5.4 Klein Slangkop Development

Alternative 1 will have a high intensity on those who have views over the site from the Klein Slangkop development as a result of the extent of the footprint of the layout.

This will drop to low for Alternative 2 as all the erven adjacent to Klein Slangkop have been removed.

Alternative 3 will have a medium intensity visual impact as some erven within clear sight from Klein Slangkop have been reintroduced, however, the smaller number of erven and the buffer zone between the erven and Klein Slangkop will result in a lower intensity when compared to Alternative 2.

Table 4.14 - Intensity of Visual Impact – Klein Slangkop Development

Alternative	Distance	Mitigation	Construction	Operational	Night
No development Alternative	±40m and further	-	-	Medium-low	-
Alternative 1		Without mitigation	High	High	High
		With mitigation	Medium	Medium	Low
Alternative 2		Without mitigation	High	Medium-low	High
		With mitigation	Medium	Low	Low
Alternative 3		Without mitigation	High	Medium	High
		With mitigation	Medium-high	Medium-low	Low

4.2.5.5 Table Mountain National Park

The intensity of the visual impact on the TMNP will be high for Alternative 1 as a result of the greater footprint of the development as well as the fact that the houses rise higher up the slopes of Protea Ridge. Specifically, the houses at the north-east corner of the site adjacent to Klein Slangkop will be visible over a far greater area of the park.

This problem is removed in Alternative 2 with the houses in the north-eastern corner being omitted, however, the lack of a buffer zone along Protea Ridge, and the fact that the houses on the westward facing portions of Protea Ridge rise further up the slope, make it possible that some of the houses may be seen against the skyline of Protea Ridge when viewed from within the park to the east of the site.

The pulling back of the houses from Protea Ridge and the fact that there will only be three houses situated lower on the ridge in the northeastern corner of the site will result in the intensity of the visual impact for Alternative 3 being significantly reduced.

Table 4.15 - Intensity of Visual Impact – Table Mountain National Park

Alternative	Distance	Mitigation	Construction	Operational	Night
No development Alternative	±0m and further	-	-	Low	-
Alternative 1		Without mitigation	High	Medium-high	High
		With mitigation	Medium	Medium	Low
Alternative 2		Without mitigation	Medium-high	Medium	High
		With mitigation	Medium	Medium-low	Low
Alternative 3		Without mitigation	Medium	Medium-low	Medium
		With mitigation	Medium-low	Low	Low

4.2.5.6 Riverside Drive and Adjacent Houses

The intensity of the visual impact on the houses at the end of Riverside Drive, particularly the 4 houses whose gardens face onto the site, will be high for all three alternatives. (Erven 4566, 4567, 4548 and 4549)

For alternative 3 there will be a slight reduction in the intensity of the visual impact for the most easterly house of the four as partial views over the new entrance road and across the green corridor will be possible.

Table 4.16 - Intensity of Visual Impact – Riverside Drive and Adjacent Houses

Alternative	Distance	Mitigation	Construction	Operational	Night
No development Alternative	±0m and further	-	-	Low	-
Alternative 1		Without mitigation	High	High	High
		With mitigation	High	High	Low
Alternative 2		Without mitigation	High	High	High
		With mitigation	High	High	Low
Alternative 3		Without mitigation	High	High	High
		With mitigation	High	Medium-high	Low

4.2.5.7 Other Areas

The intensity of the visual impact on all other areas will be medium-low for Alternative 1, as a result of the greater development footprint and the potentially larger dwelling units, and low for Alternatives 2 and 3. The views of the development from more elevated viewpoints will place it logically within the context of the surrounding development.

Table 4.17 - Intensity of Visual Impact – Other Areas

Alternative	Distance	Mitigation	Construction	Operational	Night
No development Alternative	±4,8kmm and further	-	-	Low	-
Alternative 1		Without mitigation	Medium-low	Medium-low	Medium
		With mitigation	Medium-low	Medium-low	Low
Alternative 2		Without mitigation	Low	Low	Medium
		With mitigation	Low	Low	Low
Alternative 3		Without mitigation	Low	Low	Medium
		With mitigation	Low	Low	Low

4.2.6 DURATION OF VISUAL IMPACT

This assesses the visual impact in terms of the lifespan of the development and therefore the lifespan of the visual impact.

Duration of Impact	
Rating	*Definition of Rating*
Temporary	*Change will occur but the timing is unknown*
Short-term	*Up to 3 years*
Medium-term	*3 to 15 years*
Long-term	*More than 15 years*
Permanent	*The nature of the impact is such that it will be irreversible over time.*

The duration of visual impacts associated with the construction phase will be short-term.

The duration of visual impacts associated with the operational phase will be long-term.

4.2.7 OVERALL SIGNIFICANCE OF THE VISUAL IMPACT

This rating combines the ratings for the extent of the impact, the duration of the impact, the intensity of the impact and the sensitivity of the viewers to arrive at a rating for the impact as a whole.

It is very difficult to arrive at a single overall significance rating for a project of this type. This rating is based on the ratings in the sections preceding this one, but also on the experience of the independent visual specialist. There will always be a limited number of viewpoints within the viewshed from which the ratings in the table below may be considered too high or too low.

Table 4-18 – Overall Significance of Visual Impact

Alternative	Distance	Mitigation	Construction	Operational	Night
No development Alternative	±0m and further	-	-	Low	-
Alternative 1		Without mitigation	High	High	High
		With mitigation	Medium-high	Medium-high	Low
Alternative 2		Without mitigation	High	High	High
		With mitigation	Medium	Medium	Low
Alternative 3		Without mitigation	Medium	Medium	High
		With mitigation	Medium-low	Medium-low	Low

4.2.8 STATUS OF THE VISUAL IMPACT

This assessment rates the estimated perception of the development by viewers in terms of being positive, neutral, or negative.

The usual reaction to the sight of any new development, especially by those who know an area well, is negative, and that is likely to be the initial reaction to the proposed development by the viewers who live in the area, however, it is believed that, with time, the development will become part of the accepted landscape and achieve a neutral status although it is unlikely that it will be viewed as visually positive by many of them.

The status of the visual impact will always be negative for those who live in the four houses at the end of Riverside Drive

4.2.9 PROBABILITY OF THE IMPACTS OCCURRING

This quantifies the probability of the impact occurring as described in the text.

Probability of Occurrence	
Improbable	*<40% chance of occurring*
Possible	*40%-70% chance of occurring*
Probable	*>70% to 90% chance of occurring*
Definite	*>90% chance of occurring*

It is probable that the visual impacts described in this report will occur.

4.2.10 CONFIDENCE IN THE ASSESSMENT

This states the level of confidence that the visual assessor has in the assessments above. It is possible that, because of such factors as the availability or quality of the input data, the assessor may have more confidence in certain assessments than in others.

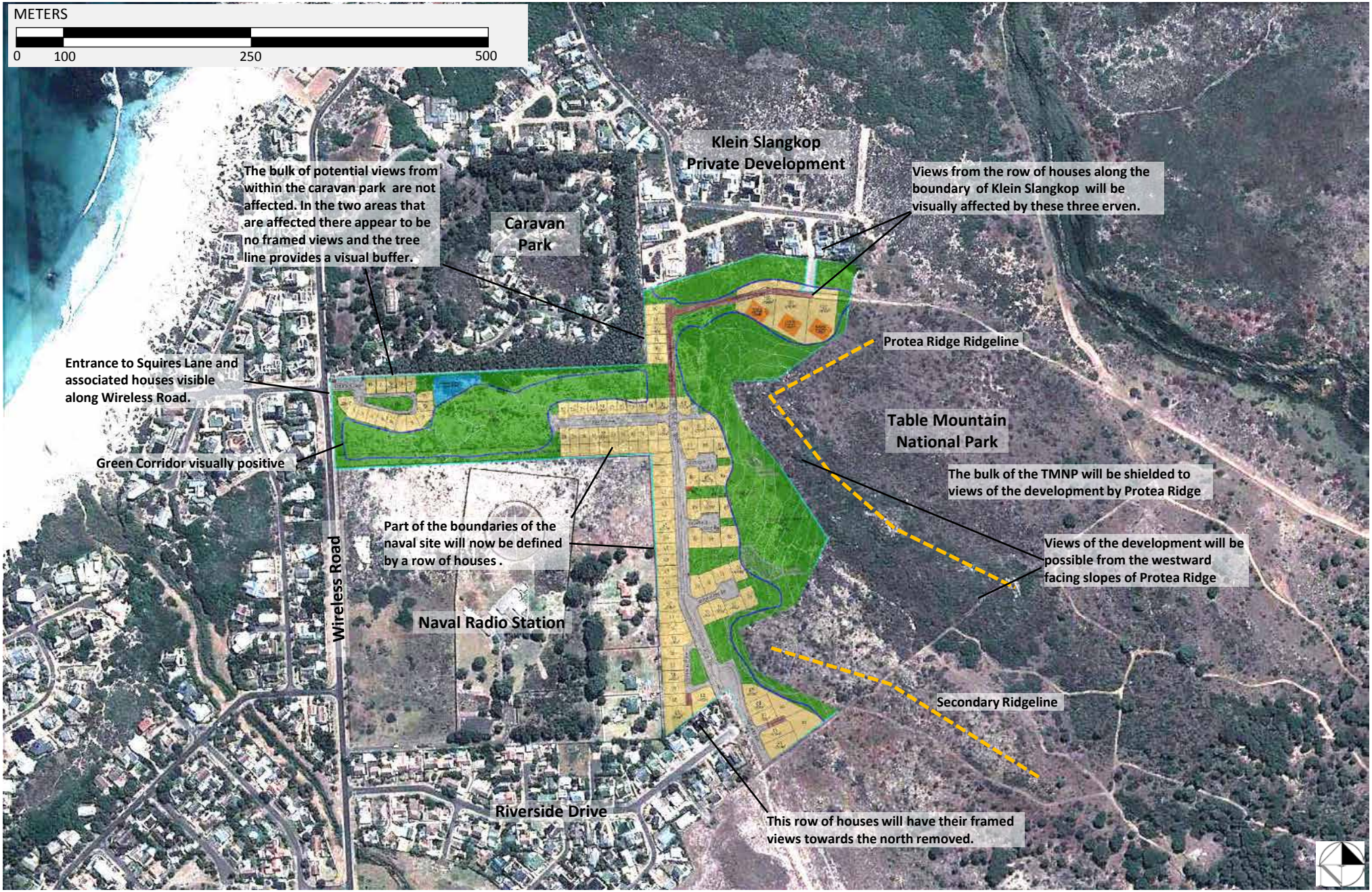
Confidence in the Assessments	
Low	*Data is insufficient or unavailable and further input may change the assessment*
Medium	*Some data is inadequate or unavailable but it is unlikely that the assessment will change significantly.*
High	*The available data is detailed and accurate leading to high confidence in the assessments*

The confidence in the findings of this report is medium-high provided that the eventual development stays within the parameters described above. Any significant changes to the layout, number of structures, or their architectural character could invalidate the findings of this report.

4.2.11 CUMULATIVE IMPACTS

As the site is the last area to the east of Wireless Road that can still be developed, the visual impacts associated with the development will cap the potential changes to the local visual environment for the foreseeable future.

At some stage in the future, however, additional development could occur on the naval radio station and the caravan park site should application be made for their redevelopment. Such development could significantly alter sense of place along Wireless Road and a visual impact assessment must be required as part of the planning.



SUMMARY OF VISUAL IMPACTS

FIGURE 15

RECOMMENDED MITIGATION MEASURES

5.1 Introduction

Most of the mitigation measures mentioned below have already been taken into consideration in the layout and architectural guidelines. The basic principles that are required for visual mitigation are however repeated here so that they can be used as a basis for any potential future changes to the guidelines, should this be necessary.

5.2 Layout

The primary visual mitigation measure will be the implementation of Alternative 3 as opposed to the other development alternatives. Many of the mitigating factors are included in the design of this alternative with the changes to the Wireless Road and the Table Mountain National Park interface being significantly better within the local context.

5.3 Architectural

- A strict set of architectural guidelines which will clearly define the parameters within which detailed design work of the individual structure can take place has been developed and has been included in Addendum 1 below. These design guidelines will ensure an overall cohesiveness without enforcing uniformity. Too much uniformity would have the effect of emphasizing the scale and density of the development, and has the potential to increase the visual impact rather than lower it.
- Every attempt must be made in the architectural design to minimize the apparent bulk of the buildings. They are not to appear monolithic but rather created of smaller units that are visually stimulating and allow for the interplay of light and shade.
- A maximum height limit of 8.0m measured above the midpoint between the highest and lowest points on each erf before any excavation has taken place must be strictly implemented. If possible the second floor spaces must be tucked into the roof so as to lower the roofline.
- No artificial plinths to increase the view are to be allowed. Every attempt must be made to ensure that the development reads as being set into the landscape rather than being imposed upon it.
- The design of all the houses on the slopes of Protea Ridge must be checked to ensure that the houses are not seen from within the Table Mountain National Park floating above the ridgeline. This is particularly true for the three larger erven in the north-eastern corner of the site. For these erven it may not be possible to use the full 8m height restriction
- The roofscape must be made up of smaller areas that do not exceed the average local roof size. Single large areas of roof in the same plane are to be avoided. This can be attained by the use of flat areas between pitched areas and the use of different heights and planes.
- The rear facades of all buildings facing onto the Table Mountain National Park, the naval radio station and the Wireless Road edge must be fully articulated so that they do not present a 'backyard' face to the potential views from these areas.
- The entrance on Wireless Road must be understated and in keeping with the existing ambience of the area. A large gate structure and signage would be inappropriate.

- Specific care must be taken with the house designs on erven 61 and 62 in the development so that privacy is maintained for erven 4566, 4567, 4548 and 4549 at the end of Riverside Drive.
- Satellite dishes are to be placed as visually unobtrusively as possible and must be kept off the roof lines.

5.4 Colours and finishes

- White is not to be used as a main colour on any of the buildings, but it can be used in a limited way as an accent colour.
- In general colours and textures must be chosen for their ability to blend into the surrounding environment with light earth-tones being predominant.
- Variation of colours, textures and finishes should be used to break up the apparent bulk of the buildings
- Roofs are to be medium to dark grey as this is the colour that best blends into the environment in all light conditions and across the seasonal colour changes. No bright or contentious colours are to be allowed.

5.5 Landscaping

- Landscaping will be key in creating and maintaining a visually acceptable environment which is appropriate to the existing visual context.
- Vegetative screening by means of trees and shrubs must be used to break up the perceived scale of the development to views from Wireless Road and The Table Mountain National Park.
- Planting is to be used to soften the impact of the built forms. This includes planted pergolas over patio and balcony areas and the use of vines on walls.
- The planting of adequate screening vegetation along the Wireless Road edge must be mandatory. This must be the responsibility of the developer submitting this application whose responsibility it must remain until it can be transferred to the Home Owner's Association.
- It is suggested that the berm planned along Wireless Road be omitted and that views into the green corridor along the naval radio station edge be allowed and framed by the spacing of the trees in this area. This will maintain the open natural sense of place along the eastern edge of Wireless Road. All visual barriers must seem natural and a berm would add an unnatural visually constricting element along the road without significantly shielding the Squires Lane houses from sight.

5.6 Lighting

- It is essential that light spillage and pollution be kept to an absolute minimum. To this end all external lights must be shielded in such a way that only the area that is meant to be lit is actually lit, and light is not allowed to spill into the surrounding landscape.
- The aim is to have no naked light sources, i.e. the light bulbs themselves, visible from outside the site. Only reflected light should be visible away from the site. This is especially true of any security lighting that may be installed. (Note that lights with translucent shields

are considered to be direct sources of light and should also not be used where they can be seen away from the site.)

- Overhead street lighting is not to be used but low bollard type lighting can be used where necessary for safety purposes.
- Please see Addendum 3 for guidelines concerning the use of lighting.

5.7 Fencing

- To maintain the open nature of the area and the visual links with the surrounding natural terrain, solid fencing, including fencing with masonry pillars should be kept to a minimum.
- Fencing is to be by means of visually permeable weld mesh or equivalent, plain galvanized or painted dark grey or black. Green is not acceptable.
- Vegetative screening of the fencing is to be encouraged where possible and appropriate.
- Razor wire should not be used. Where security measures are necessary, visually unobtrusive solutions must be found.
- It is suggested that the form of fencing along the boundary with erven 4566, 4567, 4548 and 4549 be discussed with the homeowners. A masonry wall, as shown in the fencing plan may not be acceptable as it will have a high visual impact on these erven. Some form of lighter fencing with vegetative screening may be considered more appropriate. The solution must however take the security situation into consideration.
- It is also suggested that the masonry wall at the end of Riverside Drive and in front of erven 53 to 69 in the development be omitted and be replaced by type A fencing with vegetative screening. This will prevent the view up Riverside Drive being terminated by a solid structure and will help in maintaining the visual link with the natural slopes in the background.

5.8 Construction Phase

- The construction phase, both for the infrastructure and for each individual building, is to be of limited duration to be determined in the architectural guidelines and environmental management plan. This is to ensure that any portion of the development does not become a permanent building site.
- There is to be a strict ban on any construction activities outside of the development footprint and construction workers are to be stopped from using the natural areas for any purpose whatsoever.
- All stock piles of buildings materials are to be protected against dispersion by any means into the surrounding terrain. This is especially true of cement and diesel which can have a significant long-term negative effect on visual environment if inappropriately used.
- All builders' rubble is to be removed from the site timeously and dumped at a registered dump site.
- All construction scars are to be rehabilitated immediately after construction is complete. This is especially true for all activities related to the supply of infrastructure, some of which may be outside the development area. (i.e. sewer and water connections, etc.)
- The generation of dust is to be strictly limited.
- Litter is to be strictly controlled.
- The use of fire is to be strictly controlled so that the natural vegetation is protected.

6 CONCLUSION AND RECOMMENDATIONS

The site has a medium visual absorption capacity due to the relatively small area of the proximate viewshed and the screening nature of the local vegetation and existing structures such as the tree lines within the caravan park, the existing houses along the western side of Wireless Road, and the trees along the eastern edge of the naval radio station. This in conjunction with the relatively high compatibility of the development with the surrounding land usage results in a visual impact which should be relatively easily absorbed by the existing visual environment and should not affect the sense of place in an unacceptable way.

The maintenance of a green corridor along Wireless Road, the pulling back of the Squires Lane houses from the Wireless Road Edge, the lower significance of the visual impact on the houses in the Klein Slangkop development, the pulling back of the houses from the Protea Ridge ridgeline and the creation of a green buffer zone along the Table Mountain National Park edge in Alternative 3 will result in this alternative having a lower visual impact than the other two development alternatives.

The overall significance of the visual impact has been assessed, at medium-high for Alternative 1, at medium for alternative 2, and at medium-low for Alternative 3.

The overall significance rating for Alternative 3 is considered acceptable for a development of this nature and extent, and therefore it is recommended that, purely in terms of visual issues, the implementation of Alternative 3 be allowed to proceed provided that the mitigation measures are implemented in full.

ADDENDUM 1

Architectural Guidelines

Protea Ridge

Proposed Architectural Design Guidelines

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1. Introduction:

These guidelines are intended to provide a framework for the design of individual houses in the Protea Ridge Development, Kommetjie. The implementation thereof will facilitate a architectural character in this housing development and will respond positively to the surrounding fabric. The guidelines are an attempt to guide development proposals to facilitate the creation and maintenance of a cohesive, high quality public world responding positively to its context and enhancing the positive qualities of Kommetjie. However, design guidelines cannot replace good architecture and a sensitive, responsible attitude to the broader environment by all who help shape it. High quality design, showing a keen understanding of the character of the place and demonstrating convincingly how the proposals contribute to the specialness of Kommetjie is imperative.

These guidelines are supplementary to the requirements of the local Authority and the National Building Regulations. A Design Review Committee and or the Home Owners association must approve all plans prior to their submission to the local authority. The Home Owners association reserves the right to make changes to this guideline document.

The origins of the planning principles are found in many forms of contemporary South African architecture. The planning principles have been interpreted and developed to provide design solutions appropriate for local climatic conditions and contemporary lifestyles. The use of linear pavilion forms with double pitched roofs defined the form of the primary building elements.

A major concern in this development is with the public environment, as it is in fact the environment that people buy into when investing in the area and what people come to experience when visiting from elsewhere. This includes the impact of buildings and land-uses on that environment. The important activities in the public realm are movement through (by vehicle and on foot) and activities and places of interest encountered along the way.

The goal of designers should therefore extend well beyond the technical requirements of the buildings, roads, or spaces, as well as the private requirements and tastes of individual landowners. Designers and landowners have to understand that their interventions, no matter how small or seemingly insignificant, have a direct impact on the shaping and evolution of the public environment. They are therefore directly responsible for the quality of the public environment and by extension the character of the place as a whole.

2. Architectural Background:

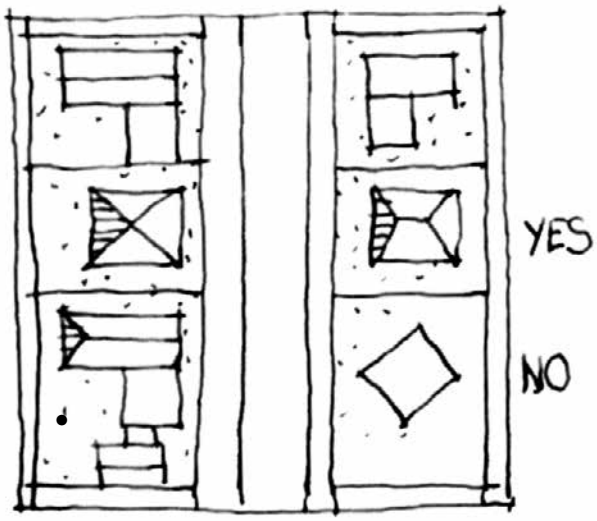
In these guidelines, simple rectangular pavilions linked in a variety of configurations is encouraged. The Urban Design concept calls for pavilion-type freestanding buildings on the Eastern side of the road, with, as far as possible, the natural vegetation extending from the urban

edge between the houses to the road verge. As such continuous boundary walls are not encouraged. Furthermore, a maximum possible distance between buildings is encouraged to allow for views to the nature area beyond between the structures. In this light, narrow, deep buildings are encouraged.

Steep, double pitched roofs ,in line with the prevelent architectural language of the cottages in the surrounding developments, are encouraged. The apropriate formal organisation of structures would be a dominant main building with a steep roof pitch, with extentions to it (if required) taking the form of lean-to structures with shallow roof pitches or even flat roofs.

Two types of window openings are considered to be apropriate - traditional window openings in walls, as well as glass walls, both with the following provisos: The proportions of window openings in walls are critical to the success of the buildings. Vertically oriented openings making references to traditional sliding sash windows are preferable over horizontally orientated or square window. Glass walls should be set back from the facades of the buildongs to read more like openings *between* walls or as link s between two buildong elements than merely big windows.

3. Siting

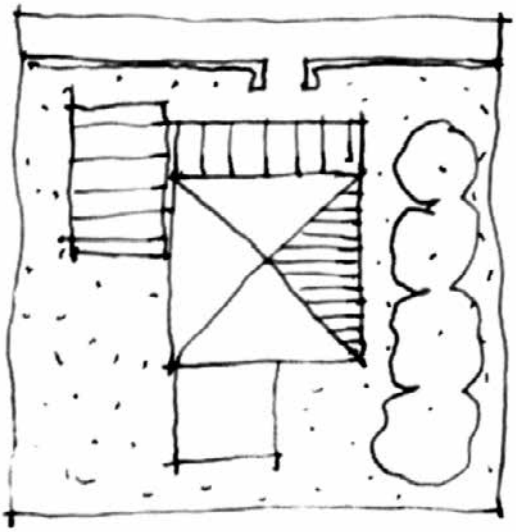


New buildings and additions must be sited parallel to cadastral boundaries and close to the road with private open space behind the houses. While the exact distances are not important, houses should be located in such a way as to relate positively to the surrounding houses and with similar street boundary setbacks. This pattern helps to create and maintain a visually unified area.

4. Form:

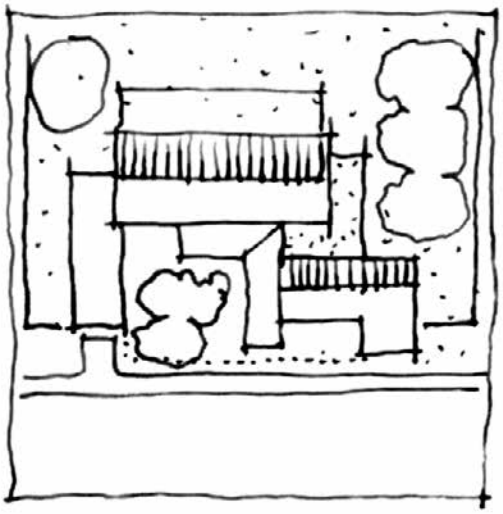
Historical Kommetjie houses were traditionally rectangular or square, with additions and stoeps taking the form of lean-to. The roofs of main buildings were pitched or double pitched, with mono-pitched lean-to's.

New buildings and additions should continue this tradition as far as possible.



Double pitched, with mono-pitched lean-to's.

5. Massing:



Traditionally the houses in this area were relatively small. Larger houses evolved over time through small incremental additions. Additions to buildings, as well as new buildings, should therefore be made up of well-proportioned smaller elements. Monolithic structures are not appropriate.

A good example of a large house made up out of smaller components, creating a positive relationship with its context

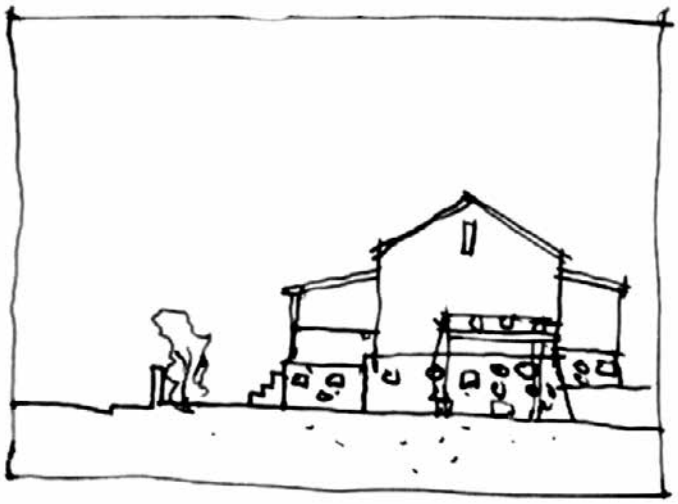
Large, monolithic structure are often imposing and gives the impression of being bigger than they actually are, resulting in structures that are out of scale with the fine-scaled built fabric of its context.

6. Roofs:

Along with walls, roofs are key to creating a unified building pattern. Roofs should be simple, with lean-to's subsidiary to the main roof. Material should as far as possible be corrugated iron or Victorian profile fibre cement sheeting Flat concrete roofs are not appropriate.

Double pitched or flat roofs with gables onto the main public streets and spaces could create imposing and inappropriately high structures with an arguably negative impact on the public environment

7. Walls:



Walls here were traditionally plastered and painted, lime washed or build out of stone. In instances the plinths were build out of stone, while the main structures were plastered and painted.

New walls should be plastered and painted. Street boundary walls should be

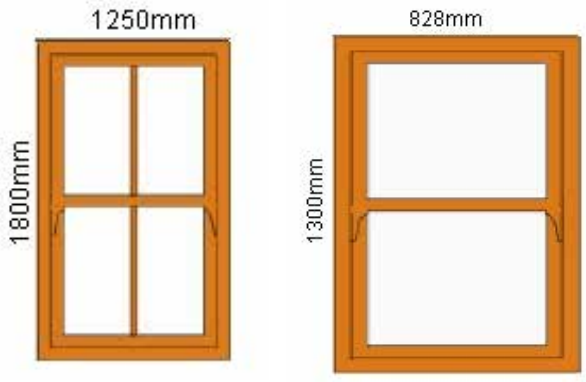
kept low (around 1000 high) to maintain visual surveillance of the street as well s creating a lively edge.

Facebrick should not be used.

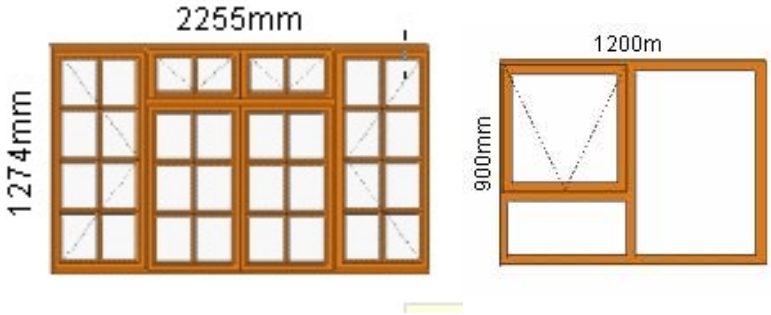
When the street boundary wall is too high, the building has no relationship with the public environment, resulting in a negative, possibly unsafe, street environment.

8. Windows:

Windows in traditional Cape houses were usually vertically proportioned. While horizontal bands of window can be considered in certain circumstances, such as part of a roof structure, windows should as far as possible be vertically proportioned. Were wider windows are required, consider placing two windows next to one another.



Appropriately proportioned windows



Inappropriately proportioned windows

Proposed gate with refuse bin area

Proposed gate/street elevation

Proposed Gated Entrance

Kommetje Estates

Protea Ridge - Squires Close

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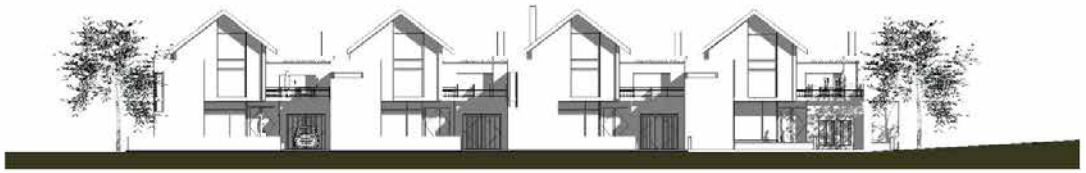

Street Elevation 1:200

Kommetje Estates

Protea Ridge - Squires Close

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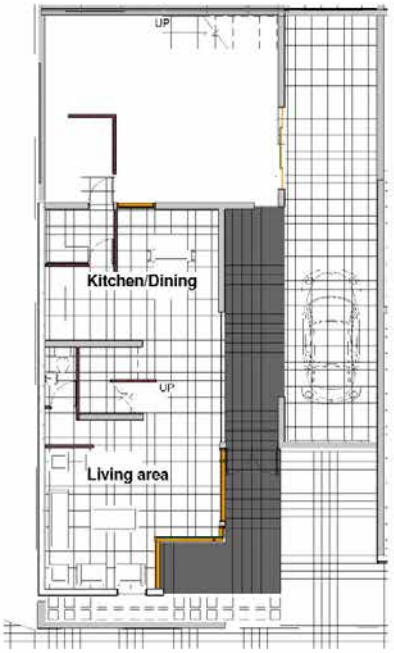

Ground Floor Plan 1:100

First Floor Plan 1:100

Unit Typology 1

Kommetje Estates

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Unit Typology 1

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7945

Ground Floor Plan
1:200

First Floor Plan
1:200

Unit Typology 2

Kommetje Estates

Protea Ridge - Squires Close

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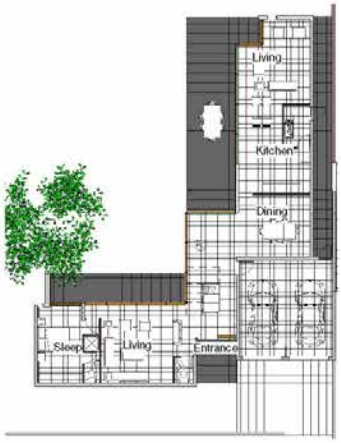
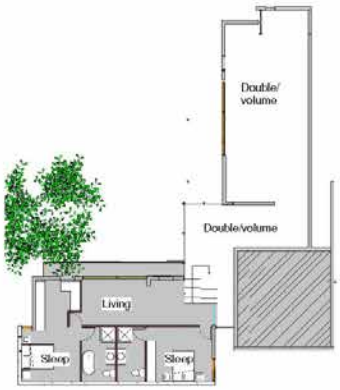


Ground Floor Plan 1:200



First Floor Plan 1:200

Northern Elevation 1:200

Eastern Elevation 1:200

Unit Typology 3

Kommetje Estates

Protea Ridge - Squires Close

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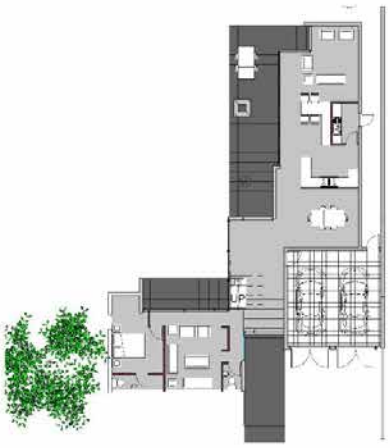

Ground Floor Plan

1:200

Unit Typology 4

Kommetje Estates
Protea Ridge - Squires Close

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Tel: +2721 788 1421
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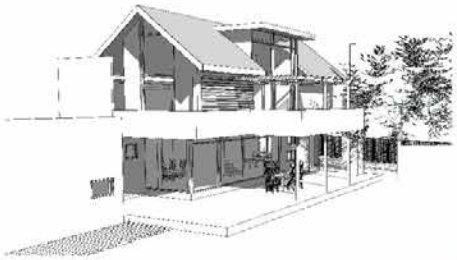

Unit Typology 5

Kommetje Estates
Protea Ridge - Squires Close

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Unit Typology 3

Kommetje Estates
Protea Ridge - Squires Close

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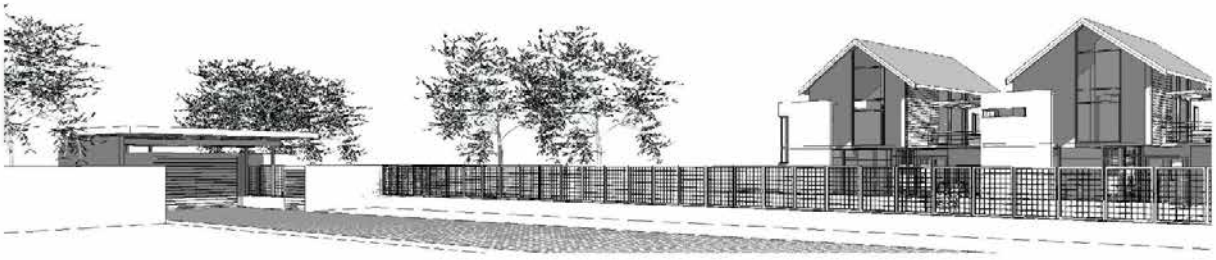

Street Elevation

Proposed Gated Entrance
Kommetje Estates
Protea Ridge - Squires Close

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Proposed gate with refuse bin area

Proposed gate/street elevation

Proposed Gated Entrance

Kommetje Estates
Protea Ridge - Squires Close

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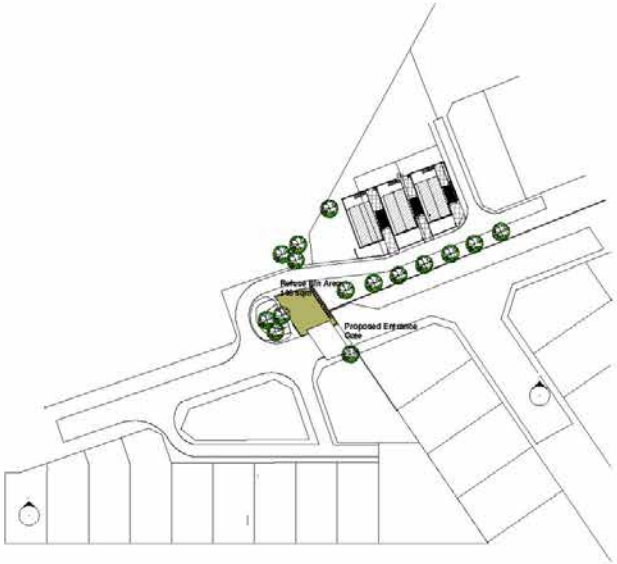


Site Plan 1:500 (Entrance Gate and Waste Storage)

Elevation: Entrance area and waste storage

Street Elevation - Entrance Gate

Kommetje Estates
Protea Ridge - Squires Close

JSAssociates
Architects & Urban Designers

ADDENDUM 2

Landscape Architectural Input

PLANT LIST

STREET / SHADE / SPECIMEN TREES
Acacia karroo
Celtis africana
Kiaedreria capensis
Ekebergia capensis / Specimen
Gymnosporia buxifolia
Hippobromus alternus
Rhus pendulina
Syzygium cordatum
Syzygium gerrardii

MIXED GROUP TREES
Acacia karroo
Brachylaena discolor
Bridelia stellatifolium
Diospyros whyteana var. acuminata
Ekebergia capensis
Halleria lucida
Olea europaea s/sp africana
Rhus pendulina
Searsia lancea
Tarchonanthus camphoratus

SHRUBS & GROUND COVERS
Agapanthus africanus
Aloe ferox
Aloe thraskii
Artemesia parviflora
Buddleja saligna
Carissa macrocarpa
Carissa macrocarpa "green carpet"
Carpobrotus edulis
Chlorophytum saltsiella
Chondropetalum tectorum "Himalia"
Crassula compressens
Dietes bicolor
Dietes grandiflora
Dimorphotheca fruticosa
Elegia capensis
Elegia racemosa
Euclea racemosa
Felicia filifolia
Felicia rotundifolia
Gazania krebsiana
Grewia occidentalis
Helichrysum spp.
Leonotis leonurus
Metalasia muricata
Osteospermum jucundum
Pelargonium betulinum
Pelargonium capitatum
Pelargonium cucullatum
Plectranthus ecklonii
Plectranthus neochilus
Plumbago auriculata
Protasparagus capensis
Putterlia pyramidalis
Rhus crenata
Rhus glauca
Salvia africana lutea
Zantedeschia aethiopica

GRASS
Stenotaphrum secundatum (Buffalo grass)
Cynodon dactylon (Fine Kweek) (Kweek)

WETLAND

TREES
Bridelia stellatifolium
Freylinia lanceolata
Nuxia floribunda
Salix mucronata ssp capensis
Syzygium cordatum

SHRUBS & GROUND COVERS
Anisodontea capensis
Chlorophytum saltsiella
Cliffortia ferruginea
Cyperus textilis
Elegia capensis
Elegia tectorum
Juncus effusus
Juncus kraussii
Knowltonia vesicatoria
Pennisetum agrostis
Prionium serratum
Rhodocoma capensis
Rhus angustifolia
Schoenoplectus scirpoides
Scirpoides nodosus
Thamnochortus spicigerus
Wachendorfia thyrsiflora
Zantedeschia aethiopica

GRASS
Stenotaphrum secundatum (Buffalo grass)
Cynodon dactylon (Fine Kweek) (Kweek)

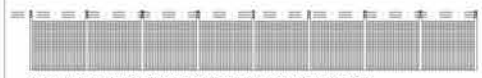
PROTEA RIDGE/SQUIRES CLOSE

LANDSCAPE MASTER PLAN

7889 | 7889.100.1 | 0
APRIL 2012
1:750 @ A0

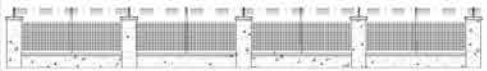
BC
KT
AW

KOMMETJIE ESTATES



STEEL MESH FENCING, ex. 'BEKAERT' OR SIMILAR, UPRIGHTS @ 2.1m ccs
WITH ELECTRIFICATION ON TOP

TYPE A
BOUNDARY STRUCTURE



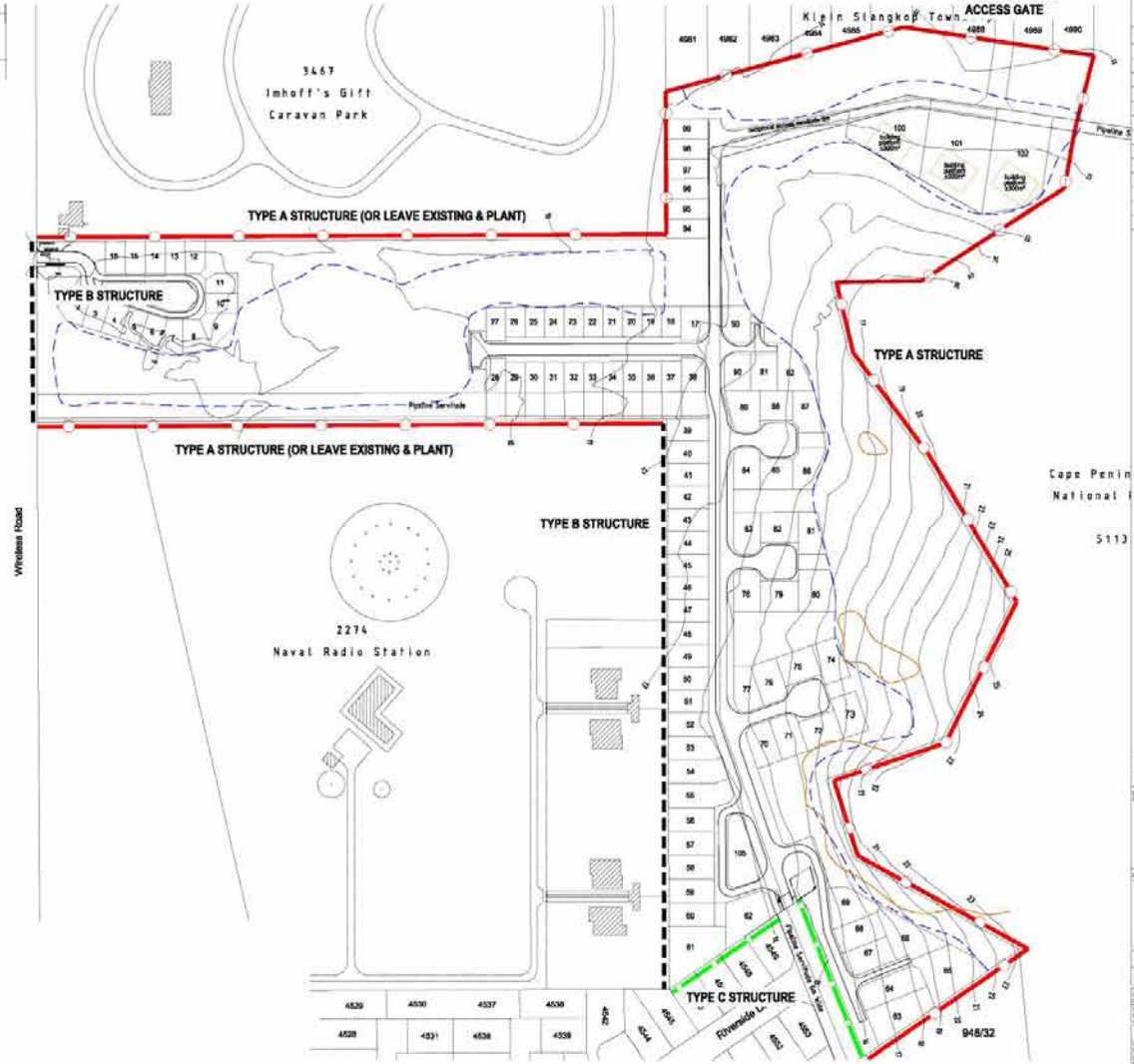
MASONRY PILLARS : STIPPLE PLASTER
MASONRY KICKER WALLS : STIPPLE PLASTER
COPINGS TO WALLS AND PILLAR CAPS : SMOOTH FINISH PAINTED
STEEL MESH FENCING : BLACK FINISH, ex 'BEKAERT' OR SIMILAR

TYPE B
BOUNDARY STRUCTURE

MASONRY PILLARS AND WALLS : STIPPLE PLASTER/PAINT FINISH
PIER CAPS AND WALL COPINGS SMOOTH FINISH

TYPE C
BOUNDARY STRUCTURE

TYPICAL BOUNDARY STRUCTURES, N.T.S.



PLAN SCALE, 1:1250

TER KENNISNAME NOTES

REV B. JUNE 2012: UPDATED LAYOUT

PROTEA RIDGE & SQUIRES CLOSE KOMMETJIE

PROPOSED BOUNDARY STRUCTURES

JOB NO.	DRAWING NO.	REVISION
7889	7889.100.FP	B

DATE JANUARY 2011
SCALE AS SHOWN

DRAWN AT/BC
CHECKED AT
APPROVED BC
AUTHORISED AW

CLIENT

PLANNING PARTNERS
BEPLANNINGSVENNOTE

ADDENDUM 3

Lighting Pamphlet

Good Neighbor OUTDOOR LIGHTING

PRESENTED BY THE NEW ENGLAND LIGHT POLLUTION ADVISORY GROUP (NELPAG) AND SKY PUBLISHING CORP.

What is good lighting?

Good outdoor lights improve visibility, safety, and a sense of security, while minimizing energy use, operating costs, and ugly, dazzling glare.

Why should we be concerned?

Many outdoor lights are poorly designed or improperly aimed. Such lights are costly, wasteful, and distractingly glary. They harm the nighttime environment and neighbors' property values.

Glare Here's the basic rule of thumb: If you can see the bright bulb from a distance, it's a bad light. With a good light, you see lit ground instead of the dazzling bulb. "Glare" is light that beams directly from a bulb into your eye. It hampers the vision of pedestrians, cyclists, and drivers.

Light Trespass Poor outdoor lighting shines onto neighbors' properties and into bedroom windows, reducing privacy, hindering sleep, and giving the area an unattractive, trashy look.

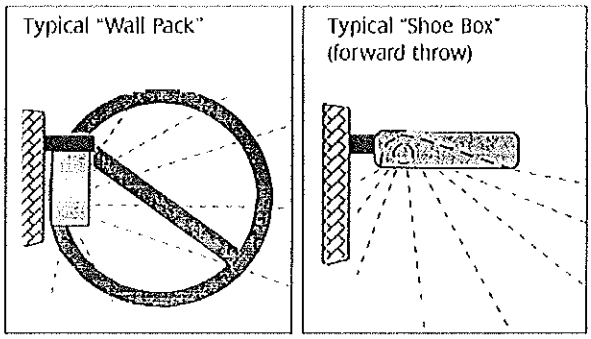
Energy Waste Many outdoor lights waste energy by spilling much of their light where it is not needed, such as up into the sky. This waste results in high operating costs. We waste over a billion dollars a year in the United States needlessly lighting the night sky.

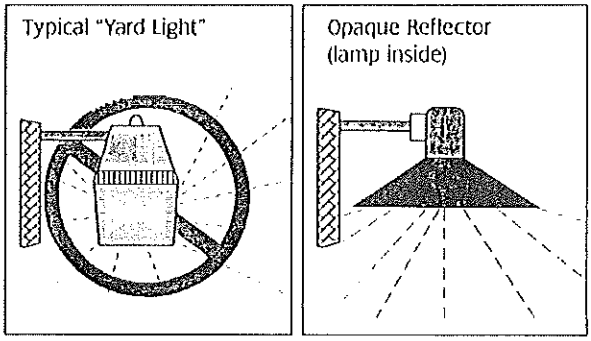
Sky Glow Rays that beam uselessly above the horizon create murky skyglow – the "light pollution" that washes out our view of the stars.

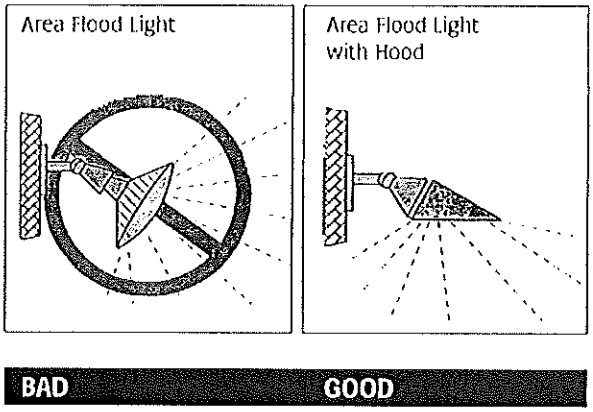
How do I switch to good lighting?

1 Provide only enough light for the task at hand; don't over-light, and don't spill light off your property. Specifying enough light for a job is sometimes hard to do on paper. Remember that a full Moon can make an area quite bright. Some lighting systems illuminate areas 100 times more brightly than the

Some Good and Bad Light Fixtures







full Moon! More importantly, by choosing properly shielded lights, you can meet your needs without bothering neighbors or polluting the sky.

2. Aim lights down. Choose "full-cutoff shielded" fixtures that keep light from going uselessly up or sideways. Such fixtures produce minimum glare. They create a pleasant-looking environment. They increase safety because you see illuminated people, cars, and terrain, not dazzling bulbs.
3. Install fixtures carefully to maximize their effectiveness on the targeted area and minimize their impact elsewhere. Proper aiming of fixtures is crucial. Most are aimed too high. Try to install them at night, when you can see where all the rays actually go.

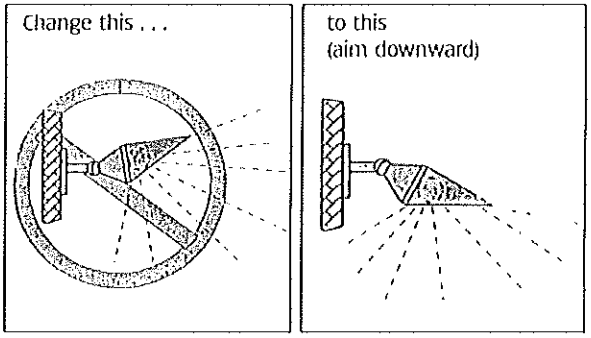
Properly aimed and shielded lights may cost more initially, but they save you far more in the long run. They can illuminate your target with a low-wattage bulb just as brightly as a wasteful light does with a high-wattage bulb.

4. Choose energy-efficient low-pressure sodium (LPS) or high-pressure sodium (HPS) lamps wherever yellowish light will do the job. Use less efficient white lights only where ideal color rendition is important.
5. Where feasible, put lights on timers to turn them off each night after they are no longer needed. Put home security lights on a motion-detector switch, which turns them on only when someone enters the area; this provides a great deterrent effect!

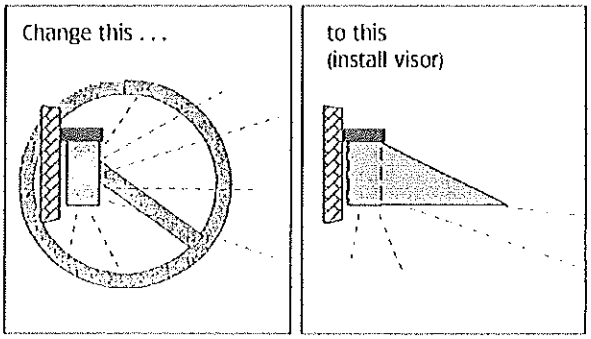
Replace bad lights with good lights.

You'll save energy and money. You'll be a good neighbor. And you'll help preserve our view of the stars.

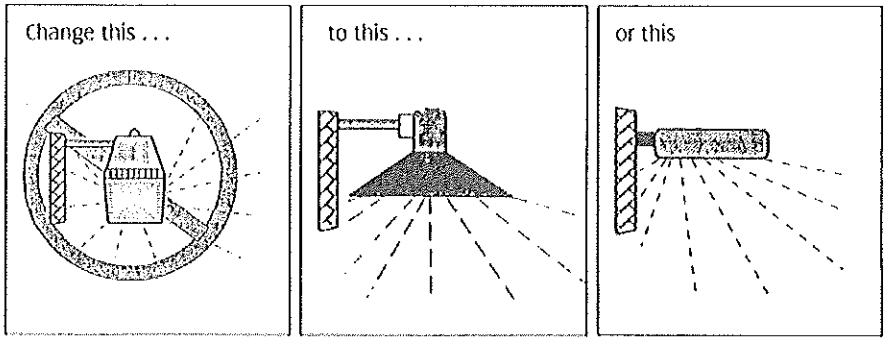
What You Can Do To Modify Existing Fixtures



FLOOD LIGHT



WALL PACK



YARD LIGHT | OPAQUE REFLECTOR | SHOE BOX

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