

draft

DANGER POINT

PRECINCT DEVELOPMENT PLAN SCENARIOS



August 2013





5. CONCEPT PRECINCT PLAN: SCENARIOS

- 5.1 Introduction
- 5.2 Premise and Principles
- 5.3 Analysis: Opportunities and Constraints
- 5.4 Scenario 1: Do Nothing
- 5.5 Scenario 2: Business as Usual
- 5.6 Scenario 3: MTO Eco-estate
- 5.7 Next Steps

This document is not intended to be complete but to serve as a “straw dog” for input and comment by stakeholders.

LIST OF APPENDICES

- Appendix 1 Zoning and Ownership Details
- Appendix 2 Birkenhead Township General Plan
- Appendix 3 Zoning Scheme Map
- Appendix 4 Zoning Scheme Conditions
- Appendix 5 Towards Design Guidelines for Danger Point

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5.1.1 Purpose of Report

The purpose of this report is to summarise relevant background information and sketch three development scenarios for consideration by stakeholders to identify a preferred scenario for the conceptual precinct plan.

5.1.2 Background

This report forms part of the Conceptual Development Framework stage in the process of preparing the precinct plan, see Figure 5.1 below.

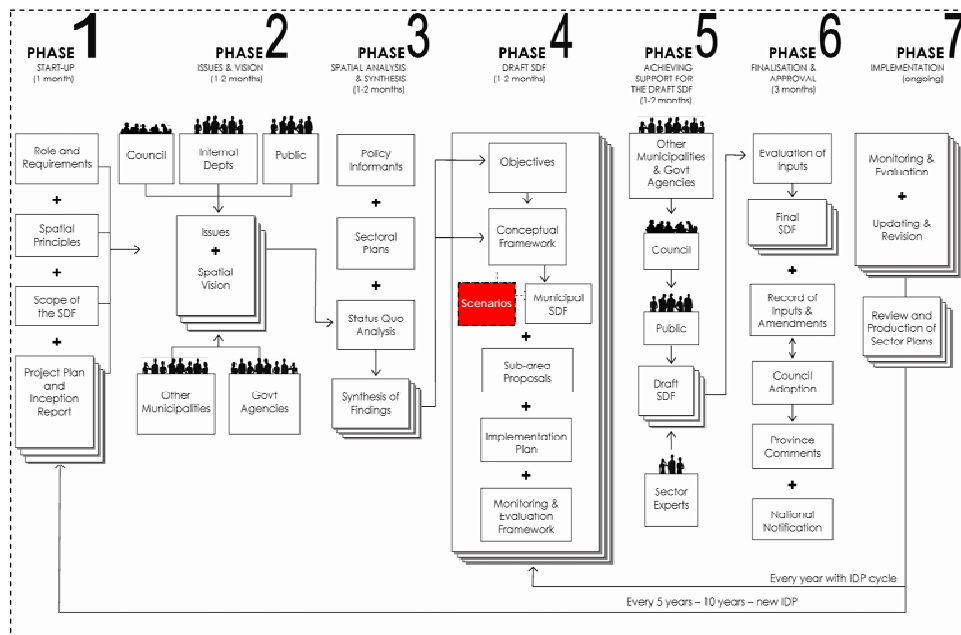


Figure 5.1 Phases in the process of completing an SDF (source: DEADP, 2010)

5.1.3 Structure

NOTE: The document investigates two level of detail: The precinct as a whole and the Birkenhead sub-precinct.

Appendices 1, 2, 3, 4 and 5 contain Property Details, Map, Zoning Scheme Map, Zoning Scheme Conditions and Design Guidelines.

PREMISE

Sensitively designed buildings can enhance rather than detract from wilderness environments.

Urban development in South Africa has generally caused so much resistance because of the insensitive and stylistically bankrupt way in which it has generally been designed.

Alternative service delivery technologies can free up layout design.

Layout form in South Africa has been so repetitive and monotonous because of the requirements of the technologies used to deliver water, waste water and electrical services cost effectively and the uniform standards used to design roads.

If these parameters are changed development can occur both sensitively and cost-effectively.

PRINCIPLES	GOAL	OBJECTIVE
A. Danger Point's value lies in its sense of wilderness and dramatic coastal setting linked to a township overlooked by a mountain relatively close (within ±180km) of a major metropolitan area.	A1 Development should not further undermine the sense of coastal wilderness and scenic quality.	A1.1 Implement strict design guidelines that ensure buildings are largely "invisible in the landscape" by controlling the following: <ul style="list-style-type: none"> • Colours; • Height; • Bulk; • Footprint; • Location; and, • Lighting.
	A2 Permit appropriate levels of development up to the point where the sense of place can be considered to be negatively impacted.	A2.1 Scale of Development: <ul style="list-style-type: none"> • Number of buildings; • Style; • Visual impact; • Tenure; and, • Maximum density.
	A3 Link mountain to ocean as much as possible.	A3.1 Keep biodiversity corridors intact between Mount Dyer and coast especially across R43. A3.2 Create a continuous physical link e.g. trail between mountain and ocean.
B. A balance needs to be found between public safety and providing rightful public access. Particularly on the Danger Point Peninsula where the public is entitled to access to the coastline.	B1 Ensure continued access to the coastline by all those who have always used the area for recreational purposes including fishing and ensure this is safe and secure.	B1.1 Limit vehicle access onto the peninsula south of Romansbaai and Van Dyksbaai to the Danger Point Main Road. B1.2 Vehicle access should be monitored onto the peninsula south of this point.
C. Ownership should be financially sustainable including funding appropriate levels of security and maintenance.	C1 Employ off-grid service technologies that do not require municipal services and have low running costs.	C1.1 Identify a range of acceptable alternative energy, water supply and waste water treatment technologies.
	C2 Quality of development (units) and natural environment should enhance rather than detract from property values.	C2.1 Property values should be enhanced to levels where contributing to levies for security and maintenance are worthwhile.



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a. R43 - van Dyk Street intersection (signage?)



b. Jeep track along power line to Mount Dyer



c. Extensive agriculture along R43



d. View from Mount Dyer (over Franskraal Strand)



e. Tourist economy (resort on Mount Dyer)



f. Intrusion into rural character - unsympathetic security wall



g. Entrance to Melkhoutbos Nature Reserve

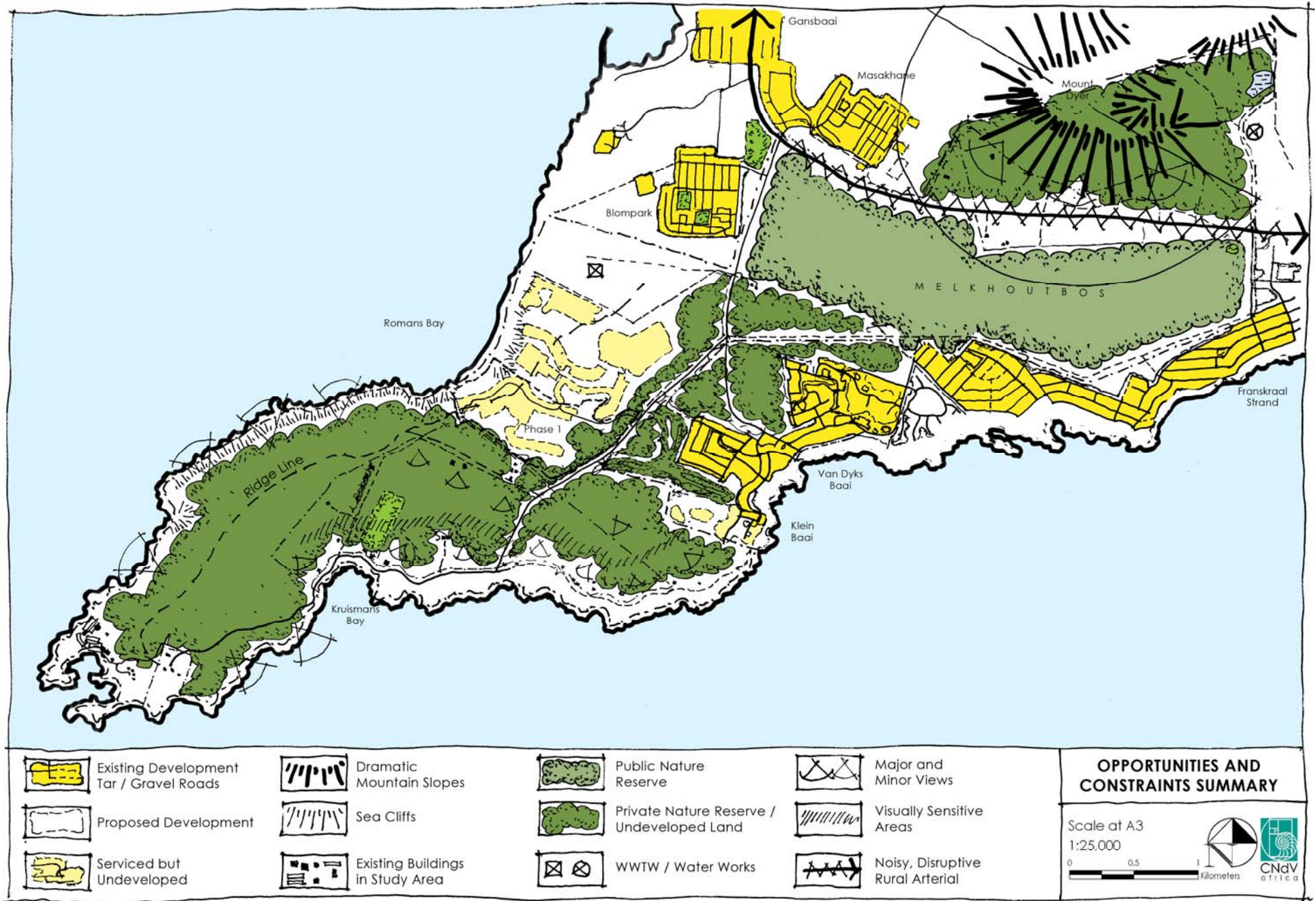


h. Suburban architecture abutting Melkhoutbos Nature Reserve



i. Visual connection between Danger Point Peninsula and Mt Dyer at Van Dyk Street intersection

- Physiologically, precinct is a single mountain to ocean transect from Mount Dyer to coast.
- This relationship has been significantly weakened by:
 - R43 rural arterial road around its base;
 - Nature and form of urban development along coast, particularly van Dyksbaai, especially where it is security walled along the N3, and Blompark.
- The continuity remains visually intact to some extent along Van Dyks Street and Danger Point road. The "Clearvu" fence and setting back of proposed development also helps to retain this connection.
- As a result of the road alignment, pattern of urban development and the topography there are two sub-parts to the precinct:
 - The mountain slopes; and,
 - The peninsula.
- The R43 is the main transport arterial leading to Franskraal Strand and Pearly Beach and passes through a rural section of road abutted by smallholdings. Economic activity in this vicinity is limited to some agricultural activity on a few smallholdings with some offering guest accommodation.
- The intersections along this route could have potential for limited farm stall with safely designed access and parking.
- Mount Dyer offers spectacular views over the entire coastline from Pearly Beach to Hermanus with Danger Point in the foreground.
- It is privately owned and there appears to be very limited tourist activity at present.
- It has important ecological functions as a core biodiversity area providing the source for local rivers and conservation of mountain fynbos.
- Access to the crest appears only possible around the "back" of the mountain from its northern slopes.
- To the south of the R43 the municipally owned, Melkhoutbos Nature Reserve conserves remnants of a Milkwood forest. It forms an important lowland green lung between the mountain and the peninsula.
- Access through this reserve is facilitated by numerous firebelts and local residents from all communities appear to use it for both recreational and commuting (walking).
- South of the Birkenhead sub-precinct the road to Danger Point Lighthouse passes through a wilderness area owned by Irvin and Johnson.
- Access to the coastline in this area is limited from Kruismansbaai, around the point to Romansbaai as a result.
- The lighthouse, which is an important tourist attraction, is closed on the weekends.





Aerial Photo - 2010
Chief Directorate National Geo-Spatial Information

Danger Point Peninsula Precinct Plan

Birkenhead: Aerial Photo

Scale at A3
1:10,000



Legend

-  Proposed Precinct Plan Study Area
-  Cadastral (SG 2012)

Drawn: RE Checked: RE Date: 27-08-2013



Building constructed from local materials



Prominent building on ridge



Coastal view showing impact of building protruding above skyline



Impact of building protruding above skyline and with roof slope opposing contour gradient



High concrete retaining wall devoid of landscaping



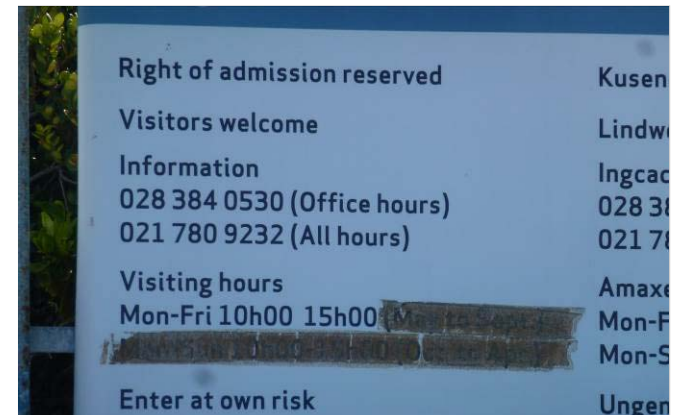
Gate and boundary wall on coastal drive



Heritage building set down in landscape

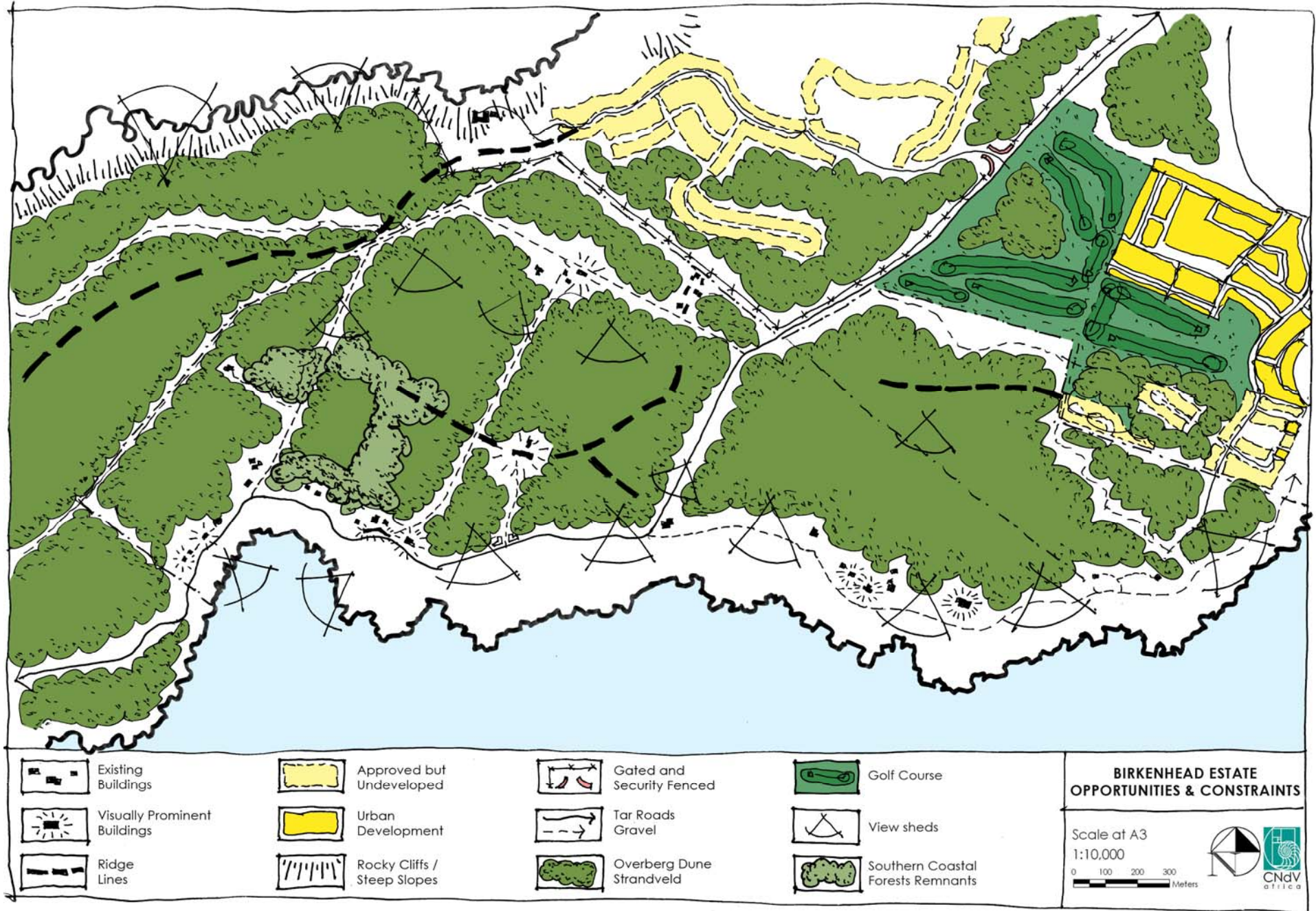


Landscape generally has low visual carrying capacity



Visiting hours: Danger Point Lighthouse

- The Birkenhead Sub-precinct comprises the Birkenhead township first registered in 1940 as well as Portions 16 and 43 of Farm 711.
- To the north and west of Danger Point road is Romansbaai Estate including a partially constructed resort on Portion 40 of Farm 711.
- The main access road through Phase 1 of Romansbaai has been completed and services are currently being installed.
- The western boundary comprises a large privately owned property (Irvin and Johnson (I&J)) which is undeveloped, except for seafood processing infrastructure on the point. It is in effect a nature reserve.
- The northern boundary, east of Danger Point road, abuts a 9 hole golf course, a useful recreational resource in the area, and the suburban development of Van Dyksbaai. Its extensions closest to Birkenhead have been serviced but remain largely undeveloped. There are also two approved but unserviced extensions.
- The sub-precinct is accessed by a tarred road from the R43 to Danger Point lighthouse and two gravel roads, Lord Roberts Drive which forms a crescent accessing the western and northern properties and a gravel coastal road eastwards to Van Dyksbaai.
- Birkenhead sub-precinct comprises a crescent shaped piece of land generally falling southwards towards the coast.
- There is a ridge through the middle of the site on which one dwelling has been prominently located thereby impacting on long seaward views from properties along Lord Roberts Drive.
- Most of the vegetation on the site comprise Southern Dune Strandveld with some remnants of coastal forest near Kruismansbaai. This vegetation, coupled with the relatively level and greatly sloping topography, means that most of the sub-precinct has a low visual carrying capacity.
- Activities at present on site include coastal recreational fishing, visits to Danger Point Lighthouse, commuting to I&J seafood processing, periodic visits from holiday home owners and Birkenhead restaurant.
- There has been very little development to date especially considering the number of properties and the outstanding seaside location.
- This can be considered fortunate as there is still the opportunity to set a positive direction for future development that will enhance rather than detract from the area's scenic, bio-diversity and recreational qualities.
- This is important because a significant minority of the few buildings that have been constructed are visually prominent, and, if this precedent is continued, could undermine the area's scenic and recreational value.
- This is also in danger of being diminished due to safety and security issues. A management system is required to address this while also ensuring the general public access to the coastline.



The current situation continues...

- No clear overall policy direction supported by either a critical mass of self-organised and motivated property owners nor by Council who have many other pressing priority social needs to deal with.
- Individuals either do nothing with their properties because there isn't sufficient value (appearance, safety, appeal) in the area to justify significant expenditure; or

Try and consolidate properties to achieve a size sufficient to create a critical mass of positive qualities.

There is no alternative acceptable policy to providing energy, water supply and waste water treatment services and there are no resources to provide conventional municipal services, either from the Council or the homeowners association.

- This institutional inertia continues throughout the precinct so opportunities such as linking Mount Dyer to the coast, locating the Melkhoutbos Nature reserve as an active link between mountains and sea, and increasing economic opportunities along the R43 are also not promoted.

Note" no drawings have been prepared for this scenario.

- Figure 5.4.2, illustrating precedent to date, gives an indication of how this scenario might unfold.



a. Ad-hoc economic activities



b. Self-guided building designs



c. Individual rather than contextual aesthetic



d. Original wilderness drawcard



e. Individual rather than association management



f. Individual development applications

- Scenario 2 sees the precinct developing along the conventional lines that have characterised development in the area to date.
- These generally comprise designing urban development extensions according to principles necessary for installing full conventional urban services cost effectively. These considerations generally override any informants, urban layouts and buildings that may arise from the context, e.g. steep rocky coastal sites, mountain slopes; biodiversity conservation areas.
- To achieve cost efficiency and keep property prices affordable the following needs to occur:
 - There should be as many connections per linear length of pipe, cable and road as possible, therefore plots should abut one another and have narrow rather than wide frontages;
 - Roads should be double-sided, i.e. properties should face each other;
 - There should be a ring grid network rather than a linear system; and,
 - The more units that can be accommodated the better. Large areas of open space interspersed within a township make it more expensive, therefore open space should be kept to a minimum.
- These principles can be seen underlying:
 - the 2009 Birkenhead Master Plans;
 - Romansbaai, although this has more open space than conventional developments the double sided circular roads are a strong feature and along these roads the experience is likely to be more suburban; and, more obviously
 - The Van Dyksbaai extensions, see Figure 5.5.2.
- The key driver to the “business as usual” approach is that bulk and linking electricity, water supply and waste water treatment services are available. However, even with extremely high development levies it appears that municipalities are increasingly unable to supply these. This has been stated by Council in the case of this precinct plan.
- This scenario is based on individual plot owners doing their own developments when the bulk services are available, rather than working towards an overall plan, see Figure 5.5.3.
- Figures 5.5.3 illustrates how Scenario 2 could develop in the precinct as a whole as well as in the Birkenhead sub-precinct.
- An important assumption is that bulk services can be provided.
- At the precinct level the following could be likely:
 - No access beyond existing individual properties access is permitted along the R43.
 - EIAs are required for development north of R43 and the road makes this not very attractive (a number of these properties are currently for sale) so no development occurs.
 - Bulk services are already available to Romansbaai so properties in the vicinity of the Van Dyk Street and Danger Point road intersection are developed.



a. Romansbaai: use of natural stone



b. Romansbaai: layout



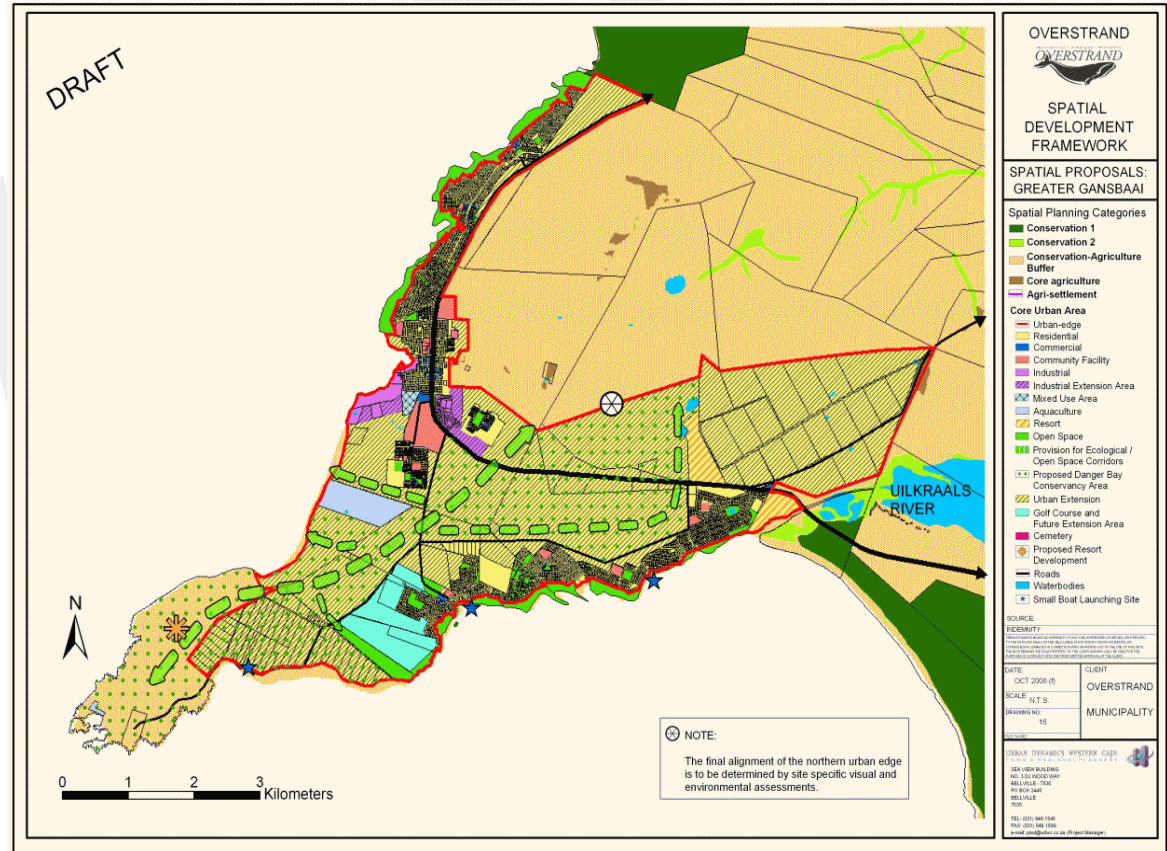
c. Birkenhead Master Plan 2009



d. Van Dyksbaai: suburban aesthetic



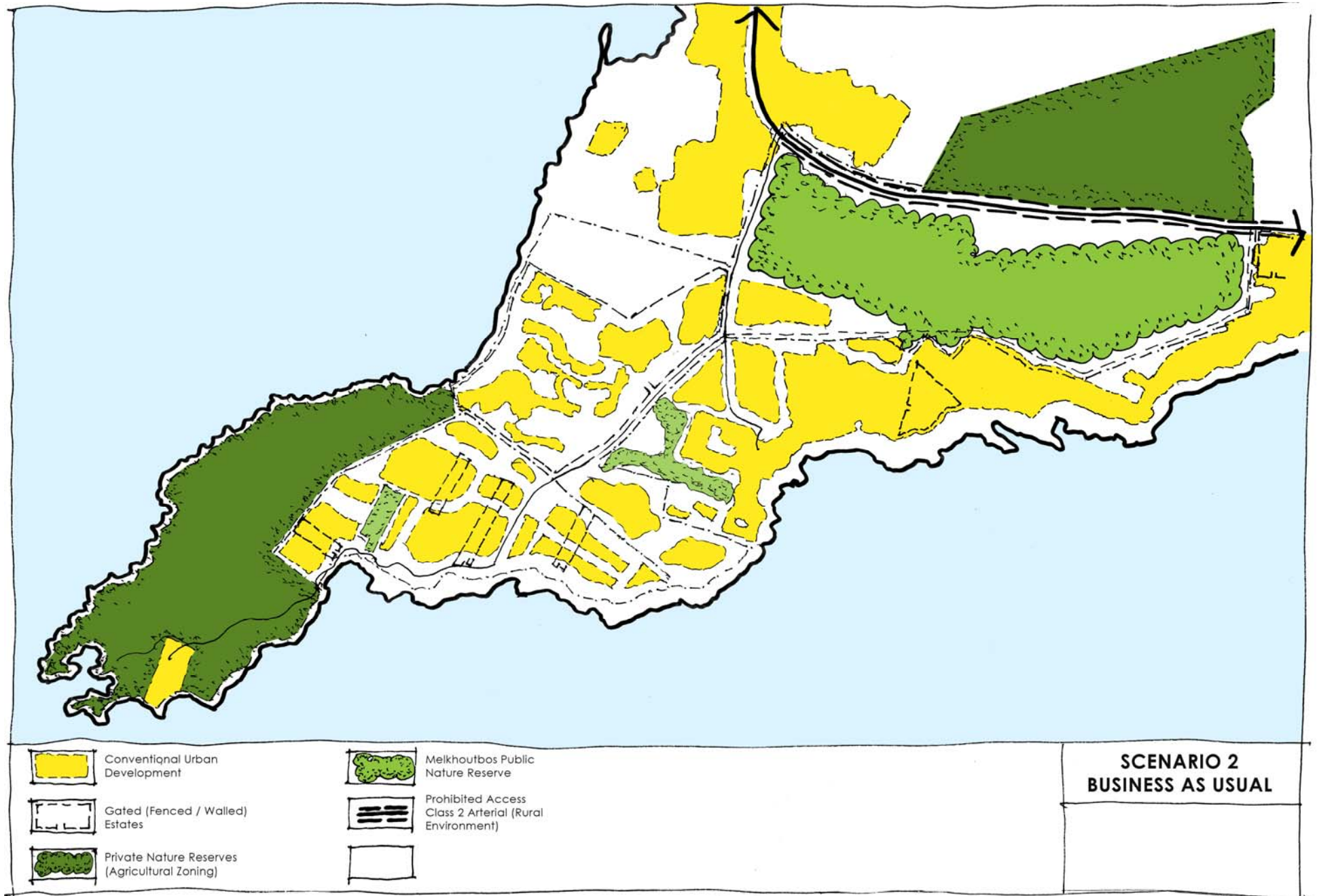
e. Van Dyksbaai: plot and plan



f. Greater Gansbaai: proposed areas for urban extension: SDF 2006



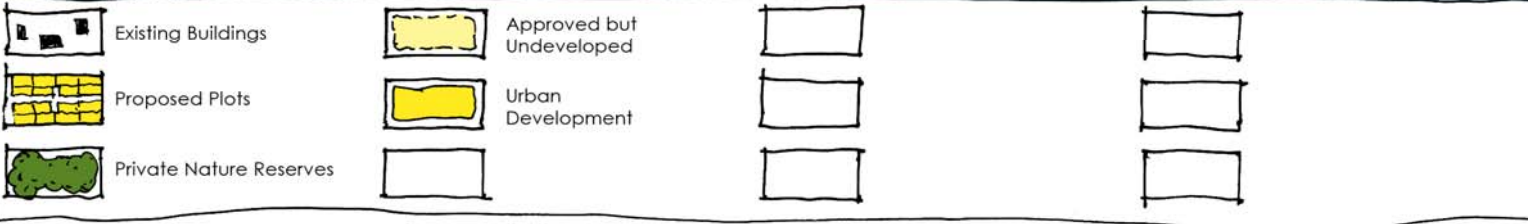
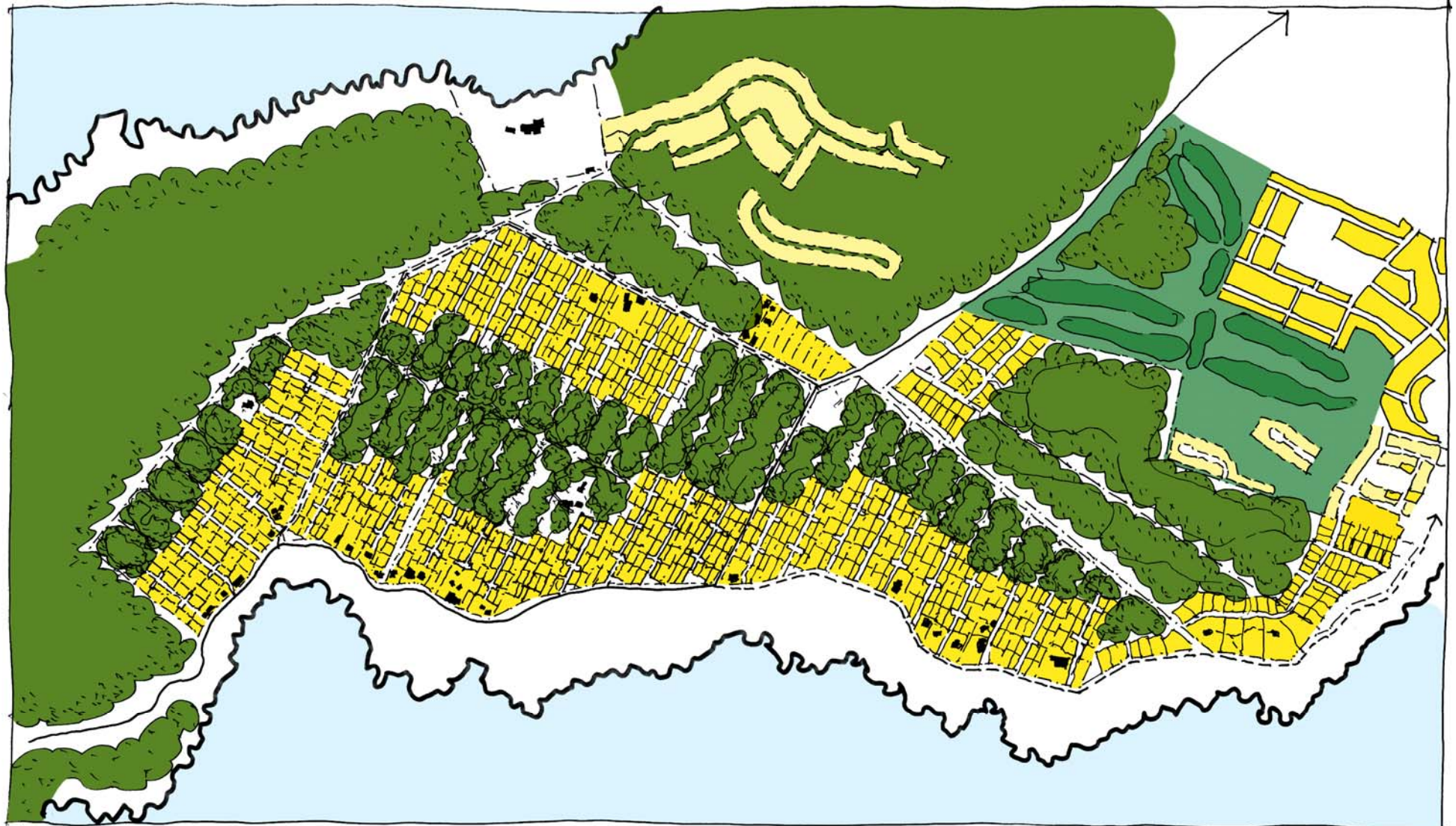
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- With respect to the Birkenhead sub-precinct it follows the guidelines of the 2009 master Plan to a certain extent as an example of “business as usual” thinking:
 - Each property is entitled to \pm 4-5dus/ha;
 - Not more than 50% of each property should be developed; and,
 - Plot sizes should be between 600 – 800m².
- A linking services network with pump stations is installed along Lord Roberts Drive and Danger Point Roads and these roads are upgraded to full municipal services including street lights.
- Figure 5.5.5 shows a possible rather awkward layout on a typical Birkenhead smallholding that could result from attempting to maximise the development potential of the guidelines on an individual plot by plot basis.
- Vehicle access south of Romansbaai / golf course to be limited to Danger Point Road only.
- There should be an access control point for vehicles here.






Figure 5.5.5 Typical Plot Configuration



**SCENARIO 2
BIRKENHEAD SUB-PRECINCT**

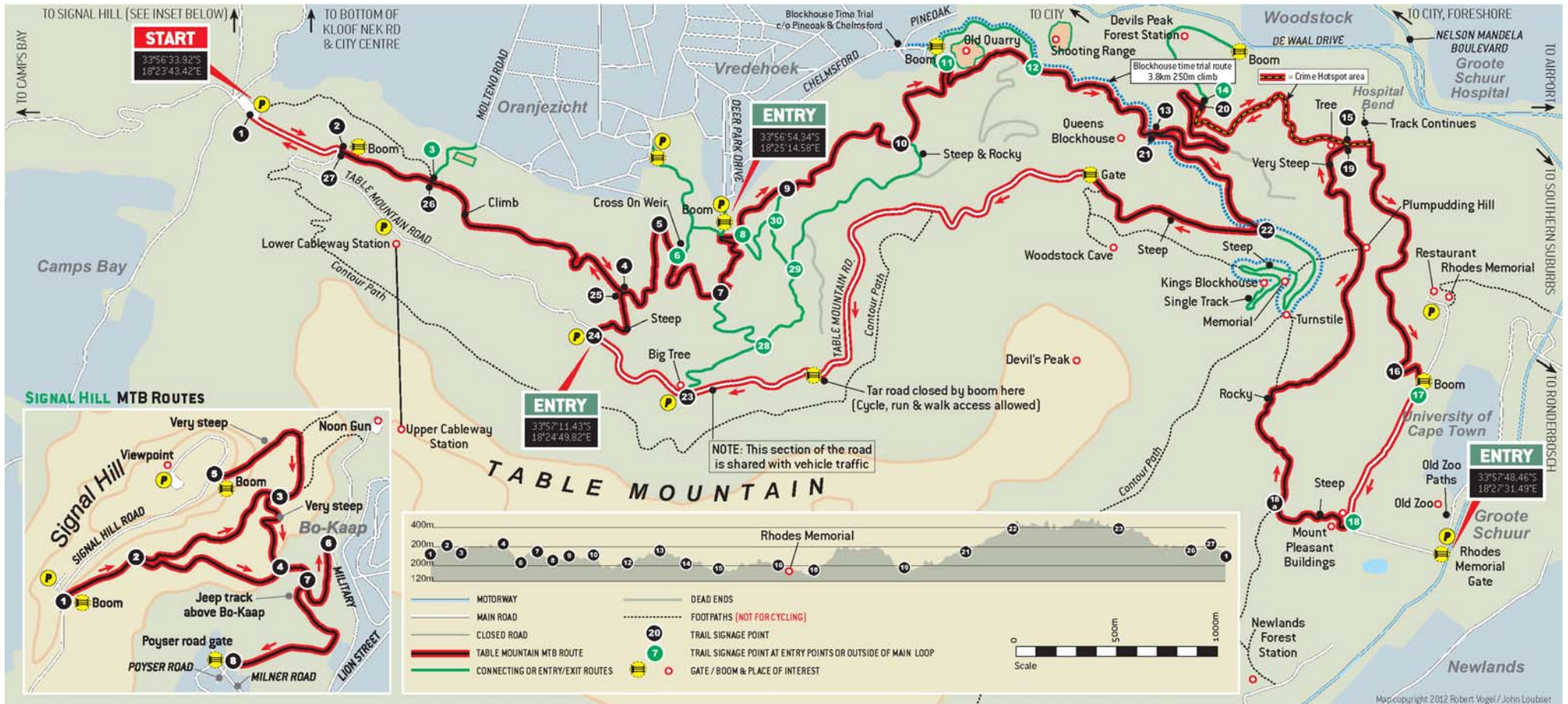
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- Danger Point precinct is an outstanding and dramatic piece of coast stretching from Mount Dyer towering over the coastal plain to the rocky windswept mostly pristine Strandveld of the peninsula strengthening the links between the mountain and coast, visually, and where possible, physically will consolidate and enhance the attractive recreational scenic and biodiversity conservation potential of this relationship.

Main linking element:

- 30km running, walking MTB trail link owners, tourism operation, professional trail design and management company, see Figure 5.6.2.
- If managed well this can have important social and economic benefits as well – access to recreational fishing, tourism and conservation employment opportunities – nearby examples include Grootbos and similar projects.
- Economic opportunities, see Figure 5.6.3:
 - 3 to 4 main resorts, Mt Dyer, 2 to 3 on I&J land – quid pro quo for trail continuity.
 - Precinct guest houses short term accommodation on sub-precinct properties.
 - Farmstalls on R43.
- Figure 5.6.4 illustrates how the whole danger Point Precinct could unfold from Mt Dyer to the coast according to Scenario 3.





Farmstall: R27/Yserfontein



Farmstall: R27/Melkbos



Farmstall: R27 Vygevalley

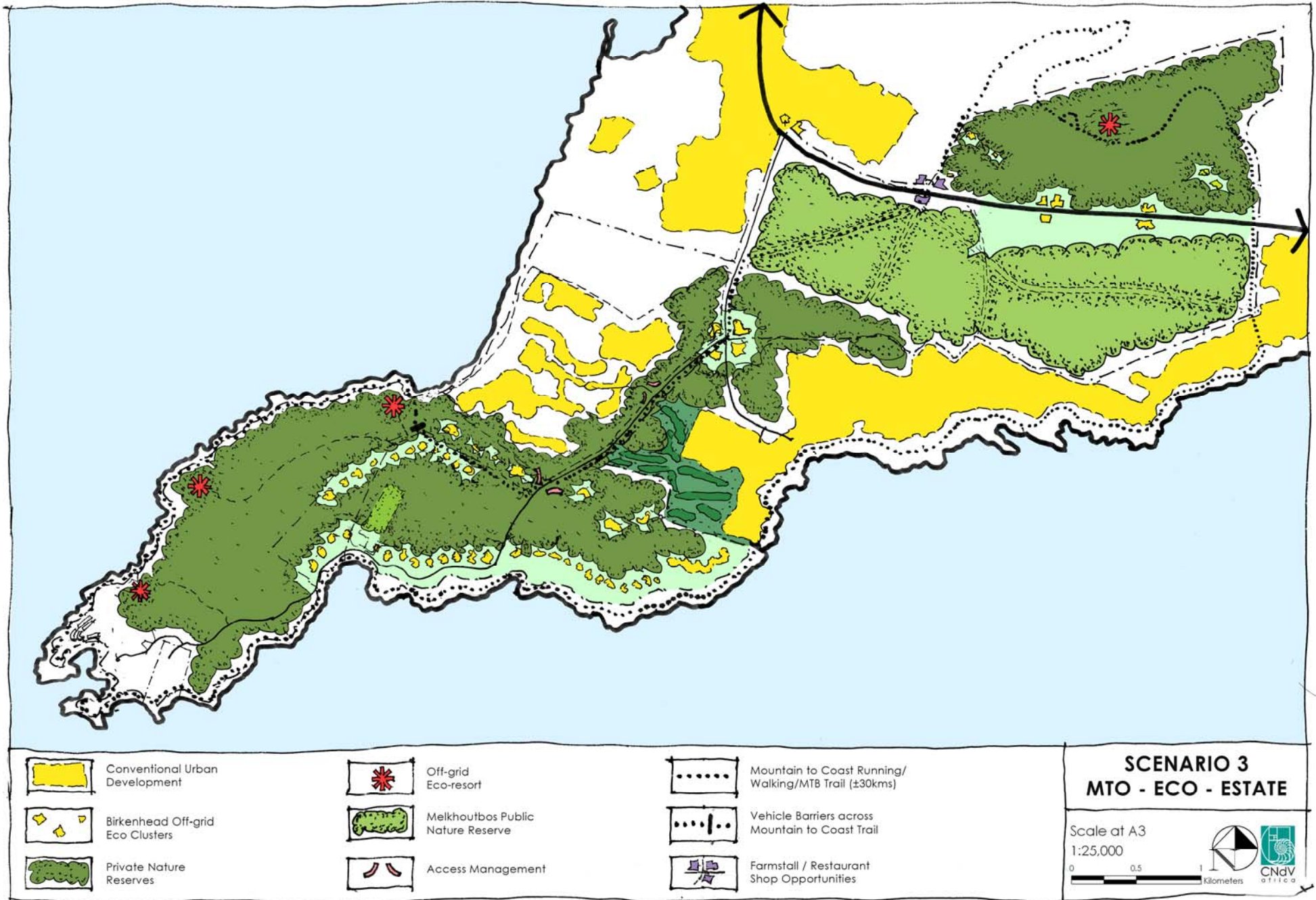


Phantom Beach Resort (previous)



Phantom Forest Mountain resort





At the Birkenhead sub-precinct scale this scenario attempts to address some of the shortcomings of scenario 2; reliance on municipal services, danger of overbuilding and obliteration of environmental qualities.

- Precedent includes:
 - Some aspects of House Fagan: Paradise Beach, see Figure 5.6.6:
 - Single storey
 - Set low in the landscape
 Note: colour palette and design requires review, see some ideas on Figure 5.6.7.
 - Sea Ranch: California, see Figure 5.6.8:
 - Holistic design - from layout to buildings including their sensitive placement in the landscape. (Note: did not have the constraint of multiple awkwardly shaped properties);
 - Careful choice of colour and materials ;
 - Churchhaven: West Coast National Park, see Figure 5.6.9:
 - Careful coastal fishing village design controls;
 - Small units 175m²;
 - All services off-grid, solar PV, solar HWC, rainwater harvesting (waste water conservancy tanks); and,
 - Security challenges.
 - Figures 5.6.6, typical plot, and 5.6.10, overall sub-precinct, illustrate how Scenario 3 could develop in the Birkenhead sub-precinct.
 - Principles include:
 - Appropriate 1du/ha
 - Dwellings limited to 175m²
 - Single storey
 - Off-grid services (Note: Danger Point's rainfall 2-3 times more than Churchhaven)
 - Buildings clustered on one part of the site leaving the remainder to be consolidated into a larger whole
 - Freehold ownership of "island" plots possible with servitude access to nearest public road
 - All owners must be compulsory members of Home Owners Association which should administer estate security (in conjunction with other stakeholders), maintenance and land use and building design control.

Note:

In this scenario the impact of zoning and, therefore, the current rights on the properties has been taken into account as follows:

- Residential and Business sites – to be amended to 1 dwelling unit per hectare;
- Agriculture – development application with EIA to resort and/or residential to be decided.





Close relationship between natural and built environment



Paradise Beach, Langebaan: Impact of overbuilding



Building set low in landscape to minimise visual impact

source: Fagan, G, 2005.
Twenty Cape Houses
(Breestraat Publikasies)



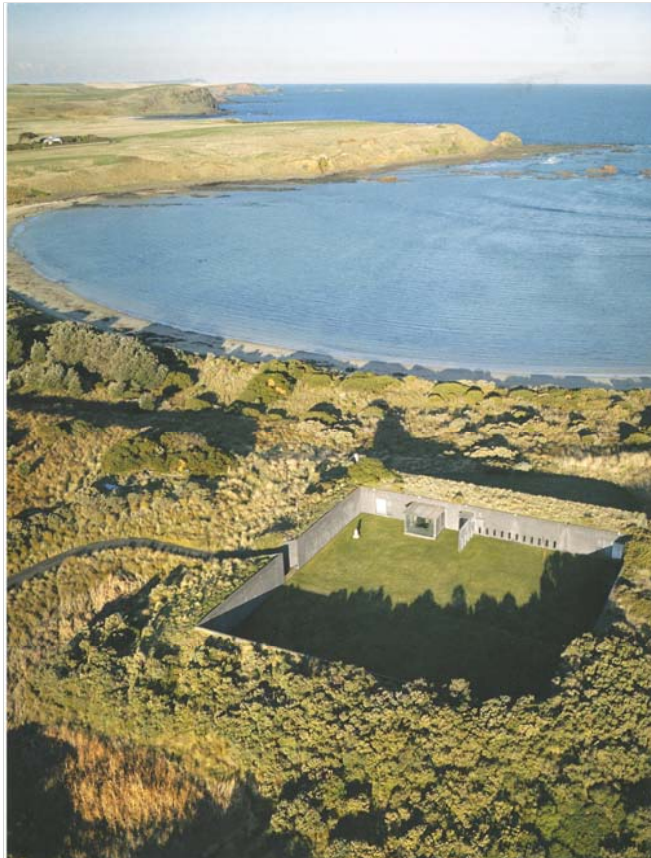
Natural materials blend in well



Light buildings set into the landscape



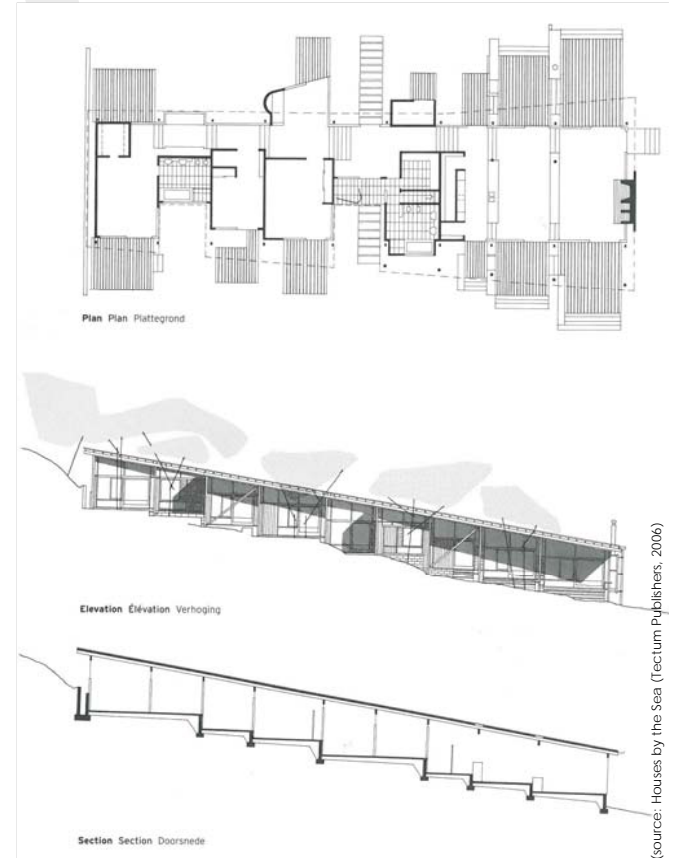
Colours and geometry disrupt natural palette and topography (source: CNdV, 1990)



Minimal disturbance where visual carrying capacity is low

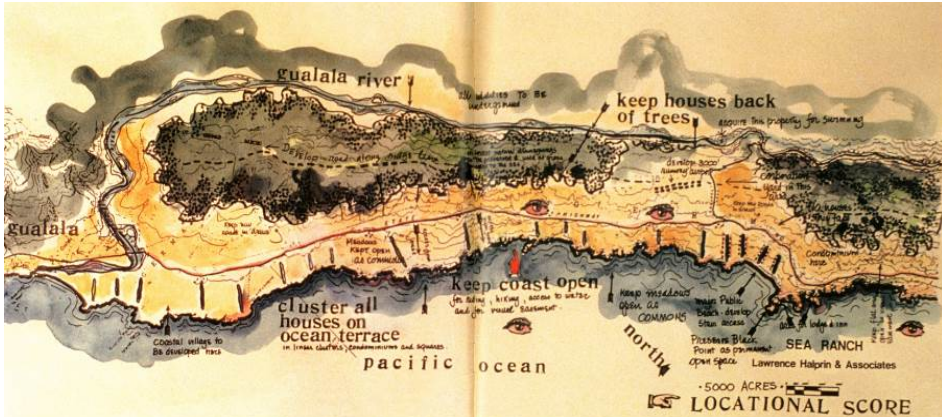


Earth architecture creates minimal visual disruption



(source: Houses by the Sea (Tectum Publishers, 2006)

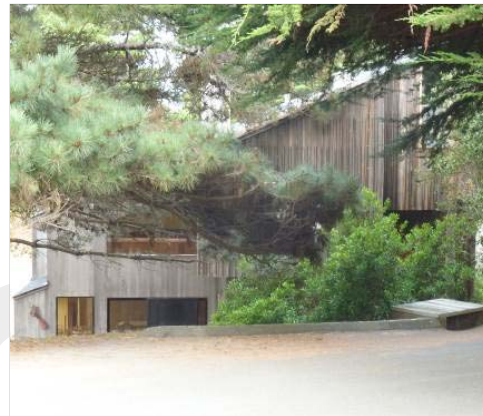
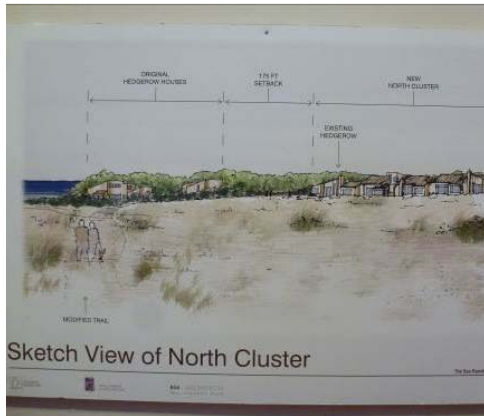
Design aligned with topography



source: Lyndon, D et al. 2004. The Sea Ranch (Princeton Architectural Press)



Buildings arranged to limit visual impact and retain landscape character





Churchhaven: Stoffbergsfontein



West Coast National Park entrance gate



Churchhaven security control



175m² off-grid holiday house



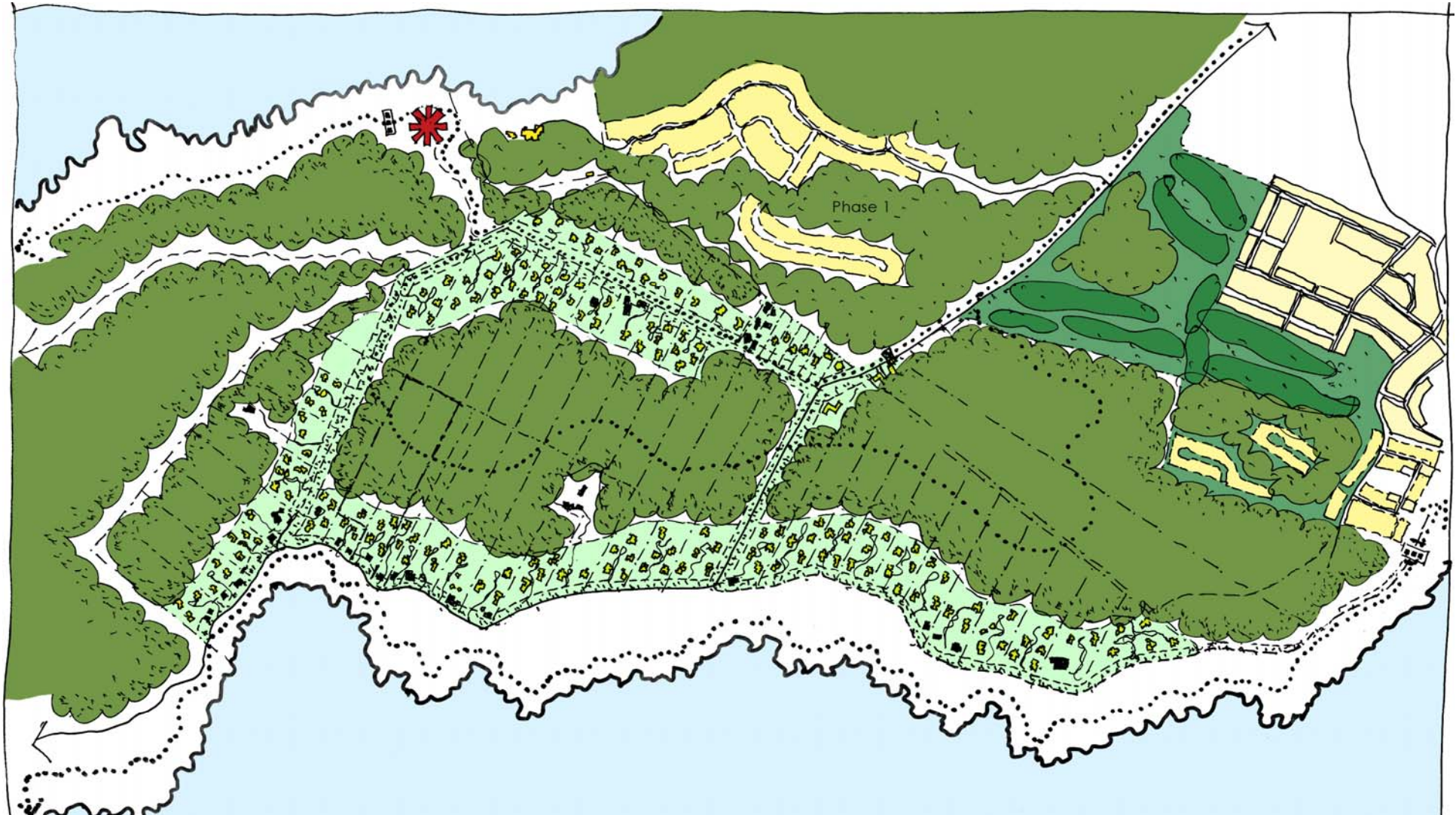
Houses have 10 000 – 30 000m² rainwater tanks



Rainwater tanks set under raised stoeps



Coastal fishing village aesthetic



	Existing buildings		Running, Walking MTB Trail		Tarred Road		Existing Development
	Proposed Buildings		Vehicle Barriers		Gravel Road		Approved but undeveloped
	Private Nature Reserve		Vehicle Control Point		Possible Resort		20m setback line from roads: indigenous landscape

**SCENARIO 3
BIRKENHEAD ESTATE**

Scale at A3
1:10,000

Treading lightly

'Green' is not a new buzzword, but it certainly is still current, and residential and commercial properties are now being built with green measures and initiatives firmly in place.



(Property Magazine: July-August 2011)



source: (Earthworks Dec-Jan 2011/2012)

When it comes to reducing the country's carbon footprint, the first name that comes to mind is the Green Building Council of South Africa (GBCSA). With the backing of the South African Property Owners Association, the GBCSA is responsible for creating an awareness of how buildings, neighbourhoods and cities increase our carbon footprint, and for the development of rating tools that will help us to reduce the environmental damage caused by urbanisation.

So it makes perfect sense that for our Green issue we visited GBCSA CEO Bruce Kerswill at his newly built home, which personifies the best of green architecture and design. Bruce also shares some tips on how you can make your own home greener. And when it comes to commercial buildings, Melrose Arch is considered the frontrunner of new-urban developments in South Africa. We explore how this popular Gauteng 'live, work, play' node is helping its residents and commercial tenants reduce their energy consumption and carbon footprints.

5.7.1 To: ...

- To decide on preferred scenario (may be a combination of elements of more than one).
- To compile draft concept precinct plan based on preferred scenario.
- To prepare final report for approval.

5.7.2 General

- Confirm coastal set-back lines for coastal properties.
- Identify relevant permitting authorities for alternative energy, water and waste water technologies:
 - Municipality;
 - DWAF;
 - DEADP.
- Confirm that properties zoned business or residential do not require EIAs.
- Anything else ...

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