

Chapter 8: Coastal Development Nodes – Connecting Communities to the Coast

1. Introduction

The Integrated Coastal Management Act makes specific reference for the Municipal Coastal Management Plan to make provision for:

- [the equitable designation of] *zones as contemplated in section 56(1)(a)(i) for the purpose of mixed cost housing taking into account the needs of previously disadvantaged individuals*

Cape Town, like all coastal areas within South Africa, has a very strong and remaining Apartheid Planning legacy. This legacy historically restricted opportunities for owning land in close proximity to the coastline for ethnic groups other than the white population. Rare exceptions to this include the communities of Kalk Bay and Hangberg.

At the core of the City's priorities are the Economic and Social Development Strategies aimed explicitly at reducing inequalities within our communities, increasing opportunities for all and improving the quality and standard of living for all Capetonians. As part of these leading City strategies, the City is committed to optimising coastal opportunities for all its communities and where possible, restore some equity in coastal land ownership through prioritising coastal nodal development that will connect previously disadvantaged communities to the coastline.

2. Context

Historical context of coastal development in Cape Town must inform the perspective on future nodal development. The coastline by its very nature is a highly complex and dynamic space influenced by a multitude of environmental and socio-economic factors. It is these factors that primarily historically determined the most desirable and appropriate locations for development. In short, not all coastal space is equal in terms of its appropriateness or desirability for development, particularly development associated with residential and recreational objectives. Globally, the spatial pattern of coastal development has been informed by a range of factors including, but not limited to:

- Sheltered and calm bays for harbours
- Exposure to wind and storm activity
- Highly dynamic unstable sand systems versus rocky shorelines
- Elevation, views and landscapes
- Wave action
- Wind shadows and contour conditions
- Proximity to high quality recreational beaches which in turn are themselves determined by a host of factors such as prevailing wind direction, shelter, wave action and dynamics
- Estuaries, coastal wetlands and floodplains

With the history of development in Cape Town, these factors were the primary determinants behind the spatial coastal form that Cape Town now presents. As a result, and as part of the Apartheid legacy, almost all of the physically appropriate and desirable coastal spaces have been developed. The vacant stretches of coast that remain, are subject to harsh environmental conditions, such as persistent south easterly winds, subsequent colder temperature and wind-driven sand. This spatial form of Cape Town's coastline has also been shaped in the last 15 years by the proclamation of the Table Mountain National Park, a highly advantageous, beneficial

and positive long term asset to the City, but which has removed approximately 60km of coastline from future nodal development options.

This context is an important starting point in considerations with regards working towards successful future nodal development on our coastline that will in part begin to reverse some of the historical coastal inequalities.

3. Lessons learned and Constraints

In planning and considering future nodal development, it is essential that we learn from past experience and clearly understand relevant constraints. Without these key informants, such as increasing pressure from sea-level rise, not only are we likely to create unsuccessful coastal opportunities but will in many cases substantially increase the risk and long term cost of poorly located development nodes to both the City as well as the individual residents who may move into that area. Further, creating unrealistic expectations of desirability in terms of the real quality of the coastal living environment, need to be fully understood as perceptions are often not realised in reality. Environmental constraints such as prevailing wind conditions, sand source and movement as well as seasonal temperature, are typically overlooked when planning for coastal development but which are central to the success of these coastal developments. This is particularly relevant along the False Bay coastline.

Lessons learned

- Highly dynamic coastal spaces cannot be engineered to accommodate infrastructure (e.g. Hout Bay windblown sand, Macassar resort, Monwabisi resort, Table Bay erosion, frequent flooding of Camps Bay and the Strand)
- Infrastructure that impedes or alters natural coastal systems often dramatically increases coastal risk which requires long term and highly costly interventions to reduce or mitigate the risk that has been created and which is often then inherited by local communities
- Engineering solutions run the risk of either failure in mitigating risk or in some cases exacerbating the risk. Typically this includes the deflection of storm surge energy to neighbouring properties and the exacerbation of erosion on these neighbouring properties

Natural Constraints

- Prevailing wind direction and strength
- Mobile sand systems replenished and fed by seasonal marine transport
- Eroding coastal conditions
- Predicted mean sea level rise and associated storm surge events
- Maintaining infrastructure in a high wind blown sand/salt spray environment
- Colder temperatures during the summer months

4. City priorities

Within the constraints and challenges, the City is however committed to identifying appropriate coastal nodal development points along our coastline that will give effect to the City's priority of opportunity, upliftment, reducing inequalities and attracting investment. A central component to the methodology for defining the City's Coastal Urban Edge as part of the Spatial Development Framework (SDF), was the application of best available technical and local knowledge to spatially define as part of the SDF, appropriate, risk averse and developable nodal points that would connect existing communities on the Cape Flats and West Coast to the coastline in a responsible and risk averse manner. The Coastal Urban Edge spatially defines these appropriate coastal spaces, and where these spaces may accommodate a mix of future residential, recreational and commercial development consistent with existing coastal development.

5. Process

During the three-year process to define the Coastal Urban Edge, an extensive methodology was applied in defining the Coastal Development Nodes. This included the following:

- Information from the City's Sea Level Rise Risk Assessment
- Mobile dune systems and substrate conditions
- Prevailing weather and wind conditions
- Contour and elevation considerations
- Existing infrastructure, access points and coastal amenities
- Biodiversity and nature reserve demarcations
- Estuary and river mouths
- Wave action and exposure

Following a lengthy and detailed process that proposed five Coastal Nodal Development Points, further engagements to incorporate local input included:

- Site visit to all areas by the Political Task Team that oversaw the SDF. This included local Ward Councillors from the affected areas
- An extensive public participation process as part of the SDF finalisation that included no less than three full public engagement processes and amendments

6. Outcomes

The City's approved SDF makes provision for five future Coastal Nodal Development points that are well located to meet the needs of connecting communities to the coast in the most appropriate manner, with minimal risk and maximum desirability within the constraints of a particularly harsh coastal environment. The SDF includes four nodal development points on the False Bay coastline that will link the communities of Strandfontein, Mitchells Plan and Khayelitsha to the coastline, and a fifth proposed nodal development point on the West Coast to create a corridor linkage for the community of Atlantis and surrounds to the coastline. Whilst these nodal points have been identified and flagged for future development, further detailed studies will be applied to ensure that these nodal growth points are designed to mitigate the social impacts that may out of the harsh environmental conditions.

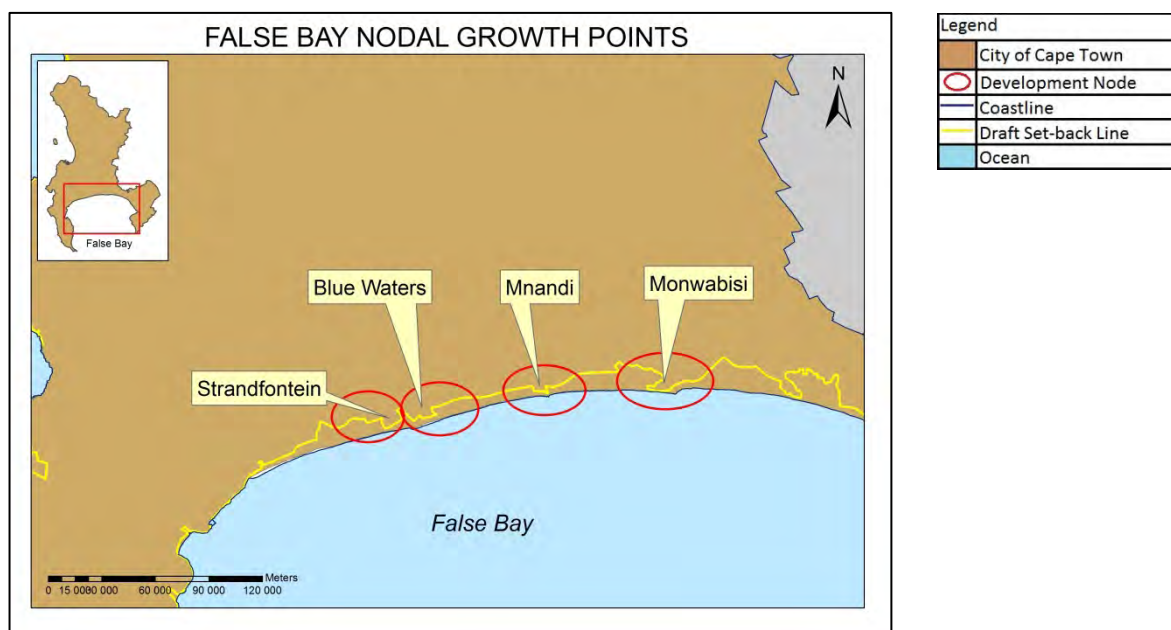
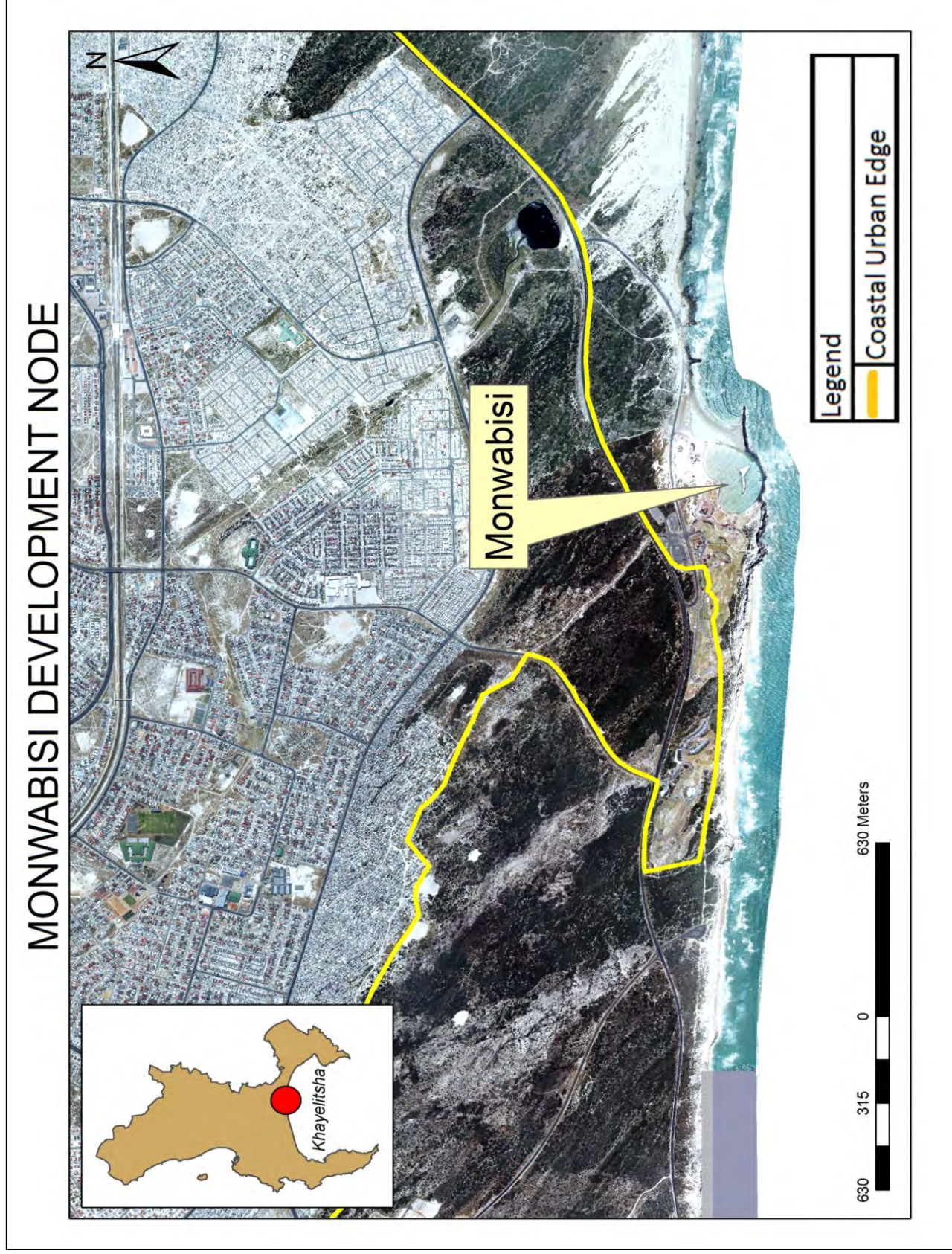


Figure 1: Overview of False Bay Coastal Development Nodes

7. The Coastal Nodal Development Nodes

- a) Connecting Khayelitsha through Monwabisi



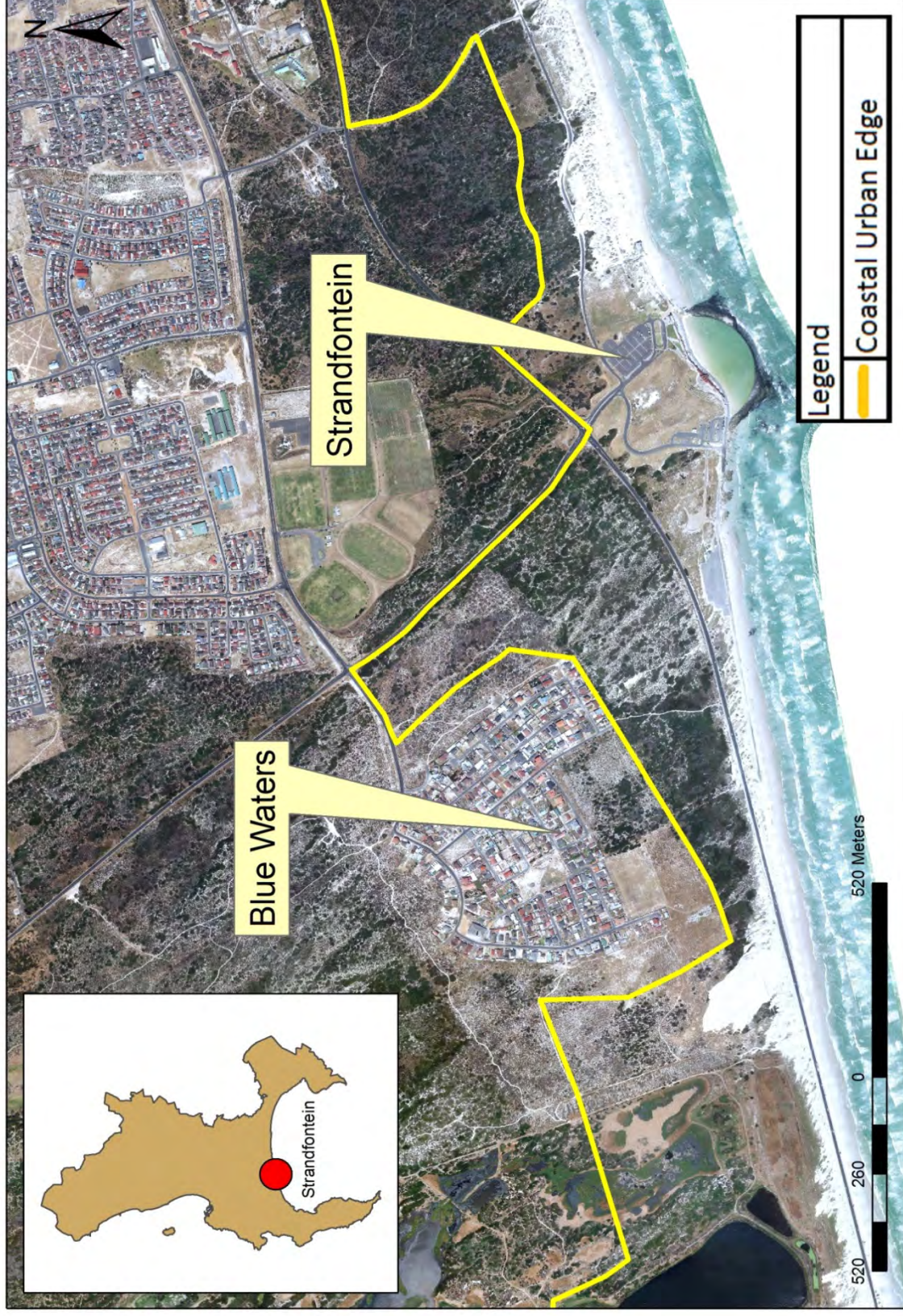
b) Connecting Mitchell's Plain through Mnandi/Kapteinskloep

MNANDI DEVELOPMENT NODE



- c) Double Node connecting Strandfontein through Blue Waters and Strandfontein Pavilion

BLUE WATERS/STRANDFONTEIN DEVELOPMENT NODE



d) Connecting Atlantis and West Coast Communities through Silverstreamstrand

SILVERSTROOMSTRAND DEVELOPMENT NODE



Way Forward

The City's Spatial Planning and Urban Design Department (SPUD) will lead the initial spatial planning and conceptual design for each development node. These planning processes will determine the way forward as well as the role of public and private sector involvement.

Planning processes have already begun for the Monwabisi Node as well as the Mnandi/Kapteinsklip node.

