KHOISAN BAY VIA
VISUAL IMPACT ASSESSMENT

MARCH 2008 REVISED JANUARY 2013 & PHOTOGRAPH 1: SHOWING THE SITE TRAVELLING NORTH THROUGH DE KELDERS

researched and produced by
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Reflection

- "The term **'visual and aesthetic'** is intended to cover the broad range of visual, scenic, cultural, and spiritual aspects of the landscape. However, for the purpose of brevity, the term **'visual'** is used in the text' (p 1). **Thus it includes aspects of "the area's sense of place, … natural and cultural landscapes, … the identification of all scenic resources, protected areas and sites of special interest, together with their relative importance in the region, … the need to include both *quantitative* criteria, such as 'visibility', and *qualitative* criteria, such as landscape or townscape 'character'** (pp 1-2)."

  This report (p 26) from the *PGWC Guideline for Involving Visual and Aesthetic Specialists in EIA Processes (November 2005)*

- **"Visual impact. The value of the environment is often under-estimated from a visual perspective.** It is the visual quality of the environment that, to a large degree, generates the attraction for the tourism industry and draws people to certain areas as desired locations for living a lifestyle outside of the large cities and densely developed urban areas. **The visual resources of rural areas, such as scenic landscapes and the cultural streetscapes and farmsteads,** and environments such as the Garden Route [Swartland], constitute major tourist attractions. …

  Each area has its own unique visual character and atmosphere, which plays an important role in the quality of any tourist experience. The diversity of the landscapes makes it essential to consider all development **and more particularly the expansion of urban areas, an issue that requires special consideration.** The intention is to manage urban development in such a way that no development would detract from the visual quality of the environment **and that all development conform to a characteristic style and urban form that suits the character of the area."**

  This report (p 28) from the *PGWC Urban Edge Guideline (December 2005)*

ᘓ Beauty is in the eye of the beholder.
What the eye doesn't see, the heart doesn't grieve over.

English Proverbs

ᘓ Do not seek revenge or bear a grudge against one of your people,
but love your neighbour as yourself. I am the LORD.

Mosaic Law, Leviticus 19.18, The Holy Bible (NIV)

NWA

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1. Executive Summary

1.1 Recommendation

Khoisan Bay, *De Kelders is a much-reduced extension of this coastal resort town within the urban edge in this latest revised proposal. A large buffer generously protects the southern edge of the Walker Bay Nature Reserve and the R43 scenic route. Complex topography highly limits visibility of the site to often very local views. The scheme does not impact on the reserve being screened by a ridgeline from it. Various recommendations are made to improve the aesthetic qualities of the scheme that should integrate in detail the rich natural landscape of the site.* ***The proposed development has a moderate visual impact, generally moderate visibility, and medium significance. It can be substantially improved by adopting the visual and aesthetic recommendations.***

1.2 Project Description (see page 12)

1. *Khoisan Bay* is a significant extension to De Kelders within the approved urban edge. This updated scheme from the previous designs of 2007 has been wholly revised and is much reduced.
2. It now covers about one third of the site leaving a substantial Public Open Space buffer (Portion 3) against the Walker Bay Nature Reserve on the site's northern dune field. Now subdivided into 3 portions, the central Portion 2 has also been left undeveloped as Private Open Space as required by DEA&DP substantially limiting the planned extension of De Kelders to Portion 1.
3. This southern portion has been zoned into four main development nodes. The scheme allows for a variety of residential types to meet differing income groups and has a 60m buffer zone along the R43. All vegetation types will be conserved in the layout and Red Data species.

1.3 Policy, Legal and Administrative Requirements (see page 23)

1. There is a long history of environmental protection and management in South Africa rooted in EIA and, later, IEM, which has given rise to the current requirement for VIA. The latest

document (November 2005) prepared by the Provincial Government of the Western Cape defines the scope and preparation of VIAs and has now been approved and adopted.

2. Provision in the various Acts is made for special areas and landscapes that has an important effect on the ranking of visual impact in these areas. VIA is integral to assessing heritage impact in scenic and historic areas like De Kelders. Heritage character is to be created and conserved by attention to both planned form and architectural style as shown in the various municipal SDFs.

1.4 Visual Environment Description (see page 36)

1. *Khoisan Bay,* De Kelders lies on the west side of the coastal R43 just north of Gansbaai in a beautiful rural area of mountains, miles of strandveld and fynbos, and the most stunning rocky coastline.
2. The area is rich in scenic and natural beauty, and there is an ancient history of shoreline usage by Khoisan. Caves, cliffs, whales and much more are the draw card in this fascinating environment. Truly, it is an incredibly beautiful stretch of coastline and a wonderful place to have a holiday or retirement home.
3. De Kelders has been built up quite conventionally with little in the suburbs to show its natural origins, however, the coastal reserve is still pristine and well conceived. The back edge of the existing suburb with its marked fynbos edge is not always visible within the town except from its western edge and northern portion, and is more visible from the R43 when driving northwards than southwards. Views of the site are overall fragmented by topography.

1.5 Visual Impacts and Mitigation Recommendations (see page 63)

1. The analysis reveals that the project's visibility is mainly visible well within the key 1km range, particularly from the south. A roadside landform along the R43 generally obscures views into the site. The site is split in two by a ridge that screens views from the reserve.
2. SUMMARY ASSESSMENT—VISUAL IMPACT: The proposed development will have moderate impact on the landscape causing noticeable change to the visual environment.
3. SUMMARY ASSESSMENT—VISIBILITY: The development has mixed visual exposure, moderate to high visual absorption capacity, medium landscape compatibility, and is highly to moderately visible.
4. SUMMARY ASSESSMENT—NATURE OF IMPACT: The development's visual impact has local extent, permanent duration, medium intensity, definite probability, and medium significance.
5. Various recommendations are made to guide the development further.

2. Project Description

2.1 Summary

Khoisan Bay *is a significant extension to De Kelders within the approved urban edge. This updated scheme from the previous designs of 2007 has been wholly revised and is much reduced. It now covers about one third of the site leaving a substantial Public Open Space buffer (Portion 3) against the Walker Bay Nature Reserve on the site's northern dune field. Now subdivided into 3 portions, the central Portion 2 has also been left undeveloped as Private Open Space as required by DEA&DP substantially limiting the planned extension of De Kelders to Portion 1. This southern portion has been zoned into four main development nodes. The scheme allows for a variety of residential types to meet differing income groups and has a 60m buffer zone along the R43. All vegetation types will be conserved in the layout and Red Data species.*

2.2 Introduction

Combined with Section 3, this chapter presents the relevant project data required to develop a Visual Impact Assessment (VIA) of the development for Environmental Impact Assessment (EIA) purposes, in particular, Heritage Impact Assessment (HIA). This chapter reviews the relevant basic aspects of the proposed development and includes plans and diagrams as appropriate to this end.

2.2.1 Background

New World Associates (NWA) was initially commissioned by the project Engineers, EFG Engineers (Pty) Ltd, to prepare a Visual Impact Assessment in 2007 when the VIA was required as part of the EIA then under the direction of Johan Neethling Environmental Services. A first draft was submitted in March 2008. Town and regional planners Plan Active Inc, acting on behalf of Khoisan Bay Development Company (Pty) Ltd, subsequently requested NWA in December 2012 to revise the report as the scheme had been substantially revised.

Developments of this scale and nature in scenic and historic environments, within or without the Urban Edge, require Visual Assessments in accordance with the PGWC Guideline for Specialist Visual Studies (pp 11-12).

2.2.2 Accreditation

Bruce Eitzen ML BSc PrLArch MILASA APHP, a registered Landscape Architect and Environmental Planner with the South African Council of Landscape Architecture Professionals (SACLAP), and Specialist Practitioner in Visual and Landscape Heritage conducted the assessment. He has twenty years experience across the board of Landscape Architecture and Environmental Planning and has practised in South Africa, Central Africa and East Africa. He holds a BSc (Botany) from the University of Cape Town and a Masters in Landscape Architecture from the University of Pretoria. He served for many years as the Chairman (and a founder) of the Landscape Association of Zimbabwe, and served on the NEC of the Institute of Landscape Architects of South Africa being Chair of the ILASA Cape. He has also served on the Association of Professional Heritage Practitioners Executive Committee.

2.2.3 Statement of Independence

New World Associates is an independent consulting firm practising in the abovementioned fields. None of its members have any financial interest in the proposed development nor are involved in any other projects being undertaken by the developer.

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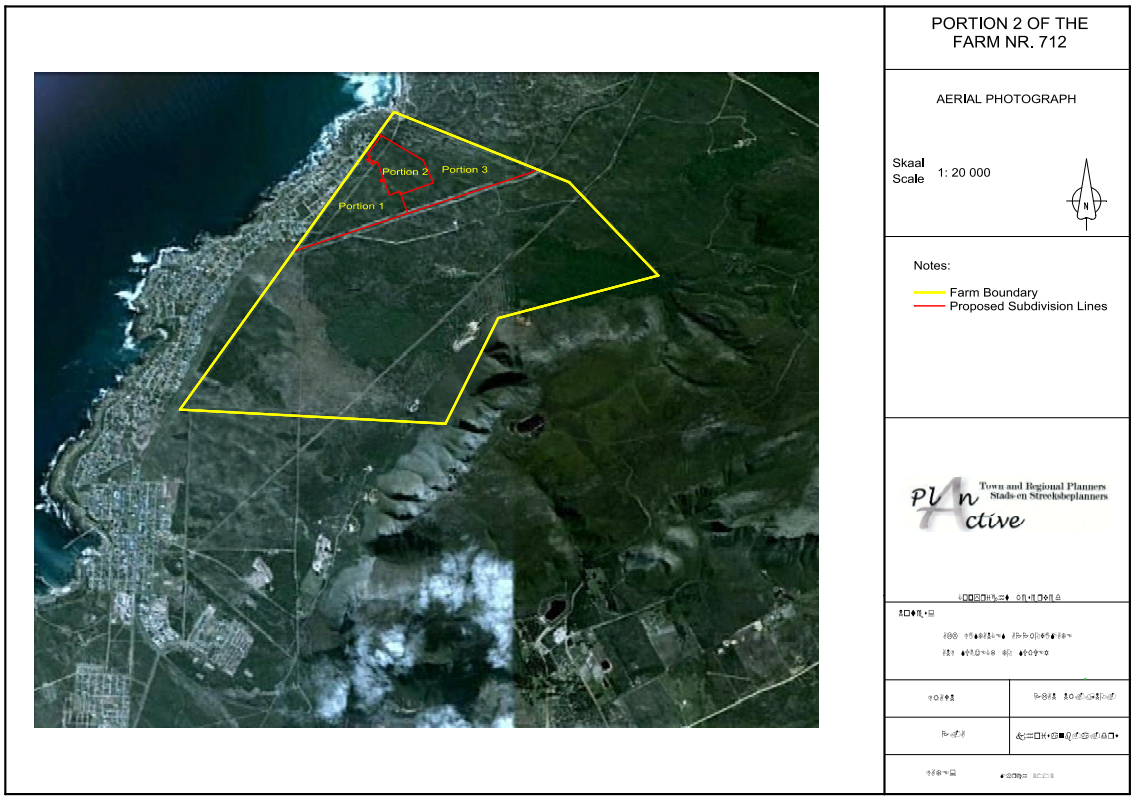
Figure 2-1: Regional Context.
Portion of a 1:500,000 map of South Africa (2000 Edition) showing the site's location (nts, about 1:1,000,000).

2.2.4 Reporting Requirements

This report is generally based on South African environmental management procedures and, more specifically, on the latest provincial guideline was endorsed by the Provincial Government of the

Western Cape (PGWC) on 3 November 2005: *Guideline for Involving Visual and Aesthetic Specialists in EIA Processes* (Edition 1, November 2005, PGWC).



Source: Reproduced courtesy of Plan Active.

Figure 2-2: Boundary Diagram on Satellite Photograph.

2.2.5 Location

The site lies next to the R43 coastal road on its western side as you enter the urban area of De Kelders from Stanford (Figure 2-1). It occurs in a scenic coastal area that is presently undeveloped and covered with natural strandveld (Figure 2-2).

2.3 Development Proposal

2.3.1 Town Planning Application

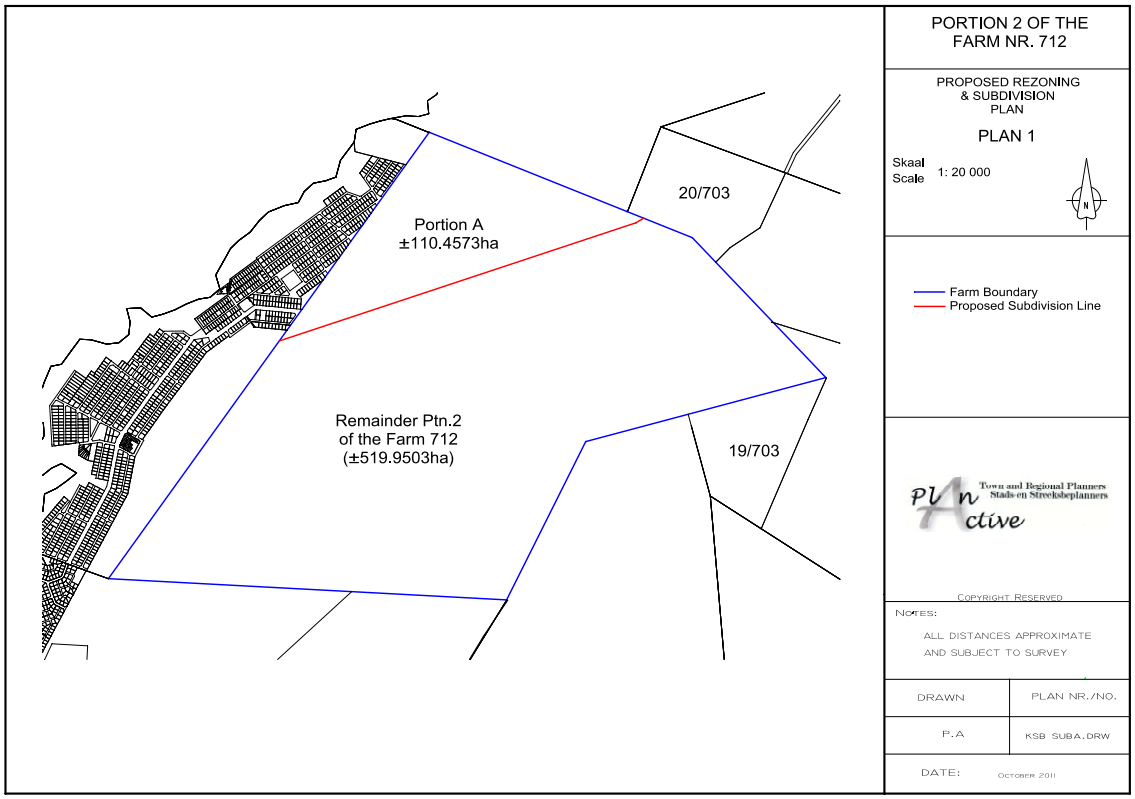
The following extract from Plan Active's Motivation Report[1] (p 7) outline the current application's background and overall objectives:

> It is the intention of the owners and developers of Portion 2 (Lang Bosch) of the farm Strandfontein No. 712 to develop the subject property in a sustainable, aesthetical manner to contribute to and compliment the urban fabric of the existing De Kelders and greater Gansbaai area. The growing Overberg region, the extension of the De Kelders township (in line with the future planning policies of the region) as well as the proposed nuclear power station proposed for Bantamsklip contribute to the need for the extension of De Kelders and in turn the greater Gansbaai area. Our

[1] Plan Active Town and Regional Planners (Sept 2011 updated May 2012). *Portion 2 of the Farm Strandfontein No 712: Motivation Report.*

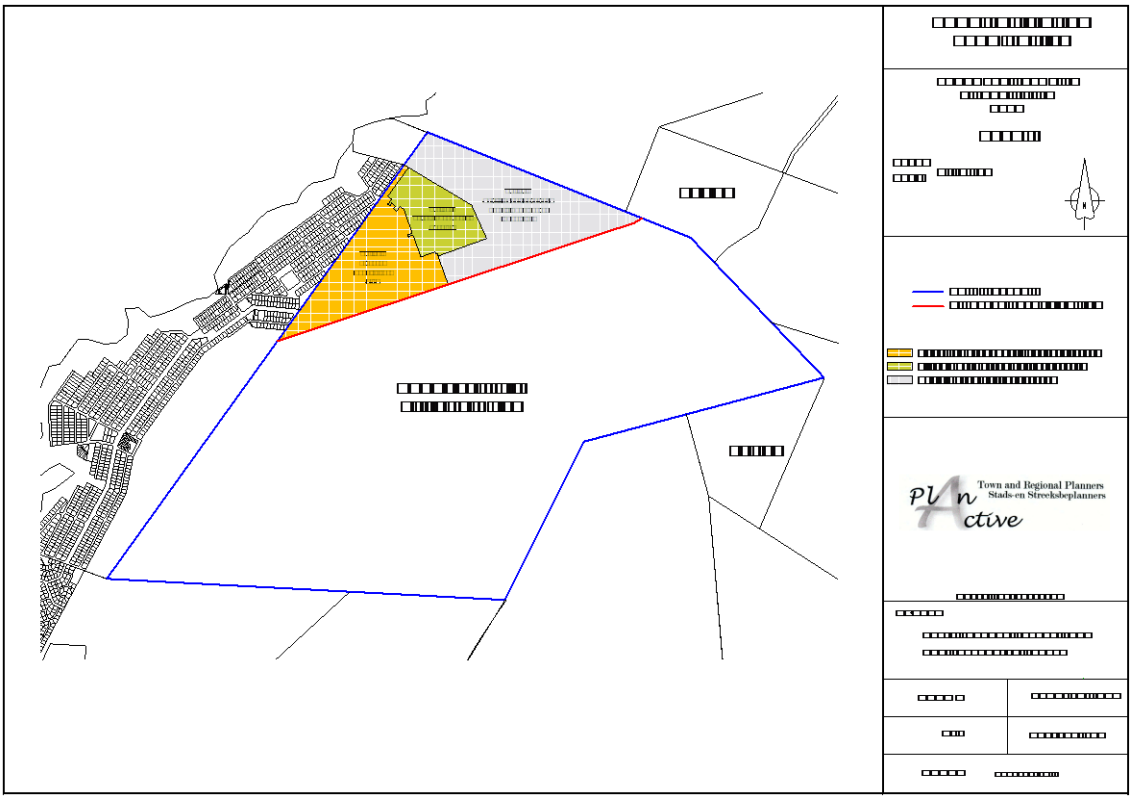
clients also recognise the need for an inclusionary development that provides for residential units that meets the need of various income levels in the greater Gansbaai area.

In 2005 an application was submitted for the subdivision and rezoning of Portion 2 (Lang Bosch) of the farm Strandfontein No. 712 to develop ±110,23ha of the subject property. Approximately 1500 to 1850 units with associated infrastructure such as roads and services were proposed. The development was to serve as an extension of the existing De Kelders area, therefore the land uses proposed was mainly residential, but commercial, institutional and open space components was also provided for in the application. It was decided to amend the proposed development application for Portion 2 (Lang Bosch) of the farm Strandfontein No. 712 after discussions with the Overstrand Municipality and the Department of Environmental Affairs & Development Planning. The outcome of the meetings and correspondence led to the downscaling of the developable area (from 110,23ha to ±36,6105ha) as well as the amount of the proposed residential units (from 1850 units to 472 units). As a result an amended application is now submitted for the proposed Khoisan Bay development.



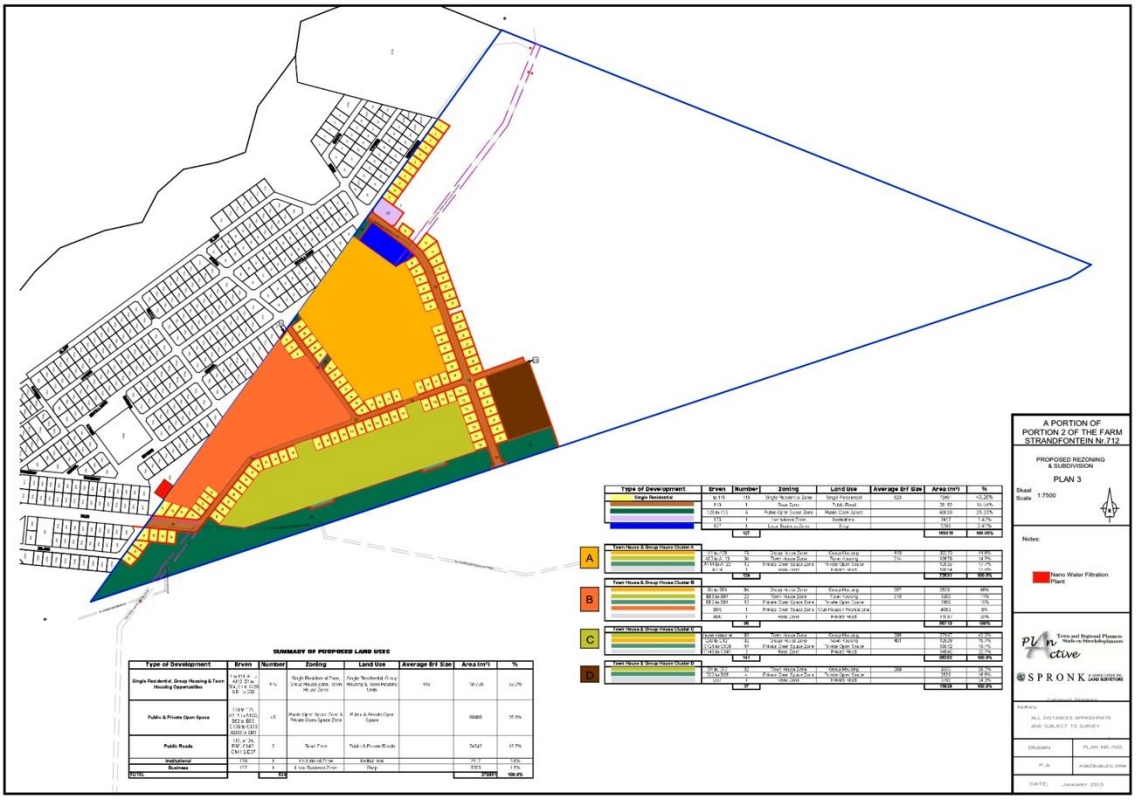
Source: Reproduced courtesy of Plan Active.

Figure 2-3: Proposed Rezoning and Subdivision Plan 1.



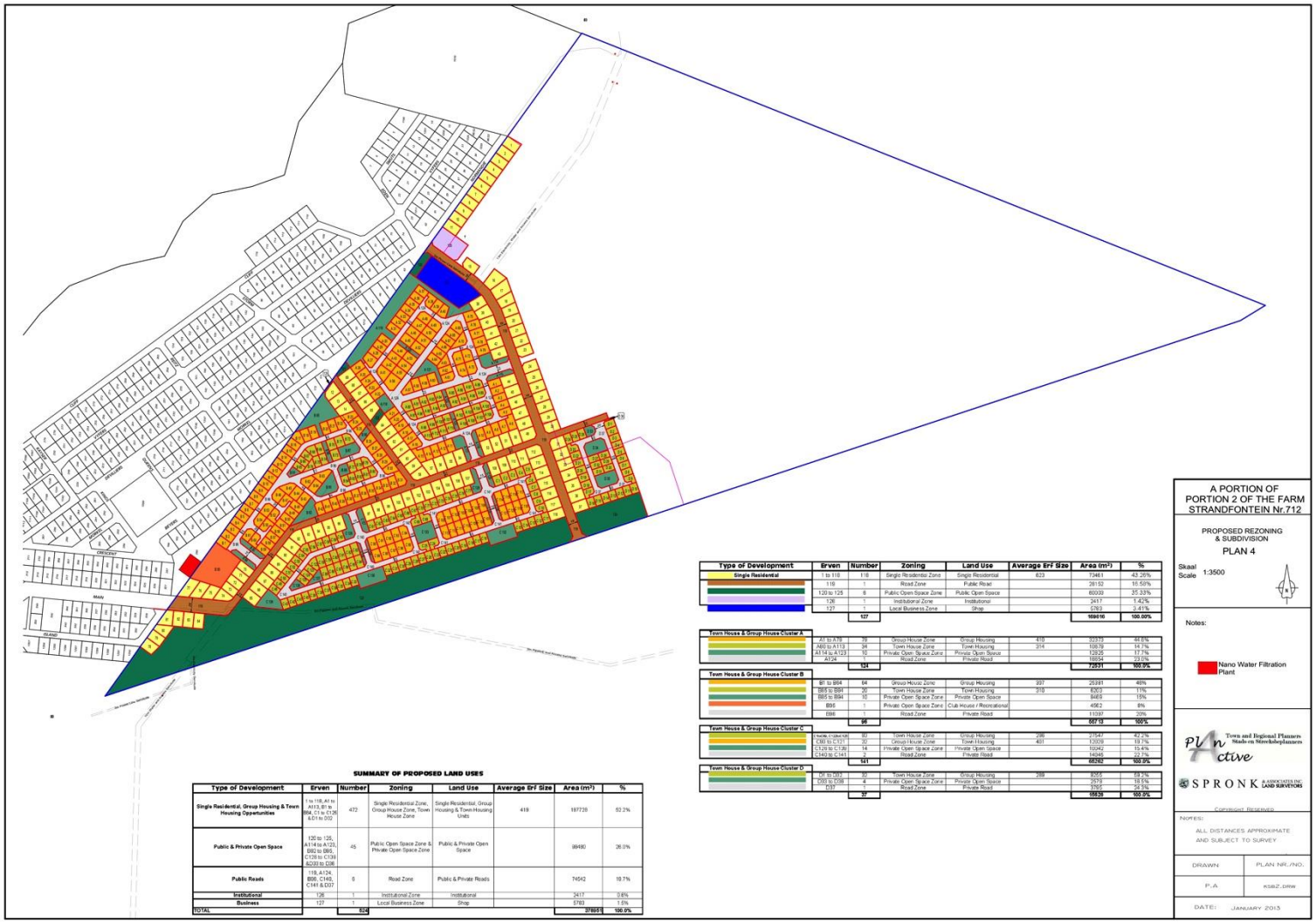
Source: Reproduced courtesy of Plan Active.

Figure 2-4: Proposed Rezoning and Subdivision Plan 2.



Source: Reproduced courtesy of Plan Active.

Figure 2-5: Proposed Rezoning and Subdivision Plan 3.



Type of Development	Erven	Number	Zoning	Land Use	Average Erf Size	Area (m²)	%
Single Residential, Group Housing & Town Housing Opportunities	1 to 116, A1 to A113, B1 to B94, C1 to C139 & D1 to D72	472	Single Residential Zone, Group House Zone, Town House Zone	Single Residential, Group Housing & Town Housing Units	419	197728	52.2%
Public & Private Open Space	120 to 125, A114 to A123, B92 to B95, C126 to C139 & D39 to D36	45	Public Open Space Zone & Private Open Space Zone	Public & Private Open Space		99480	26.0%
Public Roads	118, A124, B96, C140, C141 & D37	6	Road Zone	Public & Private Roads		74542	19.7%
Institutional	126	1	Institutional Zone	Institutional		2417	0.6%
Business	127	1	Local Business Zone	Shop		5783	1.5%
TOTAL		524				379951	100.0%

Type of Development	Erven	Number	Zoning	Land Use	Average Erf Size	Area (m²)	%
Single Residential	1 to 116	116	Single Residential Zone	Single Residential	623	73461	43.26%
	116	1	Road Zone	Public Road		28152	16.58%
	120 to 125	6	Public Open Space Zone	Public Open Space		60030	35.33%
	126	1	Institutional Zone	Institutional		2417	1.42%
	127	1	Local Business Zone	Shop		6283	3.41%
		127				169610	100.00%
Town House & Group House Cluster A	A1 to A78	78	Group House Zone	Group Housing	410	32379	44.6%
	A80 to A113	34	Town House Zone	Town Housing	314	10679	14.7%
	A114 to A123	10	Private Open Space Zone	Private Open Space		12825	17.7%
	A124	1	Road Zone	Private Road		16954	23.0%
		124				72931	100.0%
Town House & Group House Cluster B	B1 to B64	64	Group House Zone	Group Housing	397	25391	46%
	B65 to B84	20	Town House Zone	Town Housing	310	6203	11%
	B85 to B94	10	Private Open Space Zone	Private Open Space		8469	15%
	B96	1	Private Open Space Zone	Club House / Recreational		4962	8%
	D96	1	Road Zone	Private Road		11197	20%
		96				56172	100%
Town House & Group House Cluster C	C1 to C80	80	Town House Zone	Group Housing	299	23547	42.2%
	C80 to C121	32	Group House Zone	Town Housing	401	12079	19.7%
	C126 to C139	14	Private Open Space Zone	Private Open Space		10242	19.4%
	C140 to C141	1	Road Zone	Private Road		14046	22.7%
		141				59762	100.0%
Town House & Group House Cluster D	D1 to D33	33	Town House Zone	Group Housing	289	9055	69.3%
	D33 to D36	4	Private Open Space Zone	Private Open Space		2573	19.5%
	D37	1	Road Zone	Private Road		3795	54.3%
		37				15628	100.0%

Source: Reproduced courtesy of Plan Active.

Figure 2-6: Proposed Rezoning and Subdivision Plan 4.

The zoning and subdivision proposals are shown in the above plans. Plan 1 (see Figure 2-3) shows the subdivision to Portion A and a remnant of Portion 2 (Land Bosch) of the farm Strandfontein 712. Plan 2 (see Figure 2-4) shows the subdivision of the proposed Portion A into 3 areas, Portions 1, 2 and 3. Plan 3 (see Figure 2-5) shows the proposed rezoning of these 3 new Portions and Plan 4 (see Figure 2-6) shows the detailed rezoning of Portion 3. The new subdivision and rezoning shows a highly reduced development plan from the original application with large areas of public and private open space acting as buffers between the proposed new residential expansion and the Walker Bay Nature Reserve. There is also a mix of residential types into four clusters allowing for a variety of income groups access to the extension. Details of Portion 1 and the four clusters are as follows:[2]

> It is proposed to rezone Portion 1, a portion of Portion 2 (Lang Bosch) of the farm Strandfontein No. 712, from Agriculture Zone I to Subdivisional Area to create the following:
>
> - 118 Single Residential Zone erven;
> - 1 Road Zone erf;
> - 6 Public Open Space Zone erven;
> - 1 Institutional Zone erf;
> - 1 Local Business Zone erf;
> - 4 Group / Town Housing clusters (detail description of each cluster below).
>
> *Group / town house Development Cluster A*
>
> This cluster is the largest portion for group / town housing development. It is proposed to create the following portions and zonings:
>
> - 79 Group House Zone erven;
> - 34 Town House Zone erven;
> - 10 Private Open Space Zone erven;
> - 1 Road Zone portion (private road).
>
> *Group / town house Development Cluster B*
>
> It is proposed to create the following portions and zonings:
>
> - 64 Group House Zone erven;
> - 20 Town House Zone erven;
> - 10 Private Open Space Zone erven;

[2] Plan Active: 3.5 Proposal (pp 8-15).

- 1 Road Zone portion (private road).

Group / town house Development Cluster C

It is proposed to create the following portions and zonings:

- 93 Town House Zone erven;
- 32 Group House Zone erven;
- 14 Private Open Space Zone erven;
- 2 Road Zone portions (private road).

Group / town house Development Cluster D

This cluster is the smallest portion for group / town housing development. It is proposed to create the following portions and zonings:

- 32 Town House Zone erven;
- 4 Private Open Space Zone erven;
- 1 Road Zone portion (private road).

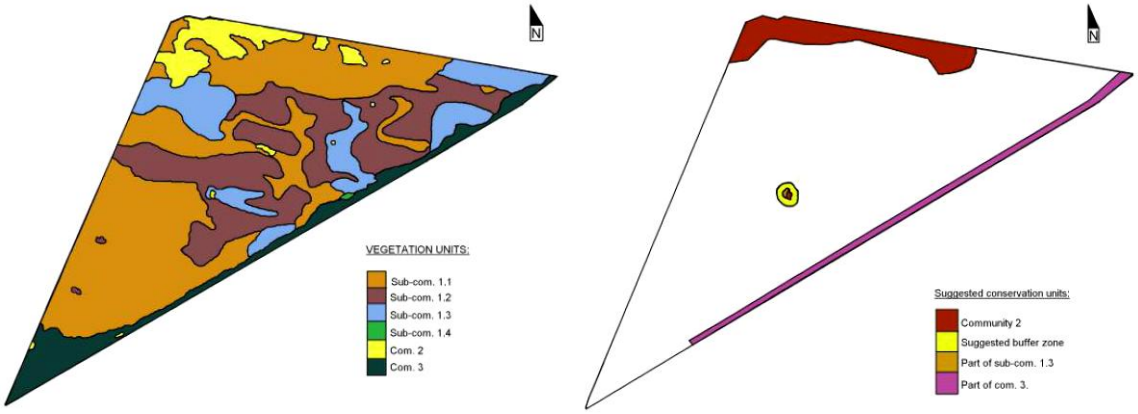
2.3.2 Architectural Guidelines

Plan Active note the following about Architectural Guidelines for the new scheme (ibid, p 26):

> 3.6. ARCHITECTURAL GUIDELINES
>
> No architectural guidelines for the proposed development of Portion 1, a portion of Portion 2 of the farm Strandfontein No. 712, exist. Detailed planning for each cluster will be addressed with the submission of site development plans for each separate cluster development. The single residential erven as well as the group / town housing clusters will be developed in accordance with the land use parameters set out in the Gansbaai Scheme Regulations. We suggest that a public participation process follow the site development plan submissions for the group / town house developments to ensure transparent processes and developments.

This is unlike the earlier alternatives that presented both architectural guidelines and some models of the proposed housing types.

2.3.3 Landscape and Environment



Source: Courtesy of Marzie Ecological Services.

Figure 2-7: Vegetation Map and Conservation Units.

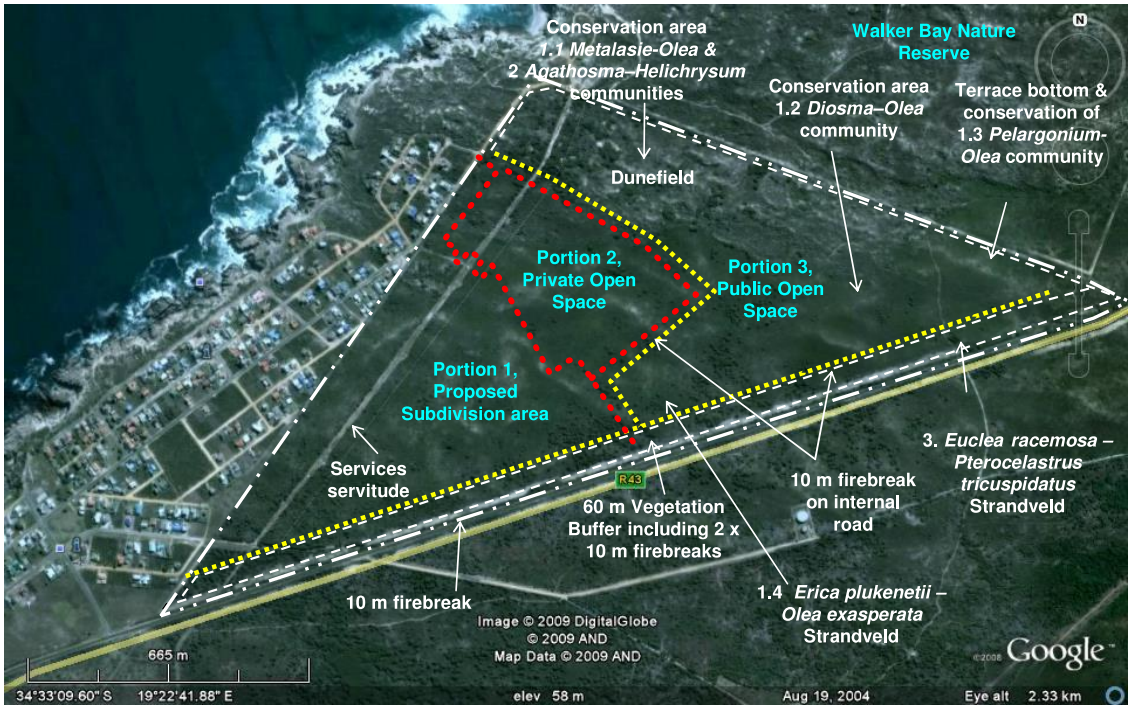
MM Zietsman of Marzie Ecological Services prepared a Botanical Assessment in March 2006. The vegetation type is coastal fynbos with patches of (1) Overberg Dune Strandveld occurring in relatively large connected patches and (2) Agulhas Limestone vegetation. The main invader on disturbed portions is *Acacia Cyclops* (*rooikrans*). He produced a vegetation map (Figure 2-7) showing 3 plant communities, one divided into four sub-communities. Communities 2 and 3 were considered conservation worthy including island types 3 and 1.3). Three red data species were found, namely, *Agathosma geniculata, Helichrysum pulchellum* and *Passerina ericoides,* and more are likely.

Subsequently, Dr Charles Boucher prepared a report in 2009 that was updated in May 2012 to cover the current preferred alternative.[3] His summary (p 4) notes the following:

> Three communities with four sub-communities are identified on site in the Zietsman report. These are upheld. The 83 species (9 exotic aliens, 4 Red Data Book species) reported for the site is low for this diverse area. The vegetation is primarily Overberg Dune Strandveld and transitional vegetation developing toward Agulhas Sand Fynbos and Agulhas Limestone Fynbos. Three development alternatives and a "No Go" Option are evaluated. In Development Alternative 3, the preferred alternative, a natural buffer conservation area between the proposed development and the Walker Bay Nature Reserve, which includes a consolidated dune field, and another along the R43 road, are proposed. A large Public Open Space (54 ha) and a Private Open Space (18 ha), which together occupy 68% of this portion of the farm, are proposed in the preferred 3rd Alternative. A buffer with firebreak of 5.8446 ha parallels the development along the R43. Alternative 3 would incorporate examples of all the vegetation types present on the property in a consolidated area. The location of firebreaks are suggested but must be finalised in agreement with Walker Bay Nature Reserve management, who need to be involved in their maintenance and in the management of the conservation areas in

[3] Dr C Boucher (November 2009, Rev May 2012). *Botanical Issues Relating to the Proposed Khoisan Bay Development on Portion 2 of the Farm Strandfontein No. 712 De Kelders.*

consultation with an Environmental Control Officer appointed for the management of the estate.



Source: Courtesy of Dr Charles Boucher.

Figure 2-8: Botanical Constraints and Conservation Plan.[4]

It is understood that Portion 2 (Private Open Space) of the current preferred alternative was initially proposed for future development but the DEA&DP required that no development take place here. There is, however, demand from the local municipality to develop this portion.[5]

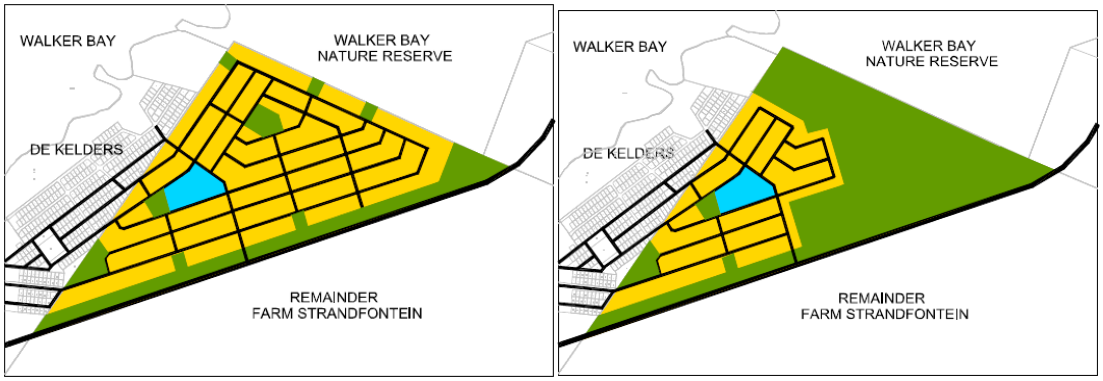
2.4 Alternatives

The current preferred alternative is a new plan by Plan Active and not a revision of the earlier plans prepared by WRAP. In terms of the history of the scheme, this could be called the Alternative 5. Previous alternatives are shown overleaf.

The previous preferred alternative (Alternative 3) went through a substantial development cycle that has moved from a formal gridiron layout (Figure 2-10) to its final form. This would cover two of the major form options. The initial concept was to take a conventional gridiron layout and extend the existing linear gridiron of De Kelders northwards into the site. It was thought that this would result in "an unattractive urban structure" and fail to integrate a variety of residential opportunities as required by the local community demographics. A limited development option was considered (Alternative 2) but found to be unviable.

[4] Dr C Boucher (2012) (p 30): Figure 13. Aerial image of Strandfontein Farm 712 (Portions 1 & 2) showing Alternative 3 Development Option (Portions 1 & 2), together with environmental constraints, conservation areas, firebreaks and recommended buffer between the development, the Walker Bay Nature Reserve and the R43 provincial road. (PrOS = Private Open Space).

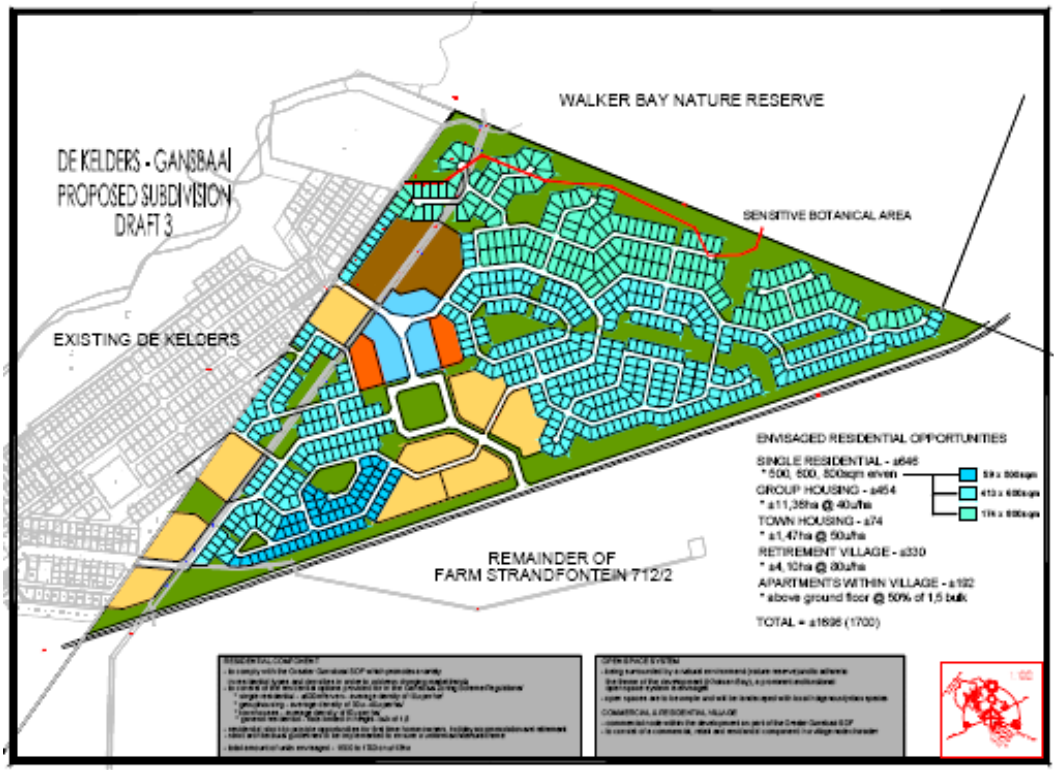
[5] Meriké Lerm, Plan Active (Pers. Comm. 25 January 2013).



Source: Reproduced courtesy of WRAP.

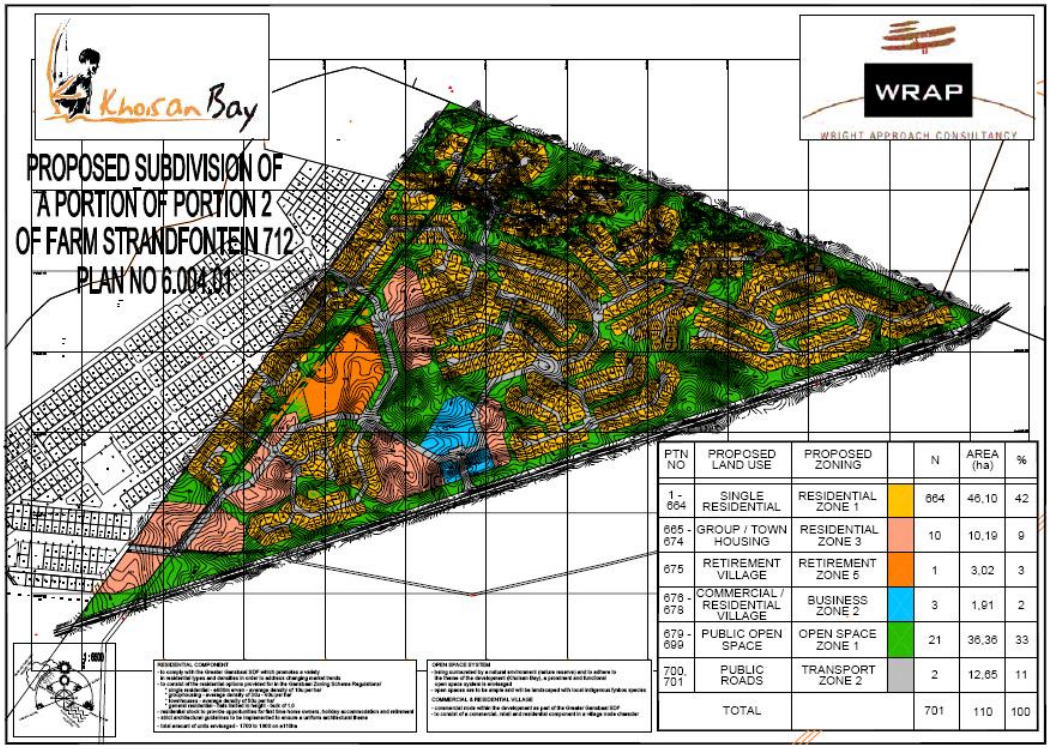
Figure 2-9: Conceptual Development Proposal Alternative 1 and 2.

Thus Alternative 3 (Figure 2-10) arose after much consideration of the various planning structures, market research and site opportunities and constraints. The vision became for a "more creative approach" based on natural topography, organic design, more extensive and integrated open space, mixed use provisions and a variety of residential types. The previous preferred alternative was a variation on this third conceptual alternative and considered Alternative 4 (Figure 2-3). It was considered a more creative approach to Alternative 3 that pulled away from a strict gridiron layout and tried to adapt to the complex contours of the area, particularly the dunes in the north.



Source: Reproduced courtesy of WRAP.

Figure 2-10: Conceptual Development Proposal Alternative 3.



PTN NO	PROPOSED LAND USE	PROPOSED ZONING		N	AREA (ha)	%
1 - 664	SINGLE RESIDENTIAL	RESIDENTIAL ZONE 1		664	46,10	42
665 - 674	GROUP / TOWN HOUSING	RESIDENTIAL ZONE 3		10	10,19	9
675	RETIREMENT VILLAGE	RETIREMENT ZONE 5		1	3,02	3
676 - 678	COMMERCIAL / RESIDENTIAL VILLAGE	BUSINESS ZONE 2		3	1,91	2
679 - 699	PUBLIC OPEN SPACE	OPEN SPACE ZONE 1		21	36,36	33
700, 701	PUBLIC ROADS	TRANSPORT ZONE 2		2	12,65	11
TOTAL				701	110	100

Source: Reproduced courtesy of WRAP.

Figure 2-11: Previous Preferred Alternative 4 (2007).

3. Policy, Legal and Administrative Requirements

3.1 Summary

There is a long history of environmental protection and management in South Africa rooted in EIA and, later, IEM, which has given rise to the current requirement for VIA. The latest document (November 2005) prepared by the Provincial Government of the Western Cape defines the scope and preparation of VIAs and has now been approved and adopted. Provision in the various Acts is made for special areas and landscapes that has an important effect on the ranking of visual impact in these areas. VIA is integral to assessing heritage impact in scenic and historic areas like De Kelders. Heritage character is to be created and conserved by attention to both planned form and architectural style as shown in the various municipal SDFs.

3.2 Introduction

This chapter provides the important and necessary policy, legal and administrative background for the visual impact study. A general overview of the relevant documents with specific reference to those applicable to visual planning is included. Particular mention is made of local planning guidelines that have the most direct bearing on the project such as the Spatial Development Framework (SDF) for the given area.

3.2.1 Background

The policy, legal and administrative framework for conservation, EIA and development in South Africa has long roots. Visual Impact Assessment (VIA) is mentioned in the national requirements for EIA under the National Environmental Management Act (NEMA) and the Environmental Conservation Act. Furthermore, the provincial government now endorsed its own guidelines for various EIA processes including VIA (PGWC, November 2005). Specific requirements for VIA may also included in local Spatial Development Frameworks (SDF) and Integrated development Plans (IDP).

3.3 Policy Framework

3.3.1 Environment Conservation Act No. 73 of 1989 (ECA), Part I: Policy for Environment Conservation

The policy for environmental protection and management is found in the Environment Conservation Act (ECA) No. 73 of 1989, Part I: Policy for Environment Conservation and is well established in South African environmental policy and law.

3.3.2 IEM Guideline Series (1992)

This Guideline Series issue by the DEA in 1992 is the foundation of the current IEM procedure and contains highly useful information on IEM and EIA in South Africa including the preparation of EIA reports and the typical outline used in this VIA. *IEM Guideline Series: 3 Guidelines for Report Requirements* included "Cultural and historic environment (e.g. site of architectural and cultural interest, visual impact)." This is the first specific reference to Visual Impact in the national legislation and documentation covering EIA.

3.4 Legal Framework

This review of current documentation is made with specific reference to requirements for VIA in the Law and by National Guidelines.

3.4.1 Environmental Impact Management: A National Strategy for IEM in South Africa (April 1998)

This discussion document on Integrated Environmental Management (IEM) defines IEM as: "the coordinated planning and management of all human activities in a defined environmental system, to achieve and balance the broadest possible range of short- and long-term environmental objectives." Further: "The overarching goal of IEM is to help ensure that South Africa's developing economy is redirected (or reoriented) from environmentally unsustainable growth and development towards environmental sustainability" (p 14). "Activities that IEM should manage" include: land use zoning plans and schemes, new activities, existing activities, and activities undertaken in terms of a land use zoning plan or scheme that has already been approved through IEM."

In terms of Scoping as it relates to the compilation of reports such as this VIA, the Main Aims of Scoping are "to focus the study on reasonable alternatives and relevant issues to ensure that the resulting *Impact Assessment* is useful to the decision-maker and addresses the concerns of interested and affected parties" (p 5, *IEM Guideline Series: 2 Guidelines for Scoping*, 1992).

3.4.2 National Environmental Management Act No. 107 of 1998 (NEMA)

This Act is "To provide for co-operative environmental governance by establishing principles for decision-making on matters affecting the environment, institutions that will promote co-operative governance and procedures for co-ordinating environmental functions exercised by organs of state; and to provide for matters connected therewith." Chapter 5: Integrated Environmental Management has among its general objectives: (b) "identify, predict and evaluate the actual and potential impact on the environment, socio-economic conditions and cultural heritage, the risks and consequences and alternatives and options for mitigation of activities, with a view to minimising negative impacts, maximising benefits, and promoting compliance with the principles of environmental management set

out in section 2" (p 34). The Act also allows for Chapter 7: Compliance, Enforcement and Protection of Part 1: Environmental Hazards and the Duty of Care and Remediation of Environmental Damage (28). Chapter 9: Administration of Act allows for Model Environmental Management Bylaws (46), "aimed at establishing measures for the management of environmental impacts of any development with the jurisdiction of a municipality. … (4) The purpose of the model bylaws…must be to—

1. (a) mitigate adverse environmental impacts;
2. (b) facilitate the implementation of decisions taken, and conditions imposed as a result of the authorisation of new activities and developments, or through the setting of norms and standards in respect of existing activities and developments; and
3. (c) ensure effective environmental management and conservation of resources and impacts within the jurisdiction of a municipality in co-operation with other organs of state.

5. …must include measures for environmental management, which may include—(a) auditing, monitoring and ensuring compliance; and (b) reporting requirements and the furnishing of information."

3.4.3 National Environmental Management: Biodiversity Bill, 2003 (BB)

This Bill is: "To provide for the management and conservation of South Africa's biodiversity within the framework of the National Environmental Management Act, 1998; the protection of species and ecosystems that warrant national protection; the sustainable use of indigenous biological resources, the fair and equitable sharing of benefits arising from bioprospecting involving indigenous biological resources; the establishment and functions of a South African National Biodiversity Institute; and for matters connected therewith." Of particular interest here is Chapter 3: Biodiversity Planning and Monitoring; Chapter 4: Threatened or Protected Ecosystems and Species; and Chapter 5: Species and Organisms Posing Potential Threats to Biodiversity, notably Part 1: Alien Species and Part 2: Invasive Species.

3.4.4 PGWC Guideline for Involving Visual and Aesthetic Specialists in EIA Processes (Edition 1, June 2005)

This newly endorsed guideline (November 2005) is the most relevant document that now guides VIA in the Western Cape. It is a highly useful document and has been used to guide this report. While lacking a definition of VIA, it states in the Introduction: "This visual guideline document is therefore an attempt to develop a 'best practice' approach for visual specialists, EIA practitioners and authorities involved in the EIA process. The term **'visual and aesthetic'** is intended to cover the broad range of visual, scenic, cultural, and spiritual aspects of the landscape. However, for the purpose of brevity, the term **'visual'** is used in the text' (p 1). **Thus it includes aspects of "the area's sense of place, … natural and cultural landscapes, … the identification of all scenic resources, protected areas and sites of special interest, together with their relative importance in the region, … the need to include both *quantitative* criteria, such as 'visibility', and *qualitative* criteria, such as landscape or townscape 'character'** (pp 1-2).

3.4.5 South African National Heritage Resources Act, 1999 (NHRA)

NHRA regulations cover the protection of historic sites, objects, buildings and landscapes. It covers (ii) “archaeological items,” namely, “material remains resulting from human activity… older than 100 years;” rock art, wrecks and “features, structures and artefacts associated with military history which are older than 75 years and the sites on which they are found (2 Definitions). The Definitions also include the term “(vi) ‘cultural significance’ [which] means aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance.” Further, (xxi) “‘living heritage’ means the intangible aspects of inherited culture, and may include: cultural tradition oral history, performance, ritual, popular memory, skills and techniques, indigenous knowledge systems and the holistic approach to nature, society and social relationships.” (xxxi) “‘Palaeontological’ means any fossilised remains or fossil trace of animals or plants which lived in the geological past, other than fossil fuels or fossiliferous rock intended for industrial use, and any site which contains such fossilised remains or trance.” (xxxviii) “Public monuments and memorials” and (xviii) “victims of conflict” relating to wars are also defined. A linear development over 300m long, or a bridge 50m long, or any development over 5,000 square metres (½ Hectare), or rezoning over 10,000 square metres (1 Hectare) requires an HIA to be submitted if a heritage resource is likely to be affected.

A Heritage Impact Assessment is being undertaken in terms of the provisions of Section 38 (8) of the NHRA.

3.4.6 PGWC Guideline for Involving Heritage Specialists in EIA Processes (Edition 1, June 2005)

Continuing on from the NHRA (1999), this now legally adopted Provincial Guideline further records (p 3): “Types of heritage resources as defined in the relevant legislation may include the following:

- Places, buildings, structures and equipment of cultural significance
- Places to which oral traditions are attached or are associated with living heritage
- Historical settlements or townscapes
- Landscape and natural features of cultural significance
- Geological sites of scientific or cultural importance
- Archaeological and palaeontological sites
- Graves and burial grounds
- Sites related to the history of slavery (NHRA).”

These are the so-called “tangibles” of the heritage concept (p 5). Thus the “cultural landscape” is seen as having a range from Archaeology to Palaeontology to Historical Architecture to Social History to Public Memory and Natural Landscape (p 6). Two categories of heritage significance/sensitivity are used: Category 1: Formally protected heritage sites and Category 2: Landscapes of recognised or potential significance or sensitivity (not yet formally protected) (p 18). This extensive list of sites include Grade I-III, National and Provincial Heritage Sites and Protected Areas, as well as Provisionally Protected Sites, Urban Conservation Areas, Nature Reserves,

proclaimed Scenic Routes, etc as well as World Heritage Sites e.g. Robben Island and Cradle of Humankind (Sterkfontein). A very large list of landscapes is also included starting with Scenic/Historical Routes or Landscapes, Pristine Natural Areas e.g. Cedarberg and many other types of landscapes including Historic Farm *Werf*s e.g. *Boschendal, Morgenster, Alphen,* and historical farmlands e.g. Winelands, Swartland, Karoolands, and many more.

This long list has been ordered into twelve types of Heritage Context in Table 1 (pp 21-27), namely:

1. Palaeontological Landscape
2. Archaeological Landscape
3. Historical Built Urban Landscape
4. Historical Farmland
5. Historical Rural Town
6. Pristine/Natural Landscape
7. Relic Landscape
8. Burial Ground and Grave Site
9. Associated Landscape
10. Historical Farm *Werf*
11. Historical Institutional Landscape
12. Scenic/Visual Amenity Landscape.

Many of these could be grouped under the broad term Regional Cultural Landscapes (p 31). **Thus the Landscape is considered a vital part or domain of Heritage Resources.** As a visual resource, Landscape is very much seen and perceived in every human sense.

3.4.7 Other Documents

Other documents that refer to visual aspects of EIA include *Aide Memoir for the Preparation of Environmental Management Programme Reports for Prospecting and Mining* 5.2.13 Sensitive Landscapes and 5.2.14 Visual Aspects which states: “Describe the impact the project will have when viewed form scenic views, tourist routes and existing residential areas” (pp 17-18). The SAMOAC (South African Manual for Outdoor Advertising Control) controls also specifically define visual impact with particular reference to signage in natural, urban and rural landscapes.

3.5 Administrative Framework

3.5.1 Western Cape Provincial Urban Edge Guideline (DEA&DP December 2005)

This document notes the following on visual impact that has special reference to this and all similar types of development, bold added (p 30):

> **“Visual impact. The value of the environment is often under-estimated from a visual perspective.** It is the visual quality of the environment that, to a large degree, generates the attraction for the tourism industry and draws people to certain areas as desired locations for living a lifestyle outside of the large cities and densely

developed urban areas. **The visual resources of rural areas, such as scenic landscapes and the cultural streetscapes and farmsteads,** and environments such as the Garden Route [Swartland], constitute major tourist attractions. Visual qualities of the environment also forms the backdrop to most other tourist activities, such as 4 x 4 routes, hiking trails, camping and recreational activities and even sporting facilities that sustain local economic activity. The growth of golf resorts in the Garden Route serve as examples of the attraction of the environment and more particularly the visual environment for interest in sporting facilities. Added thereto, the experience of reserves and resorts in the Cedarberg and Karoo are as much in the visual quality of the environment as it is in the attraction of the facilities.

Each area has its own unique visual character and atmosphere, which plays an important role in the quality of any tourist experience. The diversity of the landscapes makes it essential to consider all development **and more particularly the expansion of urban areas, an issue that requires special consideration.** The intention is to manage urban development in such a way that no development would detract from the visual quality of the environment **and that all development conform to a characteristic style and urban form that suits the character of the area."**

This implies that edge development should not only be limited to certain areas through inclusion or exclusion, **but that edge development should also be subject to urban design guidelines, architectural consideration and general aesthetic treatment.** The visual quality of the environment is not limited to the natural environment. **The built environment has as much of an effect on the aesthetic appeal of an area as has the natural environment."**

3.5.2 Western Cape Provincial Spatial Development Framework

A Draft Interim Report to Council is available ex the web dated November 2005 as prepared by CNdV Africa. The Western Cape Provincial SDF (WCPSDF) makes no specific discussion of the area around De Kelders other than to mention a tourism route between Gansbaai and Bredasdorp that requires upgrading (p 8-12).

The report's section 4.1.4 Topography, Visual Amenity and Architectural Style (Scenery), notes in their introduction (p 4-23): **"The impact of human activity has had a pronounced impact on the natural landscape and the need to manage and control such impacts are key to protecting the scenic qualities and visual resources of the Province."** They further note that visual carrying capacity is higher in undulating landscapes and we could add, in areas with numerous valleys and local ridge lines which screen off one area from the next. However, flat ground, or titled ground which offers a sweeping view is the most visible. Their report goes on to say in the section Visual Impact, Layout and Style (p 4-24):

The visual impact of urban settlements, structures and activities within different environments should enhance and respond to the natural environment and

built heritage in which they are located. **This raises the issue of appropriate layout and architectural character within the Province.**

As much as they lament the concern about the impact of globalised styles such as Tuscan that is so foreign to the Cape, the lack of due care to traditional planning forms can also be endorsed. Scenic routes including the N1, N2, N7 and N12 along with mountain passes are broadly accepted as provincial and national assets. In their Spatial Summary they finally note the following:

- The topography and settlement patterns of the Western Cape resulted in a unique matrix of Romantic, Cosmic, Classical and Complex landscapes, ranging from the complex landscape of the City of Cape Town to the cosmic landscape of the Central Karoo. Human settlement needs to be understood in the context of the natural place that 'contains' them and therefore it is important that **more emphasis is put on defining guidelines for the appropriateness of different forms of human settlement within different landscapes;**

- **Areas with exposure to large numbers of people, especially passing tourist traffic, require special consideration; and,**

- **The preparation of guidelines for site planning and choice of building materials and their implementation, including settlement on farms need to be prioritized, especially in areas identified as pure cosmic, romantic or classic landscape areas (for example the Tulbagh Valley) and Scenic Routes.**

Appropriateness of Densities, Urban Restructuring and a Tightly Drawn Urban Edge

The discussion in section 6.5 Appropriateness of Densities, Urban Restructuring and a Tightly Drawn Urban Edge, notes the concern on the policy proposal of 25du/ha as being "too ubiquitous" with the possibility "that it would lead to unacceptable high rise building in rural villages and towns." However, they point out research that shows that **25du/ha "is a minimum density at which urban settlements begin to significantly improve their urban performance."** Some authorities put this at 50du/ha. This related to the ability to walk to work, improved surveillance and security, a wide range of employment and retail opportunities within easy access and a vibrant and active streetscape. These are obviously generalisations based at the broad range of planning. They note amongst various defences that this densification level need not be applied in every area but can be higher in some, lower in others, from 60-100du/ha in areas of highest accessibility **and as low as 4-8du/ha on the periphery.** They also demonstrate that 2-3 storeys can also significantly achieve density increases. Provincially, the average of 12du/ha is approximately half of the desired metric (mark) and the high cost of transport caused by urban sprawl is considered the reason for Chinese products being so cheap as they all walk to work.

To put this into the context of *Khoisan Bay,* De Kelders, reference was made to all the various policy documents on density which ranged from 10 du/ha in the Greater Gansbaai SDF to 50 du/ha in the PGWC SDF as described above. The scheme achieves a density of 24 du/ha in the residential area and a gross density of 14 du/ha (Plan Active, p 22), which we would consider to be well in line

with the site's location within a rural tourist town's urban edge. The following plan from the older Gansbaai Structure Plan was withdrawn by Province in 2012 and no longer applies. It gave 50% of the area to be used for Residential; one third is proposed.

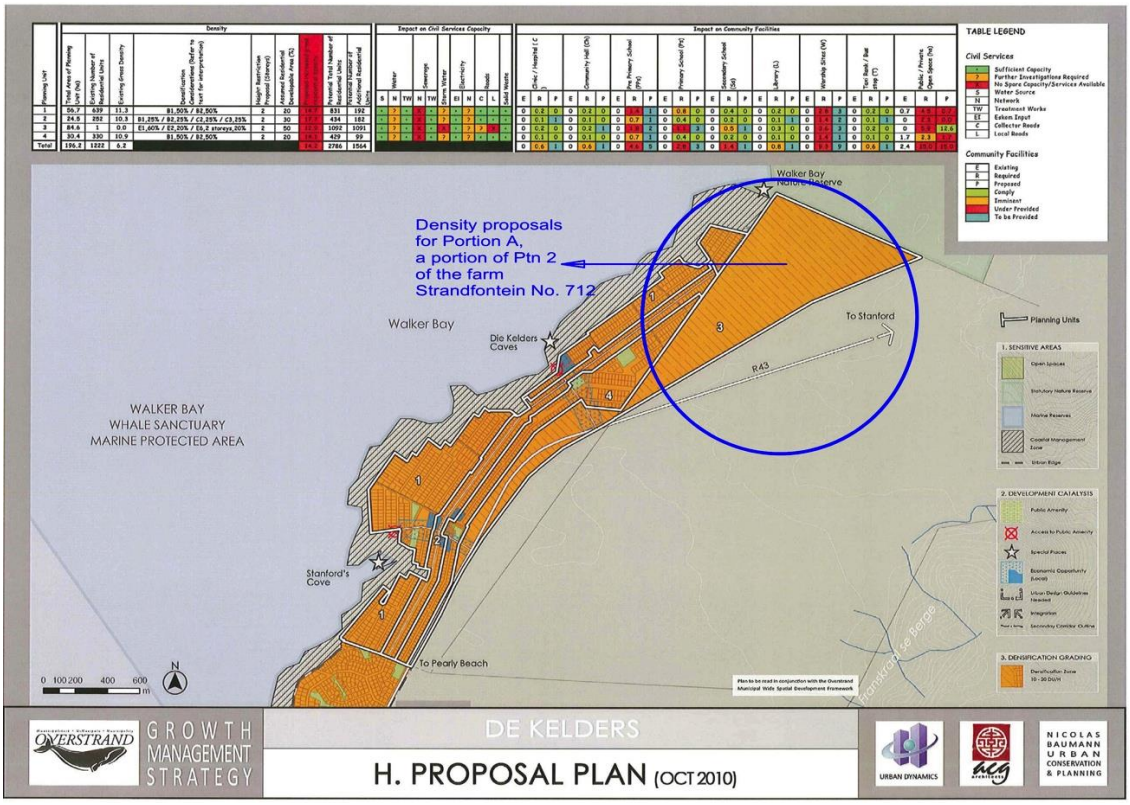
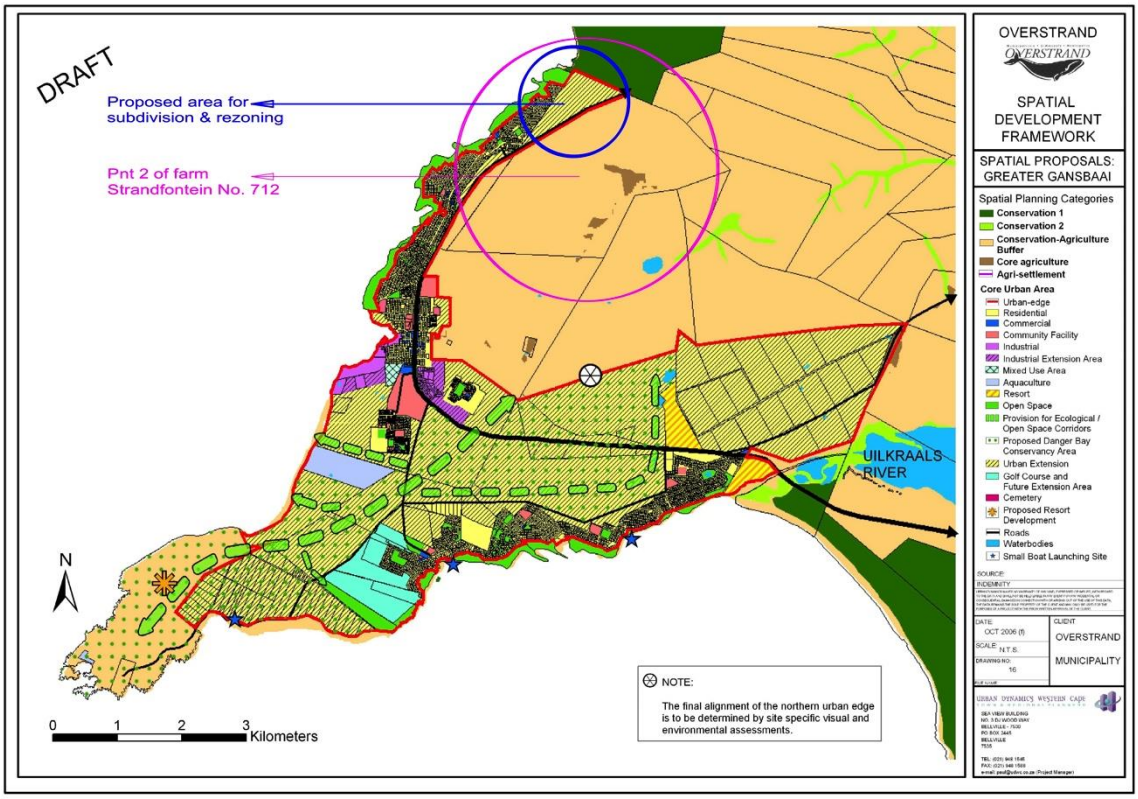


Figure 3-1: Overstrand Growth Management Strategy showing densities (withdrawn by Province 2012).

3.5.3 Overberg, Overstrand and Greater Gansbaai SDFs

The Overstrand SDF makes no specific mention of De Kelders and we were not able to locate a copy of the Greater Gansbaai SDF mentioned in WRAP's report. However, the Overberg SDF had various points to make on settlement planning and aesthetics that we include in their entirety below, as they are instructive; they also note the Khoisan middens along this coastline (p 16). Section 25.3 Urban Development notes the following:

> **An evaluation of urban space in the region reveals that many urban settlements are devoid of the endearing qualities that characterise historic settlements. The primary negative characteristics are the following:**
>
> **a) A general lack of charming urban streets, square buildings and places, which provide the characteristic structure of historic places.**
>
> b) Existing buildings generally do not play any positive role in giving the urban space a particular quality. Institutional buildings, such as churches, municipal offices and business buildings are scattered throughout the towns without any evidence of an understanding of the important role such buildings should play in providing status to the various types of urban space and how they should help define and shape specific types of public places (e.g. town squares and streets).



Source: Reproduced courtesy of Plan Active / Urban Dynamics WC.

Figure 3-2: Overstrand SDF.

c) There is generally no evidence of a well-defined town or settlement border that provides a recognisable inside-outside relationship and a sense of enclosure.

d) The urban edges of the settlements and their main entrances are, generally, ill-defined and weak, without a sense of a 'gateway'.

With the exception of some attempts to copy and clone 'regional building styles', there is little evidence of successful integration of the characteristic qualities of the built heritage of the region into new development.

As stated above, there is a widespread propensity to emphasise the role of functional, physical and biological factors in the formulation of policy and strategies, whilst the **existential meaning** that people attach to their places and the values and norms that underpin such meanings are being neglected.

25.3.1 VISION

VISION

Establish a safe, healthy and aesthetically pleasing urban environment, with the architectural and spatial character depicting the historical and cultural background of the habitant communities.

OBJECTIVES AND GUIDELINES FOR URBAN DEVELOPMENT

In respect of regulating development, the overriding objective of the ODM is to achieve the following:

a) **Order:** 'Order' concerns the logical, comprehensible arrangement of separate elements, including the disposition and relationship of one element to another.

b) **Beauty:** 'Beauty' is the quality that delights the senses or exalts the mind, and the aesthetics and outward visual impression of a place or feature.

c) **Scale:** 'Scale' concerns the proportion of elements to the human figure, which give a sense of well-being and comfortable spatial relationship to the environment.

Planning and design guidelines should always be prepared for specific places and should be a product of a specific planning and design process and strategies based on agreed upon criteria and principles. It needs to be recognised that urban spatial design is an environmental art and that the beauty of urban places is measured by how well the components fit into the larger spatial structure (Trancik, 1986).

A key aspect of sustainable development is the manner in which settlements are shaped and spatially orientated within the environment.

In this regard, Moughtin (1997) states that principles of *sustainable development* would include clear objectives for a framework of urban design that would emphasise conservation of both the natural and built environment. In the building / development process there should be presumptions in favour of conservation, and a premium should be placed on the conservation of natural resources, wildlife and landscapes.

There is a strong need to structure and restructure the built environment in a way that promotes sustainable development. In this regard, the following aspects, drawn from the views of Moughtin (1997), are summarised below. Municipalities will be required to actively promote these aspects and principles through inter alia their IDPs, SDFs and SDPs.

These are the municipal guidelines for development in the area and are valuable in directing the form and character of new projects.

3.6 Strategic Issues

3.6.1 Strategic Assessment

One of the difficulties of assessing visual impact at present is the lack of strategic Provincial or Municipal EIA, VIA or HIA studies which provide guidance on how the individual project fits into the overall context of development in any region. While an individual project seems to have an acceptable level of mitigatable impact, when viewed collectively, their sum total can well exceed the sum of the parts. That is, the impact of a single scheme such as this development may seem to be minimal when considered in isolation, however, when seen collectively with other developments also proposed in the area or region but as unknown to the assessor, or as not considered over the long term, the overall impact can become unsustainable. Thus, developments that are proposed outside the Urban Edge can be viewed as undesirable as the SDF planners have presumably taken a regional perspective already and planned to curtail or allow development accordingly. Conflicting urban edge configurations can produce conflicting interpretations between different assessors and authorities, the problem arising between the datedness of older plans that are awaiting approval or updating.

The Case of Gansbaai – De Kelders

While this latter problem is not the case in Gansbaai – De Kelders, the scheme falling within an approved urban edge, the lack of strategic development data is. There are no strategic visual studies done of the town that we are aware of.

3.6.2 Cultural Landscape

De Kelders and Gansbaai lie in the Overberg on the coastline between Walker Bay and Danger Point. The area is rich in scenic beauty and is strongly rural with largely natural landscapes prevailing. De Kelders means The Cellars and refers to the caverns below the cliff through which underground streams flow into the sea. Crystal clear pools in these caves are very popular with more adventurous swimmers (Erasmus, p 70). Gansbaai's name comes from the wild goose or *gans* and started as a fishing village. Trawlers in the harbour often use *gans* in their names. Whale watching is an important tourist attraction associated with the Walker Bay Nature Reserve and the sight of these massive gentle creatures quietly browsing near the coast is an impressive sight.

Drive along the coastal road through De Kelders and you will see a variety of exciting coastlines from narrow rock pools to dramatic cliffs and caves, sheltered beaches and the immense backdrop of fynbos, sand dunes and mountains to the horizon. Truly, this is a very beautiful stretch of coastline and residents of De Kelders are very fortunate to enjoy it. The town itself is quite modern, less than fifty years old, and spreads along the cliffs in a linear gridiron pattern. This town form is not entirely unnatural in this instance with the streets running parallel to the coast as they typically do in this area. Houses are quite recent and of an upmarket character. Perhaps what is most unnatural are the largely tamed gardens which show little remnant of the natural fynbos that can be seen in similar towns like Betty's Bay.

3.6.3 Regional and Local Character

In terms of heritage, the area being generally quite recent in development and housing form, the primary constraint besides this modern backdrop is the stunning coastline giving way to fynbos and mountain backdrop. There is a hilly drive from Stanford south to Gansbaai and De Kelders that gives a long and open sweeping view of the town and coasts as you descend into the valley. The intrusion of scattered seaside towns provides some relief to the natural landscape but this is only comforting when it remains quite small. As towns and suburbs expand, there is a need to integrate these expanded settlements into the natural environment in a more sympathetic manner than previously undertaken. However, whether the linear coastal gridiron is invalid as a suitable form is debatable. Gridirons provide highly efficient layouts for servicing purposes and in terms of their ability to assist mental maps of an area are very comforting town plans. The modern tendency to create nests of roads that twist and turn rather aimlessly or with arbitrary angles and forms create confusion and often do not relate to anything in the landscape. How to create natural, meaningful road layouts in these landscapes is very much the issue of the study beyond mere visibility.

4. Visual Environment Description

4.1 Summary

Khoisan Bay, *De Kelders lies on the west side of the coastal R43 just north of Gansbaai in a beautiful rural area of mountains, miles of strandveld and fynbos, and the most stunning rocky coastline. The area is rich in scenic and natural beauty, and there is an ancient history of shoreline usage by Khoisan. Caves, cliffs, whales and much more are the draw card in this fascinating environment. Truly, it is an incredibly beautiful stretch of coastline and a wonderful place to have a holiday or retirement home. De Kelders has been built up quite conventionally with little in the suburbs to show its natural origins, however, the coastal reserve is still pristine and well conceived. The back edge of the existing suburb with its marked fynbos edge is not always visible within the town except from its western edge and northern portion, and is more visible from the R43 when driving northwards than southwards. Views of the site are overall fragmented by topography.*

4.2 Introduction

Combined with Section 2, this chapter presents the relevant visual data required to develop a Visual Impact Assessment. This is a strongly visual chapter well illustrated with site and regional photographs. Visual impact is all about what can we see and how this affects us. This chapter shows us what we can see.

4.2.1 Background

The description of the environment is undertaken with a view to presenting basic data for the VIA. A full presentation is made of the visual information collected and analysed as required for a Level 3 VIA.

4.2.2 Key Issues

1. *Khoisan Bay,* De Kelders is a major extension of the existing suburban settlement along the Coastal Road R43 into natural fynbos vegetation with a backdrop of largely wild countryside to the horizon.
2. The site is partially visible from the road and the northern portion of De Kelders although, despite its size, it is not always visible from the general area due to the hilly local topography.
3. The site is large at 110 ha and like all sites of this size, it is rarely possible to see such a large area all at once but only as one travels through and around it.
4. Portion 2 of the farm *Strandfontein* is aptly named because this farm in its original extent was a beach side farm. The vegetation is coastal fynbos and the coastline dramatic and interesting due to the caves and rugged rockscapes.
5. The area has a long history of human habitation relating to the Khoisan's *strandloper* ancestor who occupied the caves that gave name to the area *De Kelders.* This same attraction of scenic coastline remains and is the *raison dêtre* for today's population.

4.3 Physical Environment

4.3.1 Location

The site occurs on the northern edge of De Kelders in the triangle of land between the town and the R43.

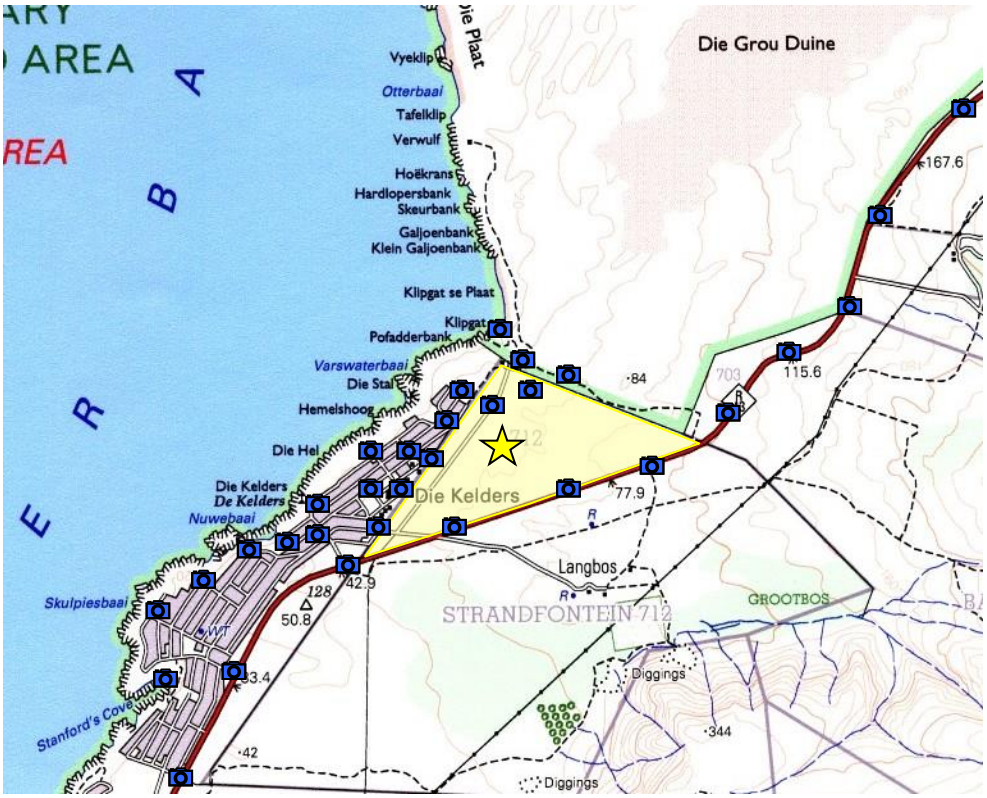


Figure 4-1: Site and Photographic Locations 1:50,000
Portion of a 1:50,000 map of Gansbaai showing the site's location (yellow colour and star) and some photographic locations (blue cameras) (3419CB Gansbaai, 4th Edition, 1997).

4.3.2 Geomorphology

Khoisan Bay lies on quite uneven ground with many sand dunes, hills, humps and small valleys over its area. The underlying geology is a mixture of Klein Brak marine/estuarine succession 2-11m thick and semi-consolidated aeolianite or wind blown sands of the Waenshuiskrans Formation. The soils are white sands (Zietsman, p 8).[6]

4.4 Biological Environment

4.4.1 Vegetation, Wildlife and Ecology

Botanically, the area falls in the Fynbos Biome in an area of Overberg Dune Strandveld and Agulhas Limestone Fynbos (Zietsman, p 10). Overberg Dune Strandveld is well conserved at 100% of its 36% conservation target so having Least Threatened ecosystem status. This counts for most of the vegetation on site. The Agulhas Limestone fynbos, on the other hand, is a poorly protected vegetation type with only 8% of its 32% conservation target but nevertheless Least Threatened ecosystem status. The site's vegetation is complex and variable as per the maps shown previously (Figure 2-7).

4.4.2 Conservation and Management

A major fire burnt through the site in late 2005 that has seen healthy regrowth of the fynbos but alien *rooikrans* is still a serious problem in places. Overall, the site appears to be in healthy condition despite the aliens and is disturbed in places due to various activities associated with its peri-urban location. Alien management is described in the Botanical Assessment.

4.5 Social Environment

4.5.1 Heritage

The site contains no constructions that we could see although there is a dirt road that runs near the western boundary. Heritage is restricted to the site's scenic beauty and near natural status. Thus visitors and residents of *Khoisan Bay*, De Kelders are likely to be there because of the rural character of this largely undeveloped area of the Overberg. Stressed out city dwellers from Cape Town and inland would enjoy the scenic drive from Hermanus onwards around the Bay through quaint Stanford and then on once more through the wild strandveld and mountains along the coast. The road continues to Gansbaai and Pearly Beach before ending at Buffelsjag.

[6] Zietsman, MM, *Botanical Assessment for Portion 2 of the Farm Strandfontein No. 712, De Kelders, Gansbaai,* March 2006.

Source: All photographs in the report by Bruce Eitzen and are copyright ©.

Photograph 2: Showing De Kelders from Stanford Cove.

These coastal resort towns are quite modern in appearance although Gansbaai has a longer history than Pearly Beach. Old fashioned or historical buildings are few and far between, if there are any, none were seen driving around De Kelders. Visitors would enjoy the great escape to this coastal hideaway with its stunning panoramic views across Walker Bay towards Hermanus and Betty's Bay. Most exciting, perhaps, would be whale watching in-season that we enjoyed and the Walker Bay Nature Reserve on the site's northern boundary. The beaches and coves, rock pools, cliffs and caves along this fascinating stretch of coastline are truly beautiful and anyone could enjoy the wide variety of coastal activities from swimming, exploring, diving, photography, painting, whale watching, botanical and wildlife studies and many more.

4.5.2 Land Use

The site is currently zoned Agriculture I. The intention is to convert the property to mixed-use development as described previously, primarily residential with an integrated open space structure.

4.5.3 Urban Context

The site lies on the edge of north De Kelders but within the approved urban edge. The edge condition is clear-cut with the existing houses of De Kelders giving way immediately to the natural fynbos and dunes of the site and beyond.

4.6 Cultural Environment

4.6.1 Aesthetics

Photograph 3: View of De Kelders from the R43.

Because the site lies on a clearly demarcated border between suburban and natural fynbos, the expected change from natural to suburban development will be marked. However, the integration of a substantial (33%) natural open space system into the scheme will temper the impact of new housing. The existing aesthetic of the township of De Kelders is on of later 20th century town planning using a linear gridiron along the coastline. Houses are built up with modern constructions largely in good to upmarket condition and style. There is an abrupt change as the suburb connects to the natural fynbos and dunes of the surrounding areas. The existing township has a well-conserved marine edge in which no development occurs leaving about 30m of natural coastline above the cliffs and rock pools leaving the township with a natural sea edge. However, the town's suburban houses themselves lack a natural aesthetic as achieved at similar resort towns in the area such as Betty's Bay and Pringle Bay. Thus driving through the suburb one sees only manicured lawns and formal gardens with nothing remaining of the original strandveld.

4.6.2 Visual

The site has been the subject of a photographic survey that looks at the site itself, the local area and views from local roads. The bulk of the visual description is to be found in the photographs that are self explanatory and accompanied by descriptions. **According to the PGWC Guidelines "the term 'visual and aesthetic' is intended to cover the broad range of visual, scenic, cultural and spiritual aspects of the landscape. However, for the purpose of brevity, the term 'visual' is used in the text" (p 1).** Thus it is within the technical gambit of VIA to comment on all the varied aspects that make up the visual environment which is the aim of this study. The photographic survey is presented as if one were to visit the site for the first time, covering views from the approach road, then views of the site, views from the site and then views from the neighbourhood.

4.6.3 Views from the Road

Scenic Coastal Road R43

The site is visible from the coastal road R43, which is a scenic drive. It can be seen on the western side as one drives from Stanford to Gansbaai. Generally, only the front most or eastern portion of the property is visible from the R43, partially due to topography and direction of travel, and partly due to invasive *rooikrans* that is quite thick along the road. In the first sequence on leaving Stanford, the road heads south towards the Swartkransberg and Franskraal se Berge, Gansbaai becoming visible in the far distance when one nears the feet of the former near the Walker Bay Nature Reserve.

Photograph 4-4: Sequence along the R43 from Stanford southwards approaching Gansbaai.

Photograph 4-5: Panorama off the R43 over Gansbaai – De Kelders and Die Grou Duine of Walker Bay Nature Reserve.

A panorama taken at this point over the tops of Die Grou Duine shows the dunes in the foreground and Gansbaai far to south along the sea. The road twists and turns a few times as one approaches, De Kelders and Gansbaai not always visible. There are a couple points as one crosses a ridge when the coast comes in view but other times the road heads towards the mountains. Travelling through low-lying valleys also causes the coast to fall from site from time to time. Views in this range are long to far distant (3-5km).

Photograph 4-6: Continuing sequence along the R43 southwards approaching Gansbaai.

Photograph 4-7: Continuing sequence along the R43 southwards along the site's eastern boundary.

Nearing the site one sees the project signboard on the RHS (Photograph 4-7). Views along this section into the site are generally not clear, either due to roadside vegetation or raised land on the side of the road although there are some places where one can look in. Due to the orientation of the road alongside the site and not towards it, the view tends to focus on the road ahead and the houses of De Kelders as one nears the corner about midway along De Kelders. Note the change in vegetation as mowing of the fynbos along the town has given way to open and rather sterile grassland in contrast to the rich strandveld (Photograph 4-8).

Photograph 4-8: Continuing sequence along the R43 southwards along the sites and entering De Kelders.

Turning around and heading north from De Kelders one gets a different and clearer view of the site, this time on the LHS (Photograph 4-9). As the road bends and rises and falls, the site and town fall out of view, but the close up views of the town when visible show a the neat, bright and well maintained, modern houses of De Kelders with Die Grou Duine shining prominently behind.

Photograph 4-9: Sequence along the R43 northwards past De Kelders on the LHS.

Photograph 4-10: Continuing sequence along the R43 northwards past De Kelders on the LHS with the southern site in partial view.

The above view as one rounds the bend in mid De Kelders gives a broadside of the road and the southern portion of the site as far as the ridge line which blocks off views of the northern section. The site appears as dark green, natural fynbos vegetation in marked contrast to the mowed grass on either side of the road and the house. The proposed development will markedly change the character of this natural area to one that is suburban. The intention to maintain one third of the area as natural fynbos should reduce some of the impact of the loss of natural environment. **Housing colouring will be key to reducing further visual impact of this extension within the urban edge.**

Photograph 4-11: Continuing sequence along the R43 northwards with the site on the LHS.

Passing the entrance to De Kelders the undeveloped portion of the town, which is the triangle of the site, appears along the LHS. The site is covered with dense natural vegetation and a rise on the edge of the road along the site's eastern boundary tends to prevent views into the site as one travels along it. Thus views into the site are generally fragmented and only marked if looking that way as the road focuses on the peak of Witkransberg ahead. **Conservation of the boundary area to over the roadside ridge will have a major effect on reducing project visibility due to this fortuitous landform along the road.** The site is left behind as the straight road turns left which marks the site boundary just after the project signboard.

Scenic Local Roads – Seafront Drives

Due to local topography, the exceptionally beautiful drives along the seafront in De Kelders tend not to have views of the site except as one gets nearer to it. Some of the road ends and curves do look up towards Die Grou Duine and the site is sometimes slightly visible to the LHS of them.

Photograph 4-12: Views from the area of Stanford Cove to the site are not possible.

If one attempts to drive along the various roads along the sea edge you will find that there is no single continuous road that allows one to do that. A major ridgeline splits De Kelders and prevents views northwards south of Skulpiesbaai; however, the views open up over this ridge line towards the north and Walker Bay Reserve.

Photograph 4-13: No view at this road end above Skulpiesbaai (left) but a partial view off this corner with site to the RHS (right).

Looking at the same corner one is more likely to be looking at the stunning sea views and whales below or the distant dunes of the Walker Bay Nature Reserve than one is to be examining the backline of the town. The site is not very prominent from this distance or location.

Photograph 4-14: Same corner with whale photographers (left) shooting the whales below (right).

Moving closer to the shopping centre or large flats complex in the following picture, the views continue to be focussed seawards or to the dunes than inland over the backs of the houses. The site is just visible behind the house to the RHS but is by no means prominent from the sea cliffs.

Photograph 4-15: Driving down to the sea edge one looks over the bay (left) and towards the dunes on this corner (right).

The following views show how the ridge above Skulpiesbaai obscures views south of it in De Kelders while views northwards to the dunes from the sea edge are often obscured towards the site, largely because the site is at the back of the town and not really visible from the other side of it.

Photograph 4-16: View of Skulpiesbaai ridge (left) and towards the dunes and site not visible (right).

Interpretive whale boards can be found along the coastal edge and views into the rocky shoreline below are stunning capturing as much attention as the enigmatic sight of whales lolling in the ocean below. The vegetation is also pristine and its wind carved forms are an excellent contrast to the wave sculpted rocks.

Photograph 4-17: Interpretive whale signboards and stunning rocks below capture the attention.

This section of seafront, with its parallel sea drive, heads straight up the coast towards Klipgat and the Walker Bay Nature Reserve. A very pleasing, natural coastal reserve has left the rocky

shoreline intact with houses set back behind a perimeter wall. This is an ideal arrangement with the road providing a clear boundary between development and natural open space.

Photograph 4-18: The linear coastal drive looks towards the dunes (left) and continues up to the reserve, site not visible in either instances but to the RHS (right).

Beautiful views into the rugged rocky shoreline below with its contrasting soft green vegetation above giving way to the turquoise sea is a sight for sore city eyes used to looking at harder human townscapes.

Photograph 4-19: Beautiful coastal vegetation and stunning rocky shoreline is a delight.

Nearing the northern end of De Kelders the site remains out of view from the coastal drive hidden behind this quite subtle intervening ridge and the housing in between.

Photograph 4-20: The site is not visible from this stretch of coastal drive (left) and is hidden behind this ridge and housing as it turns inland (right).

4.6.4 Views of and from the Site

The following views were taken around the site. Driving along the western edge of town one has various broadsides of the site as this is the edge that binds the site to existing De Kelders. The following panoramas show what this edge looks like. The west central portion of the site is quite hilly which prevents deep views into the site (Photograph 4-21). Views from here onto the site are limited by the dune topography to only the far western portion of the site. Houses built here will rise above the road and houses looking down on them.

Photograph 4-21: West central boundary panorama showing the hilly edge at this point.

However, this is quite different to the boundary portion further north that is raised and looks out over low ground right across the entire area. This NW boundary and the houses along it currently enjoy a great, uninterrupted back view of Franskraal se Berge. **This view will change considerably as it is filled up to the R43 with housing.**

Photograph 4-22: North west boundary panorama showing the more open site at this point and views right across the site to the south.

A continuation of the same view from further north at the end of De Kelders once more shows how open the site is from here and the sharp contrast of the existing built edge and the neighbouring natural fynbos (Photograph 4-23). What is seen on the RHS of the road, which is the existing town, will be coming to the LHS of the road with some qualitative differences. The proposed scheme retains a high percentage (33%) of natural open space and a more organic layout, which will have a different impact than a conventional gridironed suburb. **However, the change from natural to urban will still be distinct.** Moving into the southern boundary road of the Walker Bay Nature Reserve one sees this partial view of the north-most portion of the site cut off by a ridge (Photograph 4-24). The view at this point will change substantially although a large portion of this area will be left as natural open space but housing will still intrude from this reserve edge.

Photograph 4-23: Far northwest boundary panorama showing the view right across the site with the mountain backdrop and town edge.

4.6.5 Views from the Walker Bay Nature Reserve

Photograph 4-24: Panorama of the site from the entrance to the Walker Bay Nature Reserve showing the intermediate ridgeline screening this portion.

Driving down into the car park of the reserve one looks back and can see nothing of the site from here due to another sharp ridge on the boundary (Photograph 4-25). Thus views from this most scenic edge of the reserve entrance will not be substantially affected. This is important even though the site's location within the approved urban edge is a *fait accompli* because the views up the coastline of the Walker Bay Nature Reserve are stunning (Photograph 4-26). The drop down into the delightful beach of Klipgat ensures that this beautiful coastline from the reserve will probably not see the town's expansion into the site at all except possibly from very far north although it is unlikely because we did not see the beach from the site's western side. Living so near to the reserve will be a boon for those lucky residents who can enjoy the fascinating rocky shoreline with its colourful names, the Khoisan heritage and the beautiful vegetation.

Photograph 4-25: Panorama of the site from the Walker Bay Nature Reserve car park showing a boundary ridge screening the site from here.

Photograph 4-26: Views from the Walker Bay Nature Reserve showing the coast, Khoisan interpretive board and rich coastal vegetation.

Walking into the reserve along its southern boundary road one can potentially travel the whole way along the site's northern boundary. This first view, taken about 50m into the site in the NW corner, shows the dunes and borderline vegetation that is to be largely conserved as a buffer zone according to the SDP. This area still shows evidence of the late 2005 / early 2006 fire which devastated the area. Regrowth of vegetation is good (Photograph 4-28) but so is the alien *rooikrans.* The white sandy soils are still prominent as this young vegetation re-establishes itself. The ridgeline of sand dunes a couple hundred metres into the site screens off all views from the reserve of the bulk of the site.

Photograph 4-26: Panorama from within the site along its western road showing dunes that cut off the northern section from view.

Photograph 4-28: Colourful strandveld regrowth after last year's devastating fire.

Walking up the western track one approaches the sand dune ridge that splits the site's northern portion. The vegetation is still open and regrowing after the fire.

Photograph 4-28: Looking north to Die Grou Duine from the site's western track (left), a portion of dunes on the ridge (centre), and going over the ridge (right).

The area of sand dunes is quite hilly and it is intended to build on them. **Housing and roads in this area will have some stiff challenges if the intention is to retain the natural character short of bulldozing these interesting landforms and returning them to a condition much like existing De Kelders.** Separate guidelines for this zone are required tending to a more naturalistic site interpretation which minimises conventional suburban finishes.

Photograph 4-29: Panorama of dunes from the NW portion of the site near the internal western track

More views of the dunes looking to the north over the Walker Bay Nature Reserve can be seen above. **It is possible that a better way of creating a more site sensitive layout at this point would not be to build roads and houses on top of the dunes as seems to be indicated by the plans but rather to build the roads in the small valleys between the dunes with the houses carefully placed on the sides of the dunes, preferably not coming over the top of the ridge.** This would certainly reduce the visual impact from the reserve while still maintaining an integrated open space fringe along the edge.

Photograph 4-30: Panorama from the site's western track looking north over the Walker Bay Nature Reserve.

Looking south from the dunes the site is less complex having a sweeping slope up to the horizon ridge. **A more conventional layout would be acceptable here. The change from rural/natural to housing will be marked.**

Photograph 4-31: Panorama from the site's western track looking south across the site's central portion between the mountains and the sea.

Updated Views From Walker Bay Nature Reserve (January 2013)

The following photographs were taken in a recent visit to site to check on the conditions since the original site inspection of 2007. The area has not changed although there is little sign of the great fire five years on.

Photograph 4-32: Panorama over the southern edge of Walker Bay Nature Reserve down to Klipgat Cave and Beach.

This panorama of the Walker Bay Nature Reserve taken five years on shows much the same scene as it did in 2007. The high dunes can be seen in the distance but there is no driving access to the reserve; all is hiking access to the general public. The site cannot be seen at all from this more public area of the reserve at the entrance to Klipgat Cave and Beach. Few people are likely to enter the south-eastern sections of the reserve due to the walking only access and the most beautiful portions of the reserve being along the coast, not inland towards the R43.

Photograph 4-33: View from the car park for Klipgat Cave/Beach showing the high ridgeline that blocks views of the site from the reserve edge.

Photograph 4-34: Panorama of the site's northern boundary from the same point in Walker Bay Nature Reserve looking south.

The above panorama shows the area of Portion 1 being the northern dune fields on site that are the southern outliers of the dunes in the reserve. They end in the south at a high point come ridgeline causing the southern two thirds of the site not to be visible from the reserve at all, not at close distances. Alien invasion by *rooikrans* is also evident and further screens views by its height.

4.6.6 Views from the Area

Views from the area include the long flanks of the site on De Kelders NE edge and the reserve, which we covered in the previous section. Some of these NE edges have also been handled in the previous panoramas. Moving further south to the southwest border of De Kelders one looks into the rich and apparently unburnt fynbos of the site (Photograph 4-35). Tragically, the largest shrubs visible are not natural but alien *rooikrans*. These need urgent attention. **A local ridgeline at this point also restricts views into the depths of the site.** This is the southern section of the site that is cut off from the NW view (Photograph 4-31) by the ridgeline and screens views into the site here. Moving further south along this edge (Photograph 4-36) one finds another ridgeline screening views far into the site. The gardens and walls in the properties on the RHS show how urbanised and denaturalised sites and edges can become if not guided.

Photograph 4-35: Panorama from the southwest portion of the site showing the beautiful but invaded fynbos here with mountain backdrop.

Photograph 4-36: Panorama from the far southwest portion of the site showing a local ridge that screens most of the site.

As one moves south down the western edge of the site one moves into the mowed area at the entrance to the town. This is unfortunate as it creates a glaring blonde grassy edge with reduced species richness and should be discourage. There is extensive alien *rooikrans* invasion here evident as the dark green backdrop between the grass and the mountain that is visually concealed by the tall bushes and trees.

Photograph 4-37: Panorama from further south showing a grassy kind of degraded mowed strandveld with tall alien vegetation behind.

Updated Views from the Area (January 2013)

Some updated views of the site are shown in this section. This view is taken from Normandie Street near the entrance to the reserve and shows the southern part of the proposed Portion 3 of the site that is reserved for Public Open Space. There are some aliens but overall the vegetation looks high quality; more aliens occur further south in Portion 1, which is to be developed. The track in the distance (photograph 3) is where the next photograph is taken from; the proposed connector off the R43 to Eeden Street.

Photograph 4-38: Panorama from the site's western track looking south just south of the dune fields in the southern part of Portion 3.

Photograph 4-39: Panorama from the site's western track looking north across the site's northern portion towards the Walker Bay Nature Reserve (not visible from here).

The above and below photographs are taken from near Eeden Road which is the connector and future boundary Portions 2 and 3; thus above shows Portion 3 and below shows Portion 2 as seen from within the site near the track that runs down its western side. Note the lush natural vegetation (and comparison to the denuded firebreak). This entire zone is set aside for either Public (above) or Private (below) Open Space although the latter was originally intended for future development.

Photograph 4-40: Panorama from the site's western track looking south across the site's south central portion (adjacent Eeden St).

Views along Streets

Photograph 4-41: Panorama from further south showing a grassy kind of degraded mowed strandveld with tall alien vegetation behind.

Finally, in looking at views from the area we consider views as one travels around the streets of De Kelders. Orientation is a key consideration in knowing which streets will have views of the site. Firstly, the street must point at the site somehow and, secondly, you must be looking in the direction of the site and not away from it in order to see it. Therefore, in looking at the street grid of northern De Kelders we can see and predict that the coastal drive along the town's western edge does not point at the site but at its top NW corner. Therefore views from this street will not be possible except perhaps over housetops as elevation allows.

The remainder of the long roads point obliquely towards the site with those shorter roads on the east side or those nearer the north having clearer views when travelling or looking NE up them. Besides this theoretical view possibility, local topography and street-side structures, walls, houses and vegetation typically obscure views within built-up areas. Therefore, views up streets towards the site are generally fragmented, partial and quite small the further one is from site. Nevertheless, what is currently a rural/natural backdrop or terminus of these views will become suburban. This is unavoidable although the high quantity of open space and planned vegetation should ameliorate this situation in places.

Photograph 4-42: View series travelling north up a central spine road showing the varying views due to ridges and housing alongside.

Views around De Kelders show how some of the site's features may work such as this neighbourhood park or open space which is simply left over fynbos with a ring of houses in elevation.

Photograph 4-43: Left over fynbos park (left) and a very bright red roof over the sea (right).

Roof colour is a strategic choice in these environments. Striking blue and red roofs are not preferred in natural environments although a blue roof in a sky-dominated landscape can be effective.

Red roofs are not desirable in a fynbos setting, rather dull tans, sage or dull lime, lichen and greys. The mix of roof colours in the following first photograph shows how effectively a variety of roof shades is despite the odd blue roof that is at least on a very low building. Massive new structures such as the big brown house (top right) are lacking in trees such as coastal milkwood to seat them into the landscape; this house's solid walls are rather overpowering.

Photograph 4-44: Views along streets in De Kelders are often obscured by sharp ridgelines.

This concludes the visual description of the study area. A visual analysis of the impacts and recommendations for their mitigation follows in the next chapter.

5. Visual Impacts and Mitigation Recommendations

5.1 Summary

The analysis reveals that the project's visibility is mainly visible well within the key 1km range, particularly from the south. A roadside landform along the R43 generally obscures views into the site. The site is split in two by a ridge that screens views from the reserve. SUMMARY ASSESSMENT—VISUAL IMPACT: The proposed development will have moderate impact on the landscape causing noticeable change to the visual environment. SUMMARY ASSESSMENT—VISIBILITY: The development has mixed visual exposure, moderate to high visual absorption capacity, medium landscape compatibility, and is highly to moderately visible. SUMMARY ASSESSMENT—NATURE OF IMPACT: The development's visual impact has local extent, permanent duration, medium intensity, definite probability, and medium significance. Various recommendations are made to guide the development further.

5.2 Introduction

This chapter uses the information collected in the previous chapters in an analysis that identifies and then describes the visual and aesthetic impacts of the project on the environment.

DEFINITION: "Visual impact is defined as a change in the appearance of the landscape as a result of development which can be positive (improvement) or negative (detraction)" (IEA and the Landscape Institute, 1995).

5.2.1 Background

The analysis of impacts is undertaken in a comprehensive manner that investigates potential visual impacts. A detailed methodology is described below which is followed by the impact descriptions accompanied by recommendations to minimise visual impact. Recommendations that are considered particularly urgent or important are printed in **bold,** without suggesting that other recommendations are unimportant.

5.2.2 Key Issues

1. *Khoisan Bay* occurs on the side of the coast R43 on the northern portion of De Kelders but is more visible travelling north than south due to road orientation and raised landforms along the road. There is a brief period when rounding the corner at De Kelders when the southern site comes into view.
2. The site is not easily visible from the scenic coastal drive through De Kelders and is not visible at all from south of the ridge above Skulpiesbaai. While some long roads are oriented towards the site, views are limited and often interrupted by local ridges.
3. The site is large at 110 ha and can nowhere be seen at once except perhaps from the distant mountains. Local topography splits the site between various ridges and obscures views into the site from several locations.
4. At this time alien *rooikrans* also obscures the view in the area along the R43 and in the south where infestation is heaviest. Otherwise, there are no major trees or plantations on site that would obscure views.
5. As the site is a greenfield development there will be a major land use change from natural to housing in a scenic coastal environment which requires guidelines to minimise visual impact and maximise aesthetics.

5.3 Methodology

The methodology for this VIA is based on a combination of traditional techniques and the PGWC Guidelines (November 2005) for VIA. Namely, the site and surrounding areas are visited and investigated with particular reference to visually sensitive sites and by analysis. Views are observed, studied and recorded from these points photographically, where after they are presented as in the previous chapter. A combination mapping technique is used to show the Viewshed (or Visual Catchment Area), Zones of Visual Influence, and strategic viewpoint analysis (see Figure 5-2 below). The viewpoint analysis is not taken further into photomontages for the same reason.

5.3.1 The Visual Assessment

This is quite different to the traditional EIA technique that uses a matrix to systematically identify and classify the project impacts. In this case, lists of criteria are followed with descriptions of visual aspects pertinent to visual impact (remembering the definition of “visual” being broader than simply what can be seen). Then, having identified the visual impacts using this technique they are still addressed with the following criterion in mind:

Does the impact interaction in question merit an impact mitigation guideline or comment in the final report?

Further, the decision is based on whether the activity affects environmental resource *quantity* (i.e. numbers, volumes, etc.), *quality* (i.e. degree of contamination, diversity, etc.) and *viability* (i.e. the ability of the resource to sustain itself). Also unlike the EIA Matrix the VIA Analysis does not focus on all project activities and phases so strongly but has greater emphasis on the Planning and Operational

Phases. This is particularly the case in this level of VIA (see below). The stages of a project are typically:

1. *Planning Phase:* The period during design and planning of the project.
2. *Construction Phase:* The period during construction of the project.
3. *Operational Phase:* The period after commissioning and during the operating lifetime of the project.
4. *Decommissioning Phase:* The period of closing down the project.

The visual environment can be structured into the following components:

1. **Natural Environment:** comprising the *Geomorphology* (geology, soil, land form), *Climate* (atmosphere and water), and *Nature* (vegetation and wildlife).
2. **Cultural Environment:** comprising *Land Use* (urban, rural, agricultural, recreational, etc), the *Buildings* (architecture, engineering, lighting, services), and *History* (ancient, colonial, modern, contemporary).
3. **Visual Environment:** comprising *Views* (aesthetics), *Routes* (scenic, transport), and *Landscapes* (town, country, cultural, natural, mountainous, coastal, etc).

For a higher level of assessment all the visual components would be listed in the above order along the horizontal axis of the matrix with a second matrix showing which impacts could be mitigated. Mitigation can only be achieved if the recommendations in this report are complied with. Commissioning the report and its approval by local government is no guarantee of any mitigation being achieved.

5.3.2 Triggers for Visual Assessment

These have been extracted from the PGWC (November 2005) list of triggers (p 5) with aspects relevant to this project noted in **bold:**

The nature of the receiving environment:

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

The nature of the project:

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

As can be seen, the site falls within an area that could be described as falling within at least 7 of the 10 listed receiving environments, and 4 out of 7 project types that may cause visual impact; both the receiving environment and the project character are critical. The potential impact should therefore be described as **high.** Regarding "the nature of the receiving environment," categories apply to both the site and the area generally.

5.3.3 Key Issues Requiring Specialist Input

The following table helps identify the likely level of impact:

TYPE OF ENVIRONMENT: High to Low Sensitivity	**TYPE OF DEVELOPMENT: Low to High Intensity**				
	Category 1 development	**Category 2 development**	**Category 3 development**	**Category 4 development**	**Category 5 development**
Protected/wild areas of international, national, or regional significance	Moderate visual impact expected	**High visual impact expected**	**High visual impact expected**	**Very high visual impact expected**	**Very high visual impact expected**
Areas or routes of high scenic, cultural, historical significance	Minimal visual impact expected	Moderate visual impact expected	**High visual impact expected**	**High visual impact expected**	**Very high visual impact expected**
Areas or routes of medium scenic, cultural or historical significance	Little or no visual impact expected	Minimal visual impact expected	Moderate visual impact expected	**High visual impact expected**	**High visual impact expected**
Areas or routes of low scenic, cultural, historical significance / disturbed	Little or no visual impact expected. Possible benefits	Little or no visual impact expected	Minimal visual impact expected	Moderate visual impact expected	**High visual impact expected**
Disturbed or degraded sites / run-down urban areas / wasteland	Little or no visual impact expected. Possible benefits	Little or no visual impact expected. Possible benefits	Little or no visual impact expected	Minimal visual impact expected	Moderate visual impact expected

Figure 15: Table of Visual Impacts ex DEA&DP Guidelines.

Furthermore, the PGWC "Categorisation of issues to be addressed by the visual assessment" (Table 1, p 6) identifies the project as **Category 4 development i.e. "medium density residential development,** sports facilities, small-scale commercial facilities / office parks, one-stop petrol stations, light industry and medium-scale infrastructure." Terms are defined as follows (p 7): **"*medium density development*** as generally 1 to 3-storey structures, including cluster development, usually with more than 25% of the area retained as green open space. In the list of "Type of environment" this would be defined as **"areas or routes of *high* scenic, cultural, historical significance."** As it is on the border of a Nature Reserve, the visual impact is **borderline *high – very high.*** This would result in a theoretical possible outcome: ***high* to *very high* visual impact** expected. When considering the following descriptions, we find that the visual impact is also described as **moderate** only because visual impact from the reserve is limited by border topography and the area is already earmarked for such development:

"High visual impact expected:

1. Potential intrusion on protected landscapes or scenic resources;
2. Noticeable change in visual character of the area;
3. Establishes a new precedent for development in the area.

"Moderate visual impact expected:

1. **Potentially some affect on protected landscapes or scenic resources;**
2. **Some change in the visual character of the area;**
3. **Introduces new development or adds to existing development in the area.**

"Minimal visual impact expected:

1. Potentially low level of intrusion on landscapes or scenic resources;
2. Limited change in the visual character of the area;
3. Low-key development, similar in nature to existing development."

"Little or no visual impact expected:

1. Potentially little influence on scenic resources or visual character of the area;
2. Generally compatible with existing development in the area;
3. Possible scope for enhancement of the area."

The following terms are used in the above assessments (p 8):

1. *"Fundamental change* – dominates the view frame and experience of the receptor;
2. ***Noticeable change* – clearly visible within the view frame and experience of the receptor;**
3. *Some change* – recognisable feature within the view frame and experience of the receptor;
4. *Limited change* – not particularly noticeable within the view frame and experience of the receptor;
5. *Generally compatible* – Practically not visible, or blends in with the surroundings."

SUMMARY ASSESSMENT—VISUAL IMPACT: The proposed development will have moderate impact on the landscape causing noticeable change to the visual environment.

This assessment of the impact is confirmed by the following descriptions of the categories of issues:

5.3.4 Level of Assessment

PGWC (November 2005) defines the selection of the appropriate approach to VIA for a moderate visual impact expected as a **Level 3** Visual Assessment (p 13). This is defined as follows:

Approach Type A Assessment: which are relatively large in extent, and involve natural or rural landscapes.

Visual impact assessment report by visual specialist qualified in landscape architecture or environmental planning; preferably affiliated to SACLAP.

Method:

1. Identification of issues raised in scoping phase, and site visit;
2. Description of the receiving environment and the proposed project;
3. Establishment of view catchment area, view corridors, viewpoints and receptors;
4. Indication of potential visual impacts using established criteria;
5. Inclusion of potential lighting impacts at night;
6. Description of alternatives, mitigation measures and monitoring programmes;
7. Review by independent, experienced visual specialist (if required);

A Level 4 VIA for High Impact would require "Complete 3D modelling and simulations, with and without mitigation" in addition to the above. As the nature of impact is of a well-known type (modelling this size of development would be excessive nor substantially aid the impact assessment), we will not produce any 2D-models i.e. photomontages from the significant view points.

5.4 Visual Analysis

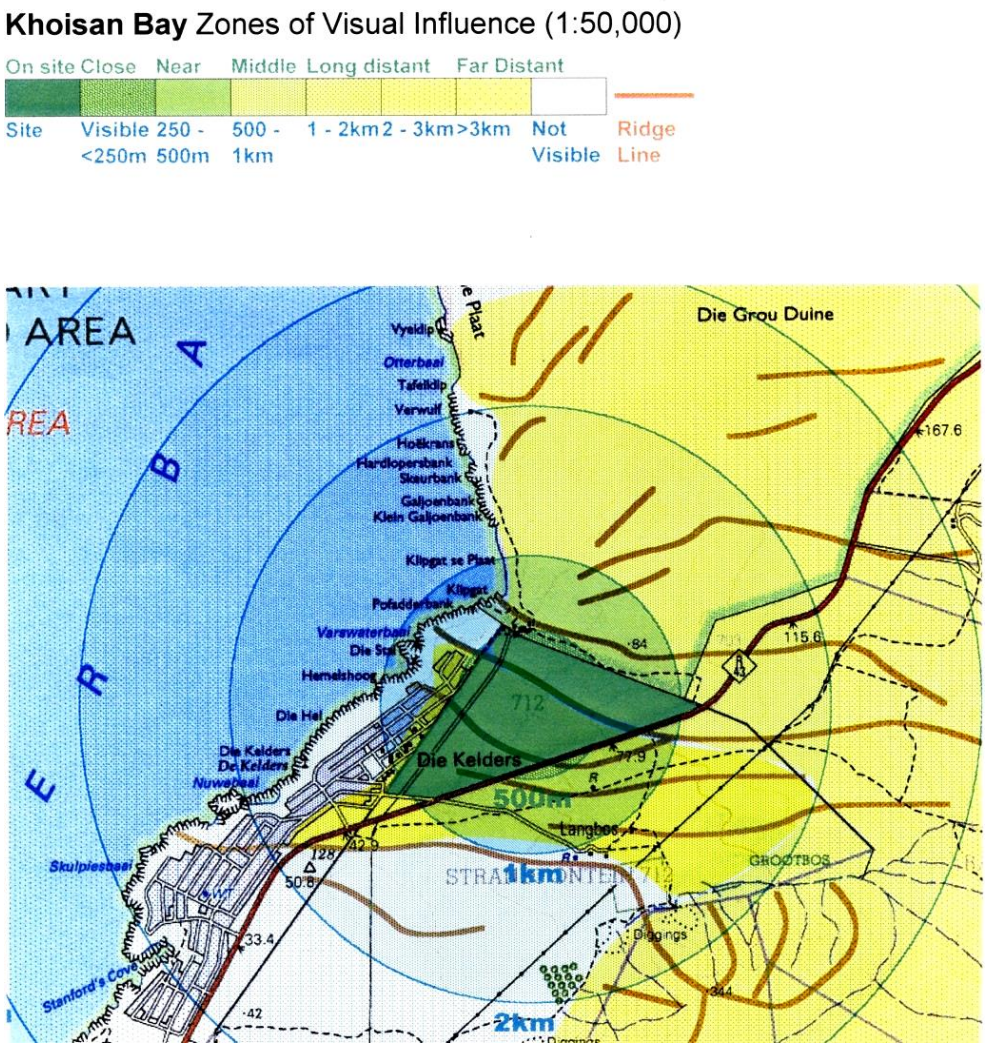
5.4.1 Visual Mapping

This has been mapped in Figure 5-2 below and shows the site's visibility as defined by its Viewshed, Zones of Visual Influence and Viewpoint Analysis. Visual Absorption Capacity (or Visual Sensitivity) is not mapped but discussed below. The mapping technique is a traditional, *reflective* mapping or viewshed mapping that shows where, and to what extent, the site is visible from its surroundings. *Projective* mapping, that is, from viewpoints within the site (inside out) is not required but site views can be seen in the photographs.

5.4.2 Key to the Visual Analysis Map

The Visual Catchment is shown as thick brown lines and approximately follows the ridgelines of the mountains and hills. Areas *theoretically* visible to the site (Zone of Visual Influence or ZVI) are indicated in **yellow** overlain on a radiating circle centred on the site graded from **solid blue** on the site being most visible to no shading beyond 5km visibility. Combined with the yellow ZVI this produces a **green** to **yellow** colour where the site is visible.[7] Areas with no yellow colouring are those where the site is not visible (the view shadow). **It should be noted that the term *theoretically* is significant as it is neither possible nor necessary to physically check all these locations. However, strategic views have been checked according to site inspection and analysis.** Some views that would theoretically be possible are not possible due to ground level screening and the hilly terrain. Urban and suburban buildings and orientation are also important factors in visibility. Radiating circles of concentric rings encompass the site at 1km intervals but including a 250m and 500m circle.

[7] In this case, due to the unusually prominent ridgeline running E – W through the northern portion of the site, we have shown the southern, lower lying viewshed in a darker yellow. This is not to suggest that this view is more prominent, merely to indicate the separation of the site into two major view zones. In the sense that more people will see the views from the south, either from the eastern edge of De Kelders or by-passers travelling from Gansbaai to Stanford, these views will be more common and of more of the site than views from the north.



Source: New World Associates.

Figure 5-2: Visual Analysis: View Shed and Zone of Visual Influence.
Portion of a 1:50,000 map of Gansbaai showing the site's location (3419CB Gansbaai, 4th Edition, 1997) showing the site's Visual Analysis. See above description for the key to the map.

It should be noted that close up views occur only within 100m of the site, that is, from which details can be seen with some accuracy. Near distance views occur up to 250m. Middle distance views are form 250m to 1km. Beyond 1km views are long distance with views from 3km and further far distant. Quantification of terms that have been used in this study is as follows:

Close up views	<100m
Near distance views	100-250m
Middle distance views	250-1km
Long distance views	1-3km
Far distance views	>3km.

5.4.3 Viewshed

The map shows that views of the site are split between a small northern portion and the remainder of the southern portion by a long ridgeline that moves east to west across the road from the mountain and down to the sea. Another ridgeline runs through the south central portion of the site also

E – W. There are, in fact, many more minor ridgelines that are quite significant all around the site, as every dune has a ridgeline on its back. However, due to the mapping scale of 1:50,000 it is not possible to show them at this scale. Overall, there are two major ridgelines that define the southern and northern limits of visibility, only the southern ridge line going through the bend in De Kelders is shown, but another major one occurs just to the north of the shown map at the northern edge of Die Grou Duine. This ridge is visible in the photo views in the report (Photograph 4-14, etc) and is the ridgeline one crosses when travelling south from Stanford when the site and the dunes first comes into view about 5km distant. The site's eastern and western limits are defined by the top of the Franskraal se Berge and the cliffs of the sea respectively.

5.4.4 Zones of Visual Influence

The Zones of Visual Influence (indicated in **green**) reveals two main areas of visibility. A smaller portion to the south of the site shown in darker yellow looks over the southern area of the site and starts as one crosses the southern ridge line through De Kelders. As one rounds the corner of the R43 this portion of the site comes into broadside view for a short moment depending on driving speed and can be seen on entering the town from the south. This area is generally visible from the eastern fringe of the town but not always due to vegetation and dunes on the edge. The site is visible from areas slightly higher and overlooking it, namely, from the land rising up to Franskraal se Berge and up to their top. From the north in the Walker Bay Nature Reserve, only the northern fringe of the site can be seen up to the site's dunes. Some housing is proposed fingering into this zone. These views continue up the coast but are quite limited to the site's NW portion and probably only occur from about De Plaat onwards but that is already long distant. Otherwise, the site is briefly but not clearly seen travelling south down the R43.

5.4.5 Visual Absorption Capacity

The Visual Absorption Capacity (VAC) of the landscape is typically defined by landform, land use and vegetation. In this case, all three apply.

VAC of the Land Form

The split valleys of the site with its northern ridgeline are a major divider splitting views completely between far north and south. Further, there is another ridgeline in the south central portion of the site. Added to this there are many dunes and other hilly landforms across the site, often near the boundaries, which cause the site to be divided into probably very many different visual land units depending on where you are looking from. As can be seen from the map, the site is large at over 2km long along the R43 and over 500m wide at its widest point. This size alone would cause the entire site not to be visible was it flat. However, as the land rises up from the northern entrance to De Kelders this presents a tilted and uplifted view of the site so increasing its visibility. Were it not for its complex landform and edge condition, the site would be even more highly visible from the south.

VAC of the Land Use

As the site is on the edge of a built up township and within the urban edge it nevertheless occurs on a Greenfield location. Thus the transition from urban to rural is marked along the site boundary with De Kelders. However, suburban buildings, walls and gardens, as well as gridiron layout

all act to generally reduce visibility due to incorrect view orientation or ground level obstructions. Thus the VAC of land use is high except on De Kelders north eastern edge.

VAC of the Vegetation

Vegetation is also significant in reducing views, largely due to alien *rooikrans* infestations especially over the southern portion of the site and along the eastern border with the road. This substantially reduces views into the site along these southern edges. Otherwise, the site been covered with low lying natural fynbos and strandveld which typically rises to 1-1.5m, views are not impeded by large trees or plantations of any kind.

5.4.6 Visual Sensitivity

The general area of the site has a mixed VAC from low through high as described above. Views from the north in the Walker Bay Nature Reserve are generally unimpeded but reduced to a small northern portion of the site. Views from the south are quite open but the viewing route on the corner of the R43 and northern entrance to De Kelders is quite short. Thus prominent views of the site are largely restricted to the more commonly and briefly seen southern edge, and to a lesser extent from the more rarely traversed reserve. Despite its size, the area is not highly visible for long periods or over wide areas from nearby. As the area is an expansion of an existing township it will be a logical extension and not out of place in that sense.

5.4.7 VIA Criteria and Assessment

The PGWC Guideline (June 2005, pp 18-19) defines Visual Impact Assessment Criteria as outlined following. We have included our assessment of the visual impact here along with the assessment criteria for ease of relating to the complex of terminology:

Specific Criteria for VIAs[8]—Visibility

The following analysis presents the specific criteria findings in bold for the project.

Visual exposure of the area: the geographic area from which the project will be visible, or view catchment area.

1. ***High visual exposure* – covers a large area (e.g. several square kilometres).**
2. ***Moderate visual exposure* – covers an intermediate area (e.g. several hectares).**
3. ***Low visual exposure* – covers a small area around the project site.**

[8] *Note 1:* These, as well as any additional criteria, need to be customised for different project assessments. *Note 2:* Various components of the project, such as the structures, lighting or power lines, may have to be rated separately, as one component may have fewer visual impacts than another. This could have implications when formulating alternatives and mitigations.

Visual absorption capacity (VAC): the potential of the landscape to conceal the proposed project, i.e.

1. ***High VAC* – e.g. effective screening by topography and vegetation;**
2. ***Moderate VAC* – e.g. partial screening by topography and vegetation;**
3. *Low VAC* – e.g. little screening by topography or vegetation.

Landscape integrity: the compatibility or congruence of the project with the qualities of the existing landscape or townscape, or the 'sense of place.'

1. *Low compatibility* – visually intrudes, or is discordant with the surroundings;
2. ***Medium compatibility* – partially fits into the surroundings, but clearly noticeable;**
3. *High compatibility* – blends in well with the surroundings.

Visibility of the project: based on distance from the project to selected viewpoints i.e.:

1. ***Highly visible* – dominant or clearly noticeable (e.g. 0 to 1km)**
2. ***Moderately visible* – recognisable to the viewer (e.g. 1 to 2km);**
3. *Marginally visible* – not particularly noticeable to the viewer (e.g. 2km+);

SUMMARY ASSESSMENT—VISIBILITY: The development has mixed visual exposure, moderate to high visual absorption capacity, medium landscape compatibility, and is highly to moderately visible.

The PGWC Guideline further notes: "To aid decision-making, the assessment and reporting of possible impacts requires consistency in the interpretation of impact assessment criteria. Various criteria are defined in the EIA Regulations, such as 'nature', 'extent', 'duration', etc. The interpretation of these criteria for visual assessments is given in Box 11" repeated below:

Criteria Used for the Assessment of Visual Impacts—Visual Impact Assessment

Once again, the following analysis presents the specific criteria findings in bold for the project.

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

Extent: the spatial or geographic area of influence of the visual impact, i.e.:

1. *site-related:* extending only as far as the activity;
2. ***local:* limited to the immediate surroundings;**
3. *regional:* affecting a larger metropolitan or regional area;
4. *national:* affecting large parts of the country;
5. *international:* affecting areas across international boundaries.

Duration: the predicted life-span of the visual impact:

1. *short term,* (e.g. duration of the construction phase);
2. *medium term,* (e.g. duration for screening vegetation to mature);
3. *long term,* (e.g. lifespan of the project);
4. ***permanent,* where time will not mitigate the visual impact.**

Intensity: the magnitude of the impact on views, scenic or cultural resources.

1. *low,* where visual and scenic resources are not affected;
2. ***medium,* where visual and scenic resources are affected to a limited extent;**
3. *high,* where scenic and cultural resources are significantly affected.

Probability: the degree of possibility of the visual impact occurring:

1. *improbable,* where the possibility of the impact occurring is very low;
2. *probable,* where there is a distinct possibility that the impact will occur;
3. *highly probable,* where it is most likely that the impact will occur; or
4. ***definite,* where the impact will occur regardless of any prevention measures.**

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

1. *low,* where it will not have an influence on the decision;
2. ***medium,* where it should have an influence on the decision unless it is mitigated; or**
3. *high,* where it would influence the decision regardless of any possible mitigation.

SUMMARY ASSESSMENT—NATURE OF IMPACT: The development's visual impact has local extent, permanent duration, medium intensity, definite probability, and medium significance.

5.4.8 Distribution of Impacts

"Beneficiaries and losers"[9] (PGWC, p 21) of the project's visual impacts are mainly local as the development will only have high visual impact to the local environment.

5.4.9 Photomontages

Photomontages are generally not required for a Level 3 VIA. The suburb will be visible but not in the same intensity as the existing conventional townships. Its distance from the Walker Bay Nature Reserve and the intervening ridge/s make near distance views largely not possible, especially from well-traversed public areas such as the caves.

[9] Possible better designations are "winners and losers" or "beneficiaries and adversaries" as, so often, objectors become opponents in environmental and visual impact.

5.5 Analysis of Alternatives

At this stage there are no alternatives to consider but the previous significant alternatives were arrived at by the approved method of consultation, public participation and revision. However, the current preferred alternative some five years on, is significantly reduced in extent and so has a much lower visual impact being one-third the size of the earlier proposals. Even were Portion 2 to be developed as residential, this still would not affect views from Walker Bay Nature Reserve due to the distance and the intervening ridgelines.

5.6 Planning Phase Impacts

This is potentially the most significant phase of a Project as it is here that crucial planning and design decisions are taken. **Critical Mitigation Recommendations are noted in bold.**

5.6.1 Planning and Design

There is a conflict between the need to densify urban areas within the urban edge at the same time as maintaining rural character along the urban edge. However, this has to be managed and mitigated. The WC Provincial Urban Edge Guideline has referred to the need **"to manage urban development in such a way that no development would detract from the visual quality of the environment and that all development conform to a characteristic style and urban form that suits the character of the area,"** further stating that **"this implies that edge development should not only be limited to certain areas through inclusion or exclusion, but that edge development should also be subject to urban design guidelines, architectural consideration and general aesthetic treatment" for both natural and built environment** (see section 3.5.1).

Furthermore, the WC Provincial SDF noted *inter alia* the following (see section 3.5.2):

> - It also proposes "to ensure effective management of all municipal functions and facets to ensure equitable and affordable services and amenities and a safe **and aesthetically pleasing urban environment…."**.
> - **Cultural resources acknowledged and protected as the fundamental link with the historical past and a basis for planning and shaping of future urban and rural environments.**
> - **A safe, healthy and aesthetically pleasing urban environment, with the architectural and spatial character depicting the historical and cultural background of the habitat community.**
>
> **Many of these components such as the mountains, farms and historical structures are irreplaceable national assets and accentuate the region's unique character.** For this reason, policy guidelines and actions must be formulated to emphasize, protect and promote these components. **The character, the detail of the towns and any planned changes should thus be carefully considered."**

Accepting that residential development is necessary and, in this case an approved part of the SDF, then it is the character and layout determined by the visual-aesthetic / landscape analysis that will achieve the balance as best as possible.

Mitigation Recommendation: Planning and Design

Visual Analysis: The new revised SDP and current preferred alternative subdivides and rezones the Portion 2 of Strandfontein 712 into 3 portions, of which only Portion 1 in the southwest will be developed for residential purposes. Portion 2 will be for Private Open Space and Portion 1 for Public Open Space as a buffer against Walker Bay Nature Reserve. This arrangement provides a more than adequate buffer compared to the old scheme, which did not have one. The visual impact of this now much-reduced extension is proportionately lower being about one third of the old scheme while the visibility of the site, being fragmented by topography, remains relatively low and local.

Aesthetic Analysis: Notwithstanding the reductions made to overall scheme size and, hence, visibility, on an aesthetic level the layout could be improved. There does not seem to be a simple connection of the streets into the new extension and the alignment seems to relate more to the R43 than to the existing suburb. Furthermore, there seems to be no incorporation of the complex landforms or rich vegetation on site into the proposals; open spaces seem to be fragmented corners that will be hard to landscape or retain as natural. No design reference to the rich natural environment is obvious. Also, no architectural or landscape guidelines have been developed. Finally, there are numerous hard edges exposed to the road and open space from the back walls of erwen.

The planners' response was that as the scheme was already agreed with DEA&DP and had already been approved by NEMA, changes to the SDP could trigger additional listed activities so changes to the SDP were not possible. Further, the great contraction of the developable area to about one third meant the site was very tightly constrained for options. Our initial recommendation is given in the footnote.[10] We have modified it slightly to cover future SDP applications for the four development nodes:

1. *FUTURE NODE SDP LAYOUTS TO REFLECT THE CONTEXT:[11]

    1.1 The SDP should be revised to take cognisance of the landform and vegetation as well as the existing grid where possible.

    1.2 High points on dunes should not be developed but left as open spaces to avoid houses being built on high ground.

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1. [10] *REVISE LAYOUT TO REFLECT THE CONTEXT:[10]

    1.1 The SDP should be revised to take cognisance of the landform and vegetation as well as the existing grid.

    1.2 High points on dunes should not be developed but left as open spaces to avoid houses being built on high ground.

    1.3 High points, special vegetation, rocky outcrops, etc should be used as the focus of local open space.

    1.4 A road edge should contain the suburb, not erwen, to prevent backyard walls being exposed to open space views and the scenic R43.

[11] REVISIONS AND GUIDELINES TO BE REVIEWED: by the Visual Planner.

1.3 High points, special vegetation, rocky outcrops, etc should be used as the focus of local open space.

1.4 A road edge should contain the suburb, not erwen, to prevent backyard walls being exposed to open space views and the scenic R43 where possible; otherwise see Recommendation 3: Natural Perimeter Boundary Zones.

1.5 A landscape sense should be built into the design be it in the conservation of natural vegetation or the creation of landscape zones including road reserves wide enough for street trees.

2. PERIMETER BUFFER ZONE: This has been well achieved along the R43, which fortuitously has a hilly landform along its edge (possibly from road construction), and in the generous Public Open Space in the north. However, the planned backyard fences along it detract; mention is made of Milkwoods in the report and these could be planted to screen the scheme from the road.

3. NATURAL PERIMETER BOUNDARY ZONES: The old scheme's guidelines handled these well (we think) but generally, on the Portion 1's boundary, particularly towards the open space to the north and the R43 to the south, this should be a natural boundary of dunes and planting, not actual fences. If required these should be carefully concealed and minimal, possibly electric or vined wooden fencing of some sort. No mowing of the edges in swathes please! The new scheme should work from these in developing its own guidelines.

4. *ARCHITECTURAL GUIDELINES:[12] Need to be prepared. Architectural style was well defined by the Landscape Architect in the old scheme. An appropriately Cape-styled, small scale will be more acceptable. Two sets of guidelines are required, one for single residential and one for the other residential types. This should outline a more natural building approach that is low slung to minimise visual impact and carefully sited for the same reason. Each erf should have a plan of its setbacks and provided and controls for its buildings to minimise visual impact and maximise natural site protection. Typical erf layouts can be prepared as well showing general arrangements of site usage but where dunes are involved these should be specifically drawn up as described.

5. BUILDING COLOUR AND ROOFSCAPE: Building colour should be developed from a blend of several complementary colours in the medium tone range, not white and pale shades, as these stand out strongly in the landscape especially *en masse*. Likewise, roofs should not be uniform in colour but from a complementary range of colours in the mid-dark tonal range. Overall, considering the strong rural character of the site and its rich vegetation, a more natural range of colours would help to seat the scheme quietly in the landscape. No white walls please.

6. *LANDSCAPE PLAN AND GUIDELINES:[13] A landscape plan and guidelines should be prepared by a registered Landscape Architect and include some typical model erf designs to

[12] REVISIONS AND GUIDELINES TO BE REVIEWED: by the Visual Planner.
[13] REVISIONS AND GUIDELINES TO BE REVIEWED: by the Visual Planner.

guide erf development. Strict controls on the image must be enforced to retain a natural landscape throughout would be an appropriate planting and sustainable theme for a Greenfield site. Interpretive facilities for the local heritage, archaeological, vegetation, wildlife, ecology, etc should be built into the open space system which we really hope will be built with all the paths, etc (preferably wood). Dangerous places where muggings, etc can occur must be carefully planned against.

7. MINIMISE ERF FENCING AND GARDENING: These are also well described by the Landscape Architects of the old scheme and are critical to achieving the less conventional suburb than that existing in De Kelders. If possible, erf boundaries should be avoided completely with limited yards to contain pets. The idea of a continuous fynbos – strandveld wild garden permeating the entire scheme with no borders into the public open space system is highly desirable if achievable. More subtle electric fencing can be used to delimit erf boundaries or very low walls of 500m or less. The new scheme should work from these in developing its own guidelines.

8. WOODEN DECKS AND RUSTIC FENCES: Wooden paths and decks will be highly desirable in this undulating landscape where houses will be hanging on dune sides with landscapes falling away below them. Natural stone paving is preferable to fake concrete products. Some rustic fence types should be developed, perhaps out of entwined vines or bunches of sticks. A variety of types will help create choice and inspire people away from conventional 4-foot, unpainted precast walls.

9. LIGHTING: is an issue in a rural landscape so should be carefully designed to be subtle and low key. Mast lighting and floodlighting off pole tops are not preferred while lighting along the edges should be reduced as far as possible to prevent spill-over into the darkness at night time. Covers should be used on lights to direct light downwards where required along paths.

10. *REVISIONS AND GUIDELINES TO BE REVIEWED: by the Visual Planner.

5.7 Construction Phase Impacts

Construction Phase visual impacts are no more than normal for an urban site.

5.7.1 Construction

Construction inevitably gives rise to noise, disruption and dust, amongst others. These are well covered by Municipal Bylaws. Site destruction and damage is also coincident with building especially to soil and vegetation, which in this case the latter is extremely sensitive. Changes to the water table by excavations can also have a heavy impact on the trees with deaths occurring a few years later.

Mitigation Recommendation: Construction

1. DAMAGE: All parties must make every effort to control the destruction of soils and vegetation on site, especially any natural vegetation. These must not be damaged under any circumstances.

2. POLLUTION: Chemical damage by cement mixing directly on the ground and by diesel, etc spills must also be prevented at all costs, as should vandalism of the plants and accidental

damage to limbs by workers and machinery. Fires must be prevented also at all costs in all areas. Penalties and incentives should be implemented as can fencing off areas.

3. MONITORIING: Monitoring of the landscape, soils and vegetation during construction is very important and must be attended to regularly. Damage to some is all too inevitable and often irreversible. Adequate indigenous (preferably endemic) vegetation must be planted.

5.8 Operation Phase Impacts

Lighting, landscape maintenance and conservation management are discussed.

5.8.1 Lighting

The Architectural and Landscape Guidelines need to consider lighting in their specific guidelines. The impact of the prison's searchlights has had a big impact on the town's night scene and shows what an effect excessive and insensitive lighting can have. Security lighting while necessary can be handled with care.

Mitigation Recommendation: Lighting

1. SUBTLE LIGHTING: The provision of suitable lighting that does not conflict with a rural suburban character is necessary. Excessive flood lighting and out-of-keeping street lighting should be avoided.

5.8.2 Conservation Management and Landscape Maintenance

The town's water situation and arid summer climate should be considered in any landscaping scheme. However, local water supplies are probably excellent and should allow water hungry species.

Mitigation Recommendation: Conservation Management and Landscape Maintenance

1. ENDEMIC PLANTING: The use of locally appropriate species is encouraged and the introduction of indigenous trees into the existing framework.

5.9 Decommissioning Phase Impacts

Ongoing landscape maintenance and conservation management remains necessary.

5.9.1 Refurbishment and Resale

This is a continuing aspect of the property ownership cycle.

Mitigation Recommendation: Refurbishment and Resale

1. The previous recommendations regarding Planning, Construction and Operation all apply to this process.

This concludes the analysis of impacts and detailed recommendations for their mitigation. The chapter, Visual Management and Monitoring Plan follows. It gives recommendations for the management and monitoring of the environment and the given VIA recommendations.

6. Visual Management and Monitoring Plan

Sound Visual Management is the ultimate aim of the VIA process. The Mitigation Recommendations developed in the report need to be implemented. This process of implementation will occur throughout the lifetime of the project, hence, the need for a Monitoring Plan. Institutions, individuals and organisations referred in the Monitoring Plan must develop a means of achieving the monitoring otherwise this report serves no purpose. ***Once the VIA Report has been approved, the Developers must seek the implementation of the recommendations as soon as possible.***

6.1 Introduction

This chapter uses the information developed in the previous section. It sets out a basic plan for the implementation of both site management and the VIA recommendations.

6.1.1 Background

Site management in this case refers to that aspect of project management needed to control visual impact. The tools for visual management developed in the VIA Report are the *Mitigation Recommendations.* Their implementation also needs to be managed as part of the ongoing site and impact management. A particular aspect of site management is monitoring. Monitoring is the routine inspection, recording and reporting of visual issues pertaining to visual impact aimed at mitigating impact by timely correction of problems as they arise.

6.1.2 Key Issues

1. Monitoring is typically routine inspection with physical analysis and recommendation, or routine reporting by various combinations of parties as outlined. The ongoing monitoring of various aspects of the project are critical to its success. Long term management of visual issues is a more challenging issue that comes down to what individuals do over time as allowed to by their local authority.

2. With the identification of monitoring method, analysis and reporting, is the identification of the responsible party as indicated in Figure 6-1: Visual Monitoring Plan. This figure is crucial in the

successful implementation of the Mitigation Recommendations and consequently, a visually-friendly (or visually responsible) project. The key parties referred to in the Monitoring Plan are largely the Developers/Owners, the Designers, and the Planning Authorities.

3. **Once the VIA Report has been approved, the Developer must seek the implementation of the recommendations as soon as possible. The Developer and Designers need to take this document and embody it in their day-to-day operations and long-term plans. Mitigation Recommendations are all written specifically around the subject of project and site management for impact mitigation; it is their incorporation into overall project management policy and practice that is required.**

6.2 Visual Management

6.2.1 Project and Site Management

The management of the project and site with particular reference to visual concerns is the subject of the Mitigation Recommendations and, indeed, the whole VIA study. As the Mitigation Recommendations are all written specifically around the subject of project and site management for impact mitigation; it is their incorporation into overall project management policy and practice that is required. The information contained in the VIA Report effectively provides the necessary information for the project management to implement their project in an visually responsible manner.

6.2.2 Implementing the VIA Recommendations

The Mitigation Recommendations have been written as broad guidelines to identify principles for minimising visual impact. The recommendations are by no means specifications. **There is a tendency in the construction industry to damage and repair later which, while possible in construction, is not always possible in the environment. A need for care towards the environment should be developed by the Contractors.** The Development Team needs to take this document and embody it in their planning and design, day-to-day operations and long-term plans.

6.3 Environmental Monitoring

6.3.1 Monitoring Methodology

The framework for administering the implementation of mitigation guidelines is presented in the monitoring plan on the following page (see Figure 6-1: Visual Monitoring Plan). The table comprises the list of project activities numbered in the same sequence as those in the Mitigation Plan. For each project activity, recommendations are made from the following standardised monitoring activities:

6.3.2 Monitoring

The following types and timing of monitoring are suggested:

1. **Inspection:** site inspection (random, at completion), routine inspection (possibly annually), clean-up inspection (after completion of clean up of the accident incident).
2. **Monitoring:** observation (and photography).
3. **Review:** review of reports, plans and design.

6.3.3 Monitoring Plan

The Monitoring Plan has been tabulated for easy reference in the figure below.

Item	Project Component and Activity	Monitoring	Investigation	Reporting	Responsible Party
5.5	**PLANNING PHASE**				
5.5.0	VIA Report	Review	Physical and Recommendation	Recommendation	Planning Authorities
5.5.1	Planning and Design	Review	Physical and Recommendation	Recommendation	Authorities, Developers and Designers
5.6	**CONSTRUCTION PHASE**				
5.6.1	Construction	Site and Routine Inspection	Physical and Recommendation	Recommendation	ALL
5.7	**OPERATION PHASE**				
5.7.1	Lighting	Routine Inspection	Physical and Recommendation	Routine, *Ad hoc* Meeting	Owners, Authorities
5.7.2	Conservation Management and Landscape Maintenance	Routine Inspection	Physical and Recommendation	Routine, *Ad hoc* Meeting	Owners, Authorities
5.8	**DECOMMISSIONING**				
5.8.1	Refurbishment	Site Inspection	Physical and Recommendation	Routine, *Ad hoc*	Owner, Authorities

Figure 6-1: Visual Monitoring Plan.

6.3.4 Analysis

The following types of analyses are recommended:

1. **Physical:** on site and by photography.
2. **Recommendation:** check against VIA recommendation.

6.3.5 Reporting

The following methods of recording and reporting are recommended:

1. **Recommendation:** report or design recommendation.
2. **Routine:** log (daily, monthly, activity), report (quarterly), certificate, minutes.
3. ***Ad hoc*:** report (incident, closing).
4. **Meetings:** routine meeting (weekly), follow-up (incident), pro-active meeting (*ad hoc*).

6.3.6 Responsible Party

The following principal responsible parties have been identified as key during the monitoring process:

1. The Planning Authorities
2. The Developers and Owners
3. The Designers: Architects and Landscape Architects
4. The Contractors.

The above monitoring plan identifies who is conducting the prescribed monitoring activities. In cases where certification for compliance or approval are indicated the responsible certifying or approving authority is noted. Many building activities are strictly controlled by local bylaws.

This concludes the main text of the VIA Report.

NWA

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Appendices

Containing the Site Development Report:

NWA

Site Development Report

NWA