KLEINBAAI NODAL DEVELOPMENT STUDY

REVISION 3

FOR SUBMISSION TO COUNCIL

26 JANUARY 2016

ENGINEERING REPORT

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Project description

Kleinbaai Nodal Development Study

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EXECUTIVE SUMMARY

Kleinbaai is the shark viewing capital of the world. Located conveniently close to Dyer Island and its resident great white shark population and with a small harbour suited to the launch of sizeable vessels, Kleinbaai has developed from a tranquil holiday town to the hub of the lucrative shark viewing business. It is exactly this apparent contradiction between holiday town passivity and commercial activity that has given rise to the need for a nodal development study that would indicate how the needs of the various Kleinbaai role players can be accommodated and the village can be developed to the advantage of all.

The report acknowledges the harbour as an anchor point in the village, but focuses on the interventions and improvements required to establish a functional commercial and tourism centre that will serve the needs of local residents, holidaymakers and foreign tourists. The continued operation of the Kleinbaai harbour as a launching site for commercial and sports fishing vessels is ensured and catered for through improvement proposals for the harbour.

Changes are proposed to the road network; the zoning of properties in the business area is discussed, parking requirements and provision are investigated and pedestrian needs are planned for. All changes and improvements are to be implemented incrementally over a number of years.

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LIST OF DRAWINGS

1. BACKGROUND

The Kleinbaai and De Kelders Nodal Development project originates from Overstrand Municipality's 2010 Growth Management Study (*Urban Dynamics, 2010*). A project proposal was drawn up and the project was endorsed by the Municipality's Executive Management Team in June 2011, after which an extensive technical report was drawn up by Overstrand Municipality's Planning Department (*Jacques Jansen van Rensburg, July 2012*). The original project proposal document drew from the following related studies:

a) Overberg Municipal Spatial Growth Management Strategy, Urban Dynamics, 2010
b) Development Proposal / Framework for the area of Kleinbaai Harbour, Origin Town Planning (Pty) Ltd, 2004
c) Greater Gansbaai Spatial Plan, Nuplan Africa, 2004
d) Overstrand Spatial Development Framework, Urban Dynamics, 2006

One of the main recommendations of the 2012 study was that a professional team consisting of a traffic engineer and urban designer should be appointed to further investigate and draw up plans that will bring the proposals closer to practical implementation. In 2013, Overstrand Municipality appointed Deca Consulting Engineers as traffic engineers, with urban design input from the Urban Design Department of CSM.

2. INVOLVEMENT OF THE PUBLIC

Diagram 1 shows how interest groups and members of the public were consulted in the earlier and current Kleinbaai studies. Many of the concepts discussed and proposed in this report were taken directly from previous reports that had been workshopped with the public, including the concept of remote parking with landscaping, improved pedestrian facilities and the provision of more varied attractions for tourists. ***Diagram 2*** shows an extract from the 2012 "Kleinbaai and De Kelders Tourism Nodal Development Proposals" report by Overstrand Municipality, showing similar concepts to those discussed in this report.

Public involvement in the current project entailed meetings with the Harbour Controller, individual shark viewing operators, Mr. Kat Myburgh (Gansbaai Area Manager for Overstrand Municipality), the Kleinbaai Slipway Management Committee and Kleinbaai Home Owners Association. A public open was held, after which comment received from the public was incorporated into the final report (this report, Revision 3). Notes on these meetings are included in ***Annexure A***.

Diagram 1: Kleinbaai Nodal Development Study process and public involvement

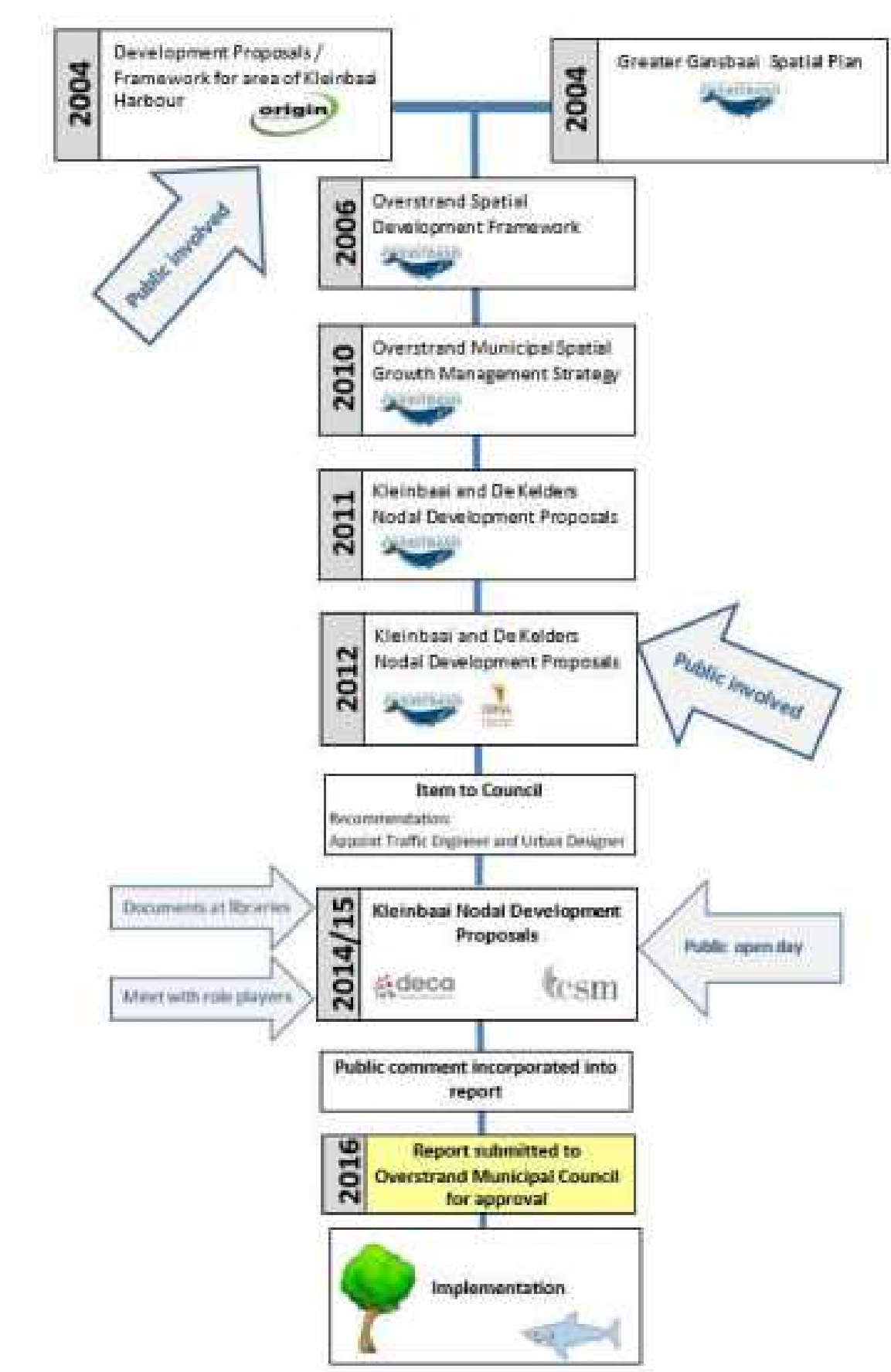
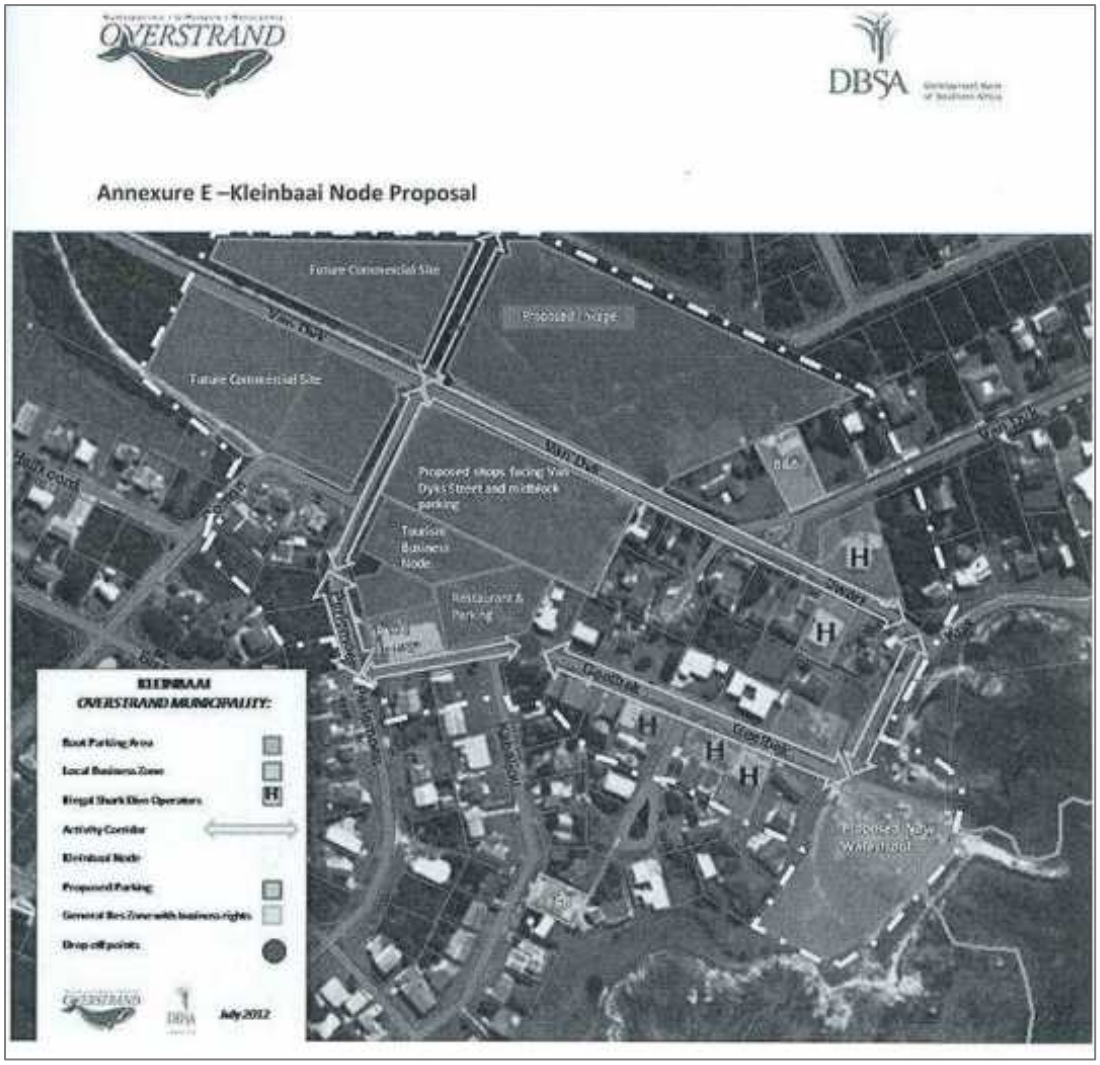


Diagram 2: Extract from 2012 "Kleinbaai and De Kelders Tourism Nodal Development Proposals" report by Overstrand Municipality, showing concepts of remote parking, activity corridors and business zones



3. ENGINEERING CONSIDERATIONS

3.1 Kleinbaai roads

Kleinbaai obtains access from the R43 – the main road between Hermanus, Gansbaai and Pearly Beach - via Van Dyk Street. In Kleinbaai, the direction of Van Dyk Street changes from north / south to east / west, parallel to the beach front, and continues as the main road through Kleinbaai and to Franskraal. Divisional Road 1214 provides a second east / west link between Van Dyk Street at the Danger Point Road intersection and the R43 / Rossouw Street in Franskraal. The section of DR1214 between Rossouw Street and Van Dyk Street was recently surfaced and provides an alternative to the Van Dyk Street route. Swart Street links Van Dyk Street to Kleinbaai Harbour. Geelbek Street has developed into the main commercial street, although not all businesses have the correct zoning. Perlemoen Street links Geelbek Street to Van Dyk Street. ***Figure 1*** shows the more important roads in central Kleinbaai*.*

Van Dyk Street

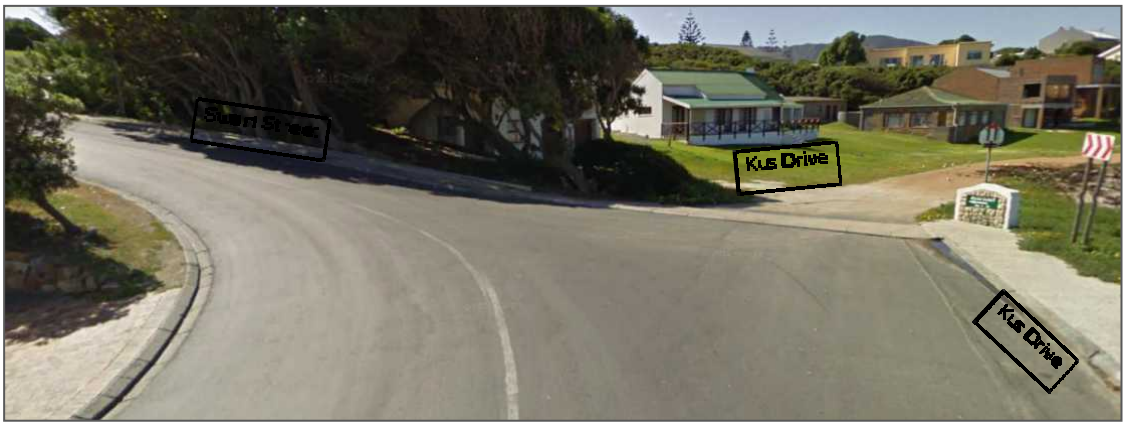
Van Dyk Street may be classified as a District Distributor (Class 3) road. It has a "rural" cross-section with no kerbs or roadside stormwater channels, but the wide road reserve lends itself to future upgrades. Properties along Van Dyk Street within the town boundaries are all zoned residential, although the property on the corner of Van Dyk and Swart Street is used by shark viewing operator. An exclusive right turn lane has been provided on Van Dyk Street southbound (See ***Photo 1***) at the Perlemoen Street intersection. Further south, the Van Dyk Street / Swart Street intersection has stop control on Van Dyk Street East and Van Dyk Street North, with a traffic island separating westbound and eastbound traffic on the eastern leg, as shown in ***Photo 2***. The incline as one approaches the intersection from the south is the likely reason why the southern approach does not have stop control.

South of the Van Dyk Street / Swart Street intersection, Van Dyk Street becomes Swart Street, which terminates at the T-junction with Kus (*Coastal*) Drive. See ***Photo 3***. Kus Drive is a gravel residential access way to the east, with the western leg leading to Kleinbaai Harbour.

Photo 1: Van Dyk Street / Perlemoen Street intersection. Note the absence of kerbs and stormwater infrastructure

Photo 2: Van Dyk Street / Swart Street intersection

Photo 3: Swart Street / Kus Drive intersection



Kus Drive

Kus Drive is a 5,5-metre wide road in a 13-metre wide road reserve. The inside radius of the Kus Drive / Swart Street junction is 12 metres, which is more than sufficient for light vehicles and single unit trucks, but which may pose a problem to trucks with trailers. According to the shark viewing operators, the large shark boat trailers can also not round this corner. Geelbek Street is available as an alternative access to the harbour, but the circular route via Perlemoen Street, Geelbek Street, Kus Drive and Swart Street back to Van Dyk Street is a much easier route. As ***Figure 2*** shows, the options for widening Kus Drive / Swart Street or for increasing the radius at this corner are limited by the house structure on Erf 11, which is located halfway within the road reserve.

Erf 65, located to the west of Kus Drive in the middle of the street block between Swart Street and Geelbek Street is a public open space, a portion of which is currently used for informal parking. Unmarked off-street parking is also available on the sea side of Kus Drive. See ***Photo 4***. Further south, Kus Drive becomes a gravel road which leads to a second Kleinbaai Harbour entrance, a few residential properties, public open space and the beach.

Photo 4: Looking northwards along Kus Drive from Kleinbaai Harbour entrance

Geelbek Street

Geelbek Street has become the commercial high street of Kleinbaai, with a restaurant, shop and filling station located on this road. A number of shark viewing businesses operate illegally from residentially zoned premises on Geelbek Street, with the exception of those on Kleinbaai Erven 110 and 117. Geelbek Street road has a more formal cross-section than Van Dyk Street, with kerbs, channels and a wide surfaced sidewalk. The mobility / activity conflict is apparent on Geelbek Street: It is the main commercial street, but speed humps have been installed as traffic calming measure. See ***Photo 5***. Some formalisation of parking, traffic calming and pedestrian infrastructure is required on this road.

Perlemoen Street

Where Perlemoen Street and Geelbek Street intersect, the Perlemoen Street approaches have stop control, with free flow on Geelbek Street. This is unusual at a T-junction, but the fact that there is an incline on Geelbek Street may have been the motivation. Perlemoen Street has no kerbs, channels or sidewalks.

Photo 5: Looking west up Geelbek Street. Note restaurant on the right hand side and shop with filling station further up. Speed humps have been installed on this road.

3.2 Intersections

Traffic counts were done at the Van Dyk Street / Swart Street, Kus Drive / Geelbek Street, Geelbek Street / Perlemoen Street and Perlemoen Street / Van Dyk Street intersections on 16 December 2013. Counts done in December 2012 were used for the R43 / Van Dyk Street intersection. Van Dyk Street and other roads in Kleinbaai carry relatively low traffic volumes, with considerable spare capacity available even during the summer holiday period. The intersections were analysed using SIDRA software. The analysis shows that the four counted intersections in Kleinbaai itself operate at excellent (A) to very good (B) service levels. The four-way stop controlled intersection of the R43, the Kleinbaai access road (Van Dyk Street) and Masakhane Street however, experiences poor (E) to very poor (F) service levels on the southern and western approaches. Refer to ***Figure 3.*** The upgrading of last mentioned intersection to either traffic signals or a roundabout is recommended in the Overstrand Transport Masterplan. This will create additional capacity and will improve service levels. No improvements are required at the Kleinbaai village intersections, but it is suggested that the Van Dyk Street / Swart Street intersection should be redesigned.

3.3 Pedestrians

Pedestrian counts were done on Kus Drive and Geelbek Street on the same day as the traffic counts. Considerable pedestrian volumes were recorded on Geelbek Street (see ***Figure 4***). Approximately a third of the volume counted on Geelbek Street was counted on Kus Drive. Geelbek Street is the only street with a paved sidewalk. It is recommended that a paved sidewalk or walkway should be provided along Kus Drive and Swart Street as well.

3.4 Parking

Parking near the Kleinbaai Harbour include parking along Kus Drive, parking at the harbour for single passenger vehicles and parking for vehicles with boat trailers, or boat trailers only. The utilisation of parking at these three sites was recorded on 16 December 2013. The results (***Figure 5***) show that none of the three sites was fully occupied at any time of the survey day, but it should be noted that parking utilisation is subject to weather conditions and that the parking areas are fully occupied during the peak holiday season.

4. LAND USE

According to the Hermanus District Growth Management Strategy (*HDGMS, Urban Dynamics, 2010*), the majority of erven in the central Kleinbaai area are zoned for residential use. The exceptions are Erven 117 (corner Kus Drive and Geelbek Street), 107, 110 (Marine Dynamics) and 431 (corner Geelbek Street and Perlemoen Street). A number of Shark Viewing businesses operates illegally from residentially zoned erven. These include:

- Shark Diving Unlimited (Erf 12)
- Great White Shark Tours (Erf 71)
- Shark Lady (Erf 120)
- White Shark Projects (Erf 121)
- White Shark Diving Company (Erf 117)
- Supreme Sharks (Erf 149)

The owners of Erven 12, 120 and 149 are in the process of rezoning their properties from commercial to residential use. As shown in ***Figure 6***, most of these businesses are located on Van Dyk Street / Swart Street and on Geelbek Street. The owner of Erven 107, 108, 109 and 110 intends to further expand his operations - which include shark viewing and whale watching and research, with supporting facilities such as offices and a restaurant – by adding an interactive interpretation centre. Some of the vacant land on Erf 109 will be used for landscaped private parking.

In the absence of commercially zoned properties and an established, planned central business area, there has been a natural progression in the land use on Geelbek and Van Dyk / Swart Street from residential towards commercial. From a planning perspective, it makes sense that commercial properties should be located near the town entrance and close to the harbour, which is the town's focal point. The need for more commercially zoned properties is recognised and it is recommended that the commercial node should rather be formalised and contained within acceptable limits.

5. KLEINBAAI HARBOUR

Kleinbaai Harbour is the property of the National Department of Public Works, but it is leased to Overstrand Municipality. Overstrand Municipality is responsible for the day to day operations, management and infrastructure associated with the harbour, but the Department of Public Works is the deciding authority when it comes to major projects. The name Kleinbaai *Harbour* is misleading, as the facilities provided only includes a breakwater and slipway, with a short, small jetty for boarding and alighting boats. The most obvious use of the harbour is by the shark viewing / shark diving operators. The various role-players involved with the harbour, including the Slipway Committee, Overstrand Municipality and shark boat operators, previously agreed that eight (8) shark viewing boats may be parked on their trailers in the harbour parking area. The remainder of the harbour property is used for casual parking, a small shop, ablution facilities and an office for the harbour controller. Other regular users of the harbour include fisherman – both commercial and sports; researchers, the National Sea Rescue Institute and kelp gatherers.

The use of the harbour land for the permanent parking of shark boat trailers has been debated at length: The parked trailers and boats negatively impacts the views from and across the harbour area and takes up prime space closest to the slipway. Some friction may occur occasionally between shark boat operators and the owners of smaller craft when it comes to launching and landing of boats. Complaints have been received about the maintenance and cleaning of boats in the harbour area. On the other hand, Kleinbaai's status as the shark viewing capital of the world cannot be over emphasised. This is the main commercial activity in Kleinbaai, also contributing to the economy of Gansbaai. It attracts a few thousand tourists annually – the majority from abroad. Due to the shorter distance from Kleinbaai to the Dyer Island area and more favourable sea conditions for the trip than from Gansbaai, there really is no alternative to Kleinbaai Harbour for shark boat operators.

The launch frequency of both shark and other boats were recorded on 16 December 2013. (See ***Figure 7***.) The six shark boats operating on that day each made two trips. This is the number of trips that can be made comfortably within one day, as boats have to be cleaned, refuelled and restocked after each trip. In other harbours, boats of this size are usually only taken out of the water for refurbishment or maintenance, but the lack of mooring facilities at Kleinbaai Harbour has led to the current practice of storing the boats on land. On most days, boats do a morning trip of approximately three hours and is then taken out of the water for a brief period before going on the second trip for the day. These vessels are large – up to 14 metres long – and have large trailers that can be classified as abnormal load vehicles. It would be impractical to store the trailers at a remote location during the time that boats are out to sea or even during the evening, as the trailers are not suited to the local roads and should not mix with normal traffic.

When viewed daily as shown in Figure 7, the number of smaller craft may slightly outnumber the trips made by the shark boats. On an annual basis, which includes the winter season, the number of shark boat trips far outweighs the number of trips made by smaller boats, but on certain days during the year the number of small boats become so large that there is not enough space at the harbour for all the trailers.

Previous studies on Kleinbaai Harbour include the 2004 "Development Proposal / Framework for the area of Kleinbaai Harbour" report by Origin Planners and a report by Ulwazi Engineers. Some of the recommendations of these reports, like the extension of the slipway, have since been implemented. The current layout of the harbour is shown in ***Figure 8***. Through discussions with the Gansbaai Town Manager, the Kleinbaai Slipway Committee and shark boat operators, it became apparent that a number of improvements are still needed in the harbour. Some of the improvements will require long term planning; others can be implemented right away.

Further concerns that were raised during the public participation process, were those of dust and noise pollution. The dust problem can be addressed by providing permanent surfaces (asphalt, concrete or brick paving) for gravel areas in the harbour precinct. Noise pollution is more complex to address, with three possible attenution methods: attenuation at the noise source, interference with the propagation path or applying actions on the receiver. In the case of Kleinbaai Harbour, the noise sources are the engines of boats and the vehicles that launch and retrieve the boats, be it tractors or bakkies. Although engine noise can be reduced by, for instance, using electric engines, it is highly unlikely that such measures will be implemented by boat owners and operators, at least in the short to medium term. Acoustic rehabilitation that can be done at the receiving end include the cladding of the most affected façades with sound absorbing material and the fitting of double glazed windows. In Kleinbaai, such measures would be for the cost of the home owners. The third possibility is to interfere with or block the path along which sound waves travel by erecting barriers. Such measures are effective and appropriate at larger commercial harbours, but will block the sea views of Kusweg homes across Kleinbaai Harbour. From the three possible noise attenuation measures, the application of actions at the receiving end seem the most practical.

6. IMPROVEMENT PROPOSALS

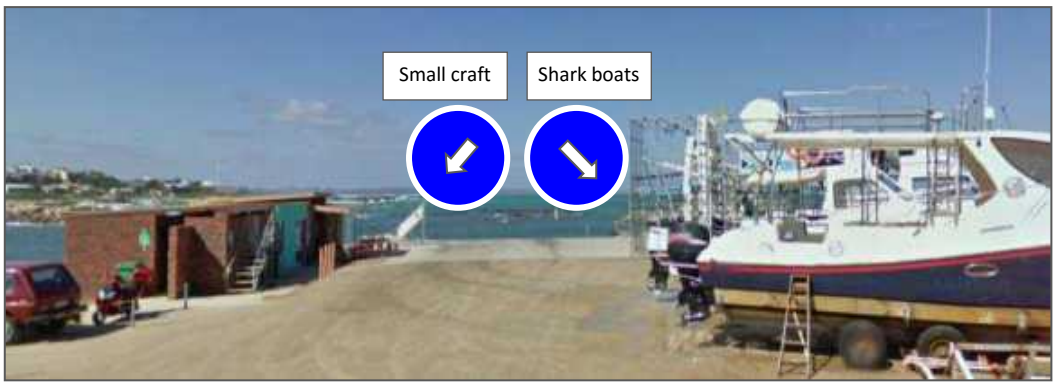
The findings summarised in the paragraphs above clearly indicate the need for the establishment and formalisation of a central business district for Kleinbaai and for improvements to the harbour.

6.1 Improvements at Kleinbaai Harbour

The improvements proposed range from low cost and short term projects to more costly long term projects. The SA National Department of Environmental Affairs has, for the past number of years, maintained their position that only up to ten boats (8 shark boats and 2 whale boats) are ecologically sustainable and that higher numbers will start to have a negative impact on the habitat and behaviour of the sharks. The short term focus will therefore be for the accommodation of up to ten shark / whale boats in an orderly and acceptable manner. Should the authorities grant more than ten permits, leading to an increase in the number of operators, the most viable long term solution will be to enlarge and deepen the harbour basin in order to provide permanent mooring facilities for all the shark boats. An alternative would be to restrict new operators to Gansbaai Harbour, but this could hamper the economic feasibility of the operation. Some of the improvement proposals as discussed with the Slipway Committee, and which will benefit both fishermen and the shark industry, are listed below. The project numbers correspond with the numbers in ***Figure 9***.

1) Replace wooden hut for harbour controller with stone structure of similar size, but with finishing similar to the existing harbour buildings to improve the aesthetic appearance. The facebrick structures shown in the photo have been clad in stone since the photo was taken.

2) Separate launching space for small craft (eastern side of slipway) and shark boats (western side of slipway) by means of lane marking or similar (cones, signs). This proposal is not supported by the Kleinbaai Slipway Management Committee.



3) Slipway to be extended until foundation can be set on bed rock. Currently sand is washed away from bottom end of the structure, causing as step down from the concrete to sandy seabed and sagging of the slipway structure.

4) Make channel out to sea deeper to accommodate waiting boats in all tides.

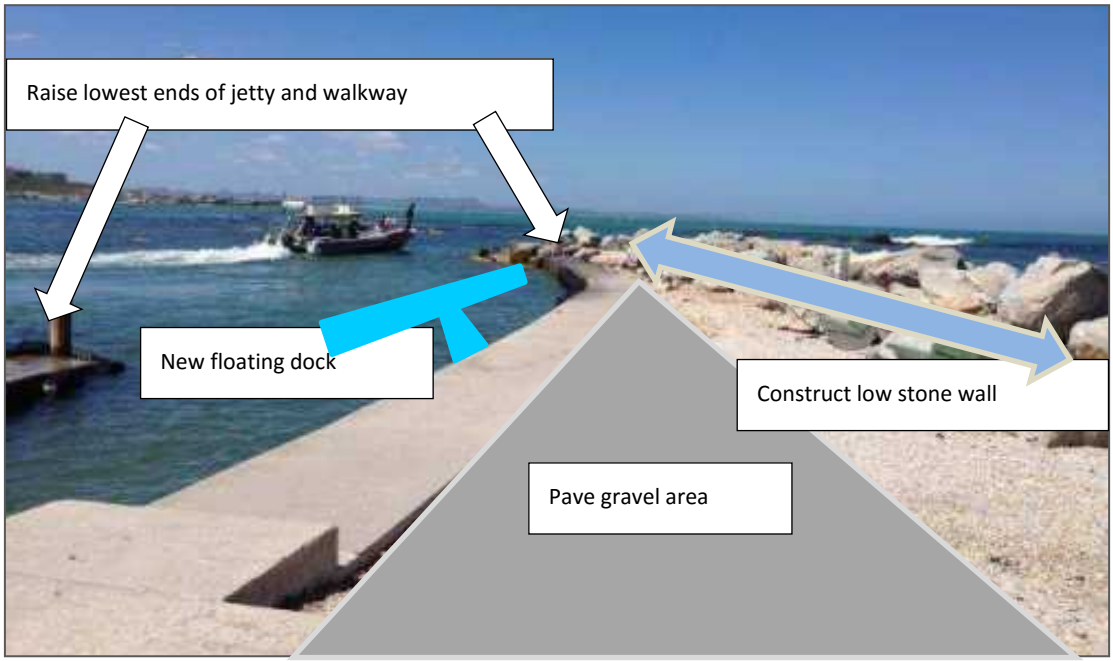
5) Provide floating jetty for small vessels to dock while off-loading passengers or while waiting for space on the slipway. Jetty needs to float to cater for tidal height differences.

6a) Replace gravel and loose stones between jetty and breakwater with permanent surface. Gravel currently washes away at high tide, making the docking area shallower.

6b) Construct low stone wall to create boundary between jetty / walkway and breakwater.

6c) Raise existing right angled jetty and harbour wall / walkway so that surface remains above water during normal high tide.

7) Surface and formalise loading area which is used by light vehicles to collect wetsuits, etc from boats, to load research material and for NSRI purposes.



8) Provide two additional shark / whale boat parking bays for operators whose boats are currently stored at residential properties

9) Provide electrical connections to each shark boat parking bay, similar to existing water points. Electrical points should be lowered into ground to prevent vehicles from riding over and damaging points.

10) Provide pedestrian link from Kus Drive to the breakwater by boardwalk or similar. Should be raised to keep water off. Link to breakwater line and provide walkway along breakwater as well. Broad enough for wheelchairs, etc.

11) Construct low wall to create better visual impact, hiding boulders forming breakwater.

12) Lower information signs, maybe mount on wall, to create unobstructed view from walkway out to sea. Provide weatherproof benches and dustbins.

13) Pave parking area. Clearly mark bays for boats and trailers, and bays for light vehicles only. If parking on grass is undesirable, create physical barrier.

14) Construct low stone wall between harbour property and Kus Drive.

15) Lay concrete slabs from Kus Drive to existing paved area above slipway. The permanent surface is required to provide a cleaner, dryer and maintenance-free area for vehicles and pedestrians and to improve the current problem of dust pollution. Importantly, road markings need to be provided on new surface (cannot be done on gravel) to indicate direction of flow, access restrictions, etc. Formalise entrance (kerbing) and provide proper signage.

16) Provide more toilets with showers and change rooms. Appoint dedicated cleaning crew, to be managed and funded by shark boat operators.

17) Pave and mark out parking for light vehicles next to harbour change rooms and along Kus Drive.

18) Provide / extend boardwalk along Kus Drive and down eastern side of slipway as previously approved by Council.

Long term upgrades to the harbour will to a large extent depend on the growth in the tourist industry and the associated need for tourist facilities such as craft shops, eateries, coffee shops and similar.

6.2 Improvement of the Kleinbaai commercial area

It is recommended that the Kleinbaai commercial area should be demarcated as follows:

- On both sides of the north-south running section of Van Dyk Street;
- On Van Dyk Street East / West: Two or three erven on either side, eastwards Van Dyk Street North/South;
- On both sides of Swart Street
- On Kus Drive;
- On both sides of Geelbek Street;
- On both sides of Perlemoen Street, from Geelbek Street eastwards (see ***Figure 10***).

Applications for rezoning to commercial or tourism-related land uses in this block should be supported. This was agreed by most respondents in the previous public participation processes. New businesses and businesses that are already operating from residential properties, should be subject to certain conditions, which should include:

- Parking for Shark Viewing operators: Parking to be provided on site at a rate of 4 bays per 100m^2 of gross floor area (GFA). This rate does not comply with the Municipal Zoning Scheme requirement of 6 bays per 100m^2 for commercial activities, but was determined through surveys;

- Parking for restaurants: 6 bays per 100m^2 gross lettable area (GLA) as per the zoning scheme;
- Parking for guest houses: 1 bay per guest rooms as per the zoning scheme;
- Parking at retail outlets (single shops): 4 bays per 100m^2 GLA. A rate of 6 bays per 100m^2 is recommended in the zoning scheme, but this is found to be more applicable to large retail outlets and shopping centres. A ratio of 4 bays per 100m^2 is normally sufficient for smaller stores;
- Parking at offices: 4 bays per 100m^2 GLA. Again, this is not in accordance with the zoning scheme requirement of 9 bays per 100m^2, but is sufficient for the offices relating to shark viewing and marine conservation activities;
- Shark Viewing operators should provide an indoor rest area with at least 4 toilets and 4 showers per operator (2 each for males and females).

No on-street parking should be allowed at business sites. It is suggested that a communal parking area should be provided on the southern corner of the Van Dyk Street / Perlemoen Street intersection. Businesses that are unable to provide sufficient parking on their own properties should be able to procure parking spaces at this parking area, at a rate to be determined by the Overstrand Municipality. The idea is that this parking area should be provided in pockets between the protected Milkwood Trees. This will soften the view as one enters town. The greening concept was a point on which 90% of respondents in previous public processes agreed.

Overflow parking from the harbour can also be accommodated on this site. A longer term plan is to develop the space to the north and west of the Van Dyk Street / Perlemoen Street intersection. The area to the north can be developed with the parking of vehicles with boat trailers, buses and smaller tour minibuses in mind. These proposals are shown in more detail in the Urban Design Framework.

During peak fishing seasons, it is proposed that vehicles with trailers should be parked at this site after the boats have been launched. As there is little mooring facilities available in the harbour for boats to wait, it was proposed that drivers should be employed by the Municipality or a local business, who could drive vehicles from the harbour to the remote parking site after craft had been launched, and who could return with the vehicle and trailer to retrieve the boat when it returns from its trip. The communications required for this operation could have been done by the harbour controller. This proposal was, however, not supported by the public.

When the remote parking is up and running, it may become feasible to change Van Dyk Street into a non-motorised transport corridor with no through traffic allowed, only vehicles with trailers. The north-eastern part of Kleinbaai can then be accessed via the extension of Steenbok Street to the southwest, of via the extension of Perlemoen Street to the northeast. An engineering concept is shown in ***Figure 11***.

Previous reports made mention of possibly changing Geelbek Street into a one-way street. This does not have merit from a traffic engineering point of view and it is recommended that the status quo should be retained.

The ultimate vision is that the whole of the demarcated commercial area should start functioning as a village, with fences between plots coming down, opening up courtyards and walkways between buildings through which visitors can meander, visit cafes and browse through shops. This vision is shown in the Urban Design Framework, Annexure B.

7. CONCLUSIONS AND RECOMMENDATIONS

A number of studies have been done for Kleinbaai town and Kleinbaai Harbour. This 2014 Kleinbaai Nodal Development study is intended as a guideline of practical engineering, town planning and urban design interventions that can be used to achieve the vision that had its origins in the previous plans. The recommendations made in this study were categorised as short term, medium term or long term improvements, dependent on scale, cost and social impact.

7.1 Short term improvements

a) Replace the wooden hut of the harbour controller with a stone structure;
b) Replace gravel and loose stones between jetty and breakwater with permanent surface;
c) Construct low stone wall to create boundary between jetty / walkway and breakwater;
d) Construct low stone wall between harbour property and Kus Drive;
e) Construct low stone wall above the south-eastern breakwater to create better visual impact, hiding the boulders that form the breakwater;
f) Lower information signs along south-eastern breakwater, maybe mount on wall, to create unobstructed view from walkway out to sea.
g) Provide weatherproof benches and dustbins;
h) Surface and formalise loading area at head of jetty which is used by light vehicles to collect wetsuits, etc from boats, to load research material and for NSRI purposes;
i) Provide two additional shark / whale boat parking bays;
j) Provide electrical connections to each shark boat parking bay;
k) Lay concrete slabs from Kus Drive to existing paved area above slipway;
l) Formalise entrance (kerbing) and provide proper signage;
m) Pave and mark out parking for light vehicles next to harbour change rooms and along Kus Drive;
n) Pave parking area. Clearly mark bays for boats and trailers, and bays for light vehicles only. If parking on grass is undesirable, create physical barrier;
o) Separate the launching space for small craft and shark boats on the slipway by means of road marking or similar (cones, signs). This proposal is not supported by the Kleinbaai Slipway Management Committee;
p) Demarcate Kleinbaai commercial area as shown in ***Figure 10***. Applications for rezoning to commercial or tourism-related land uses in this block should be supported;
q) New businesses and businesses that are already operating from residential properties should be subject to certain conditions, which should include:
    - Parking for Shark Viewing operators: Parking to be provided on site at a rate of 4 bays per 100m^2 of gross floor area (GFA);
    - Parking for restaurants: 6 bays per 100m^2 gross lettable area (GLA);
    - Parking for guest houses: 1 bay per guest room;
    - Parking at retail outlets (single shops): 4 bays per 100m^2 GLA
    - Parking at offices: 4 bays per 100m^2 GLA
    - Shark Viewing operators should provide an indoor rest area with at least 4 toilets and 4 showers per operator (2 each for women and men);
r) Sufficient parking is provided on Kus Drive and at Kleinbaai harbour and no further parking should be provided in this area;

s) No on-street parking should be allowed at business sites. Businesses that are unable to provide sufficient parking on their own properties should be able to procure parking spaces at this parking area, at a rate to be determined by the Overstrand Municipality.

7.2 Medium term improvements

a) Provide / extend boardwalk along Kus Drive and down eastern side of slipway as previously approved by Council;

b) Provide pedestrian link from Kus Drive to the breakwater by boardwalk or similar. Should be raised to keep water off. Link to breakwater line and provide walkway along breakwater as well;

c) Extend slipway until foundation can be set on bed rock;

d) Make channel out to sea deeper to accommodate waiting boats in all tides;

e) Provide floating jetty for small vessels to dock at;

f) Raise existing right angled jetty and harbour wall / walkway so that surface remains above water during normal high tide;

g) Provide more toilets with showers and change rooms. Appoint dedicated cleaning crew, to be managed and funded by shark boat operators;

7.3 Long term improvements

a) Redesign the Van Dyk Street / Swart Street intersection;

b) Provide a paved sidewalk or walkway along Kus Drive and Swart Street;

c) The commercial node of Kleinbaai should be formalised and contained within acceptable limits;

d) Enlarge and deepen the harbour basin in order to provide permanent mooring facilities for all the shark boats should more long term shark viewing permits be issued by government;

e) Provide a communal parking area on the southern corner of the Van Dyk Street / Perlemoen Street intersection, with bays provided in pockets between the protected Milkwood Trees;

f) Develop the space to the north of the Van Dyk Street / Perlemoen Street intersection with the parking of vehicles with boat trailers, buses and smaller tour minibuses in mind;

g) During peak fishing seasons, it is proposed that a shuttle or valet-type system should be used to park vehicles with trailers at this site after the boats had been launched. The public was not in favour of this proposal;

h) If or when the remote parking is up and running, it may become feasible to change Van Dyk Street into a non-motorised transport corridor with no through traffic allowed, only vehicles with trailers. The north-eastern part of Kleinbaai can then be accessed via the extension of Steenbok Street to the southwest, of via the extension of Perlemoen Street to the northeast as shown conceptually in ***Figure 11***;

i) The ultimate vision is that the whole of the demarcated commercial area should start functioning as a village, with fences between plots coming down, opening up courtyards and walkways between buildings through which visitors can meander, visit cafes and

j) browse through shops. This vision is shown in the Urban Design Framework, Annexure B;

k) Elements of the Kleinbaai Urban Design Framework should be implemented as a pilot project that can serve as design standard for other towns and suburbs in the Overstrand area.

ANNEXURE A
RECORDS OF MEETINGS WITH ROLE PLAYERS

1. Interview with Harbour Controller (Christine), 17 September 2013

- Shark boats operate throughout the season; fishing boats are more seasonal;
- Shark boats trailers are moved to and from the slipway with a tractor. Two tractors serve all eight boats parked in the harbour area;
- Shark boats are not serviced in the harbour, only very small reparations may be done. Boats are taken off-site for major services or repairs;
- Returning vessels call in to notify the harbour controller, who in turn tells the skipper whether it is clear to approach and who also calls up the tractor with that boat's trailer;
- Boats sometimes first dock at the small jetty to offload passengers before being taken out of the water;
- Provision of concrete slabs where the shark boats are parked, has helped a lot;
- Requests that remainder of roadway and manoeuvring space should also be provided with concrete surface;
- Shows where road signs at harbour entrance are lacking and ignored;
- Indicates that permanent surface with road marking will help in managing the movement of vehicles;
- Confirms that a shark boat and a smaller boat can be launched or retrieved simultaneously;
- Request that ablution facilities should be improved and that showers should be provided.

2. Meeting with Mr. Wilfred Chivell, 14 March 2014

- Mr. Chivell explains how the shark cage diving business works:
  - Majority is overseas visitors;
  - Interested in ecology and nature. Not just there to do shark dive, but to learn;
  - Tourists stay in Cape Town and come to Kleinbaai for one day only. Need has not been expressed for accommodation in Kleinbaai, as other "must see" tourist destinations are in and around Cape Town;
  - Tourists come by shuttle or sometimes by hired vehicles;
  - Bookings are done online long in advance;
  - Boats go out twice a day. When visitors arrive they are briefed and issued with gear. Boat then goes out to sea for about three hours. Upon return boat is cleaned and restocked before afternoon group goes out;
- Impractical to expect shark boats to park their trailers anywhere else. Mentions speed humps on Geelbek Street and short corner at Swart / Kus Drive as limiting factors. Also that all trailers are not roadworthy to go on public roads and even those who are, must be treated as "abnormal loads" with traffic officers escorting. This is only done when boats go for big services.
- Would have been ideal if boats could dock in harbour and did not need to be retrieved from sea every time, but harbour too shallow and small. Notes that studies were done to investigate possibility of deepening and enlarging the harbour, but this has a big environmental impact.
- Deca engineers walk to harbour with Mr. Chivell, who points out which residential properties are used for shark boat operations and lack of parking at some of these properties.
- Concept of remote parking – where the Municipality develops a central parking area and where non-compliant businesses can "buy out" additionally required bays – is discussed.

- In harbour, Mr. Chivell shows where slipway has been extended in recent past and says that the slipway is still not founded on bed rock, which means that sand still gets washed out at slipway footing, causing a drop off.
- Shows where gravel fill has been washed away underneath concrete boardwalk and where this gravel lands next to jetty, making it too shallow for boats.
- Shows that jetties are inundated during high tide.
- Asks that Municipality should consider the provision of electrical points at each shark boat parking bay. Water points have already been provided.
- Wooden boardwalk / walkway along Kus Drive and down to jetty, as proposed in previous study and as approved by Council, should be implemented.
- Mr. Chivell says that he intends to develop an interpretation centre on the vacant Erf 109 that belongs to him. Deca engineers walk with Mr. Chivell to Erf 109 where he points out Milkwood trees that are protected and should be incorporated into design of parking area.
- In response to a question on the maximum sustainable number of shark boat operators, Mr. Chivell says that studies on shark behaviour, habitat and ecology have shown that 10 boats are the maximum. Adds that Dept of Fisheries may choose to differ and that they may add additional permits, but that Kleinbaai harbour is also reaching capacity in terms of time and space for launching.
- Mr. Chivell tells Deca engineers of the number of commercial ventures that started up only to close down again during the last number of years. This is because tourism / visitor numbers are seasonal and businesses that may be very viable in peak season, will no longer be feasible in the off-season.

3. <u>Meeting with Mr. Kat Myburgh, 17 March 2014</u>

Mr. Myburgh is the Gansbaai Town Manager for Overstrand Municipality. He is also a member of the Kleinbaai Slipway Management Committee (KSMC).

- Mr. Myburgh says that shark boat operators, boat clubs, kelp collectors, rate payers and Cape Nature are represented on the KSMC.
- Informs Deca of the following studies:
  - Ulwazi Engineers have done a design for the boardwalk that will run from Kus Drive, behind the ablution facilities at the harbour down to the jetty. The concept has been approved by Council, but the ROD lapses in July 2014 and the process will have to go through public participation again before project is implemented. Ulwazi study also said that slipway should be extended.
  - Origin report of 2004 also made proposals for harbour development.
- Confirms that shark boats cannot leave the harbour and that docks should be considered as permanent solution.
- Where sufficient parking cannot be provided on commercial / shark operators' properties, they should buy parking at an alternative location. Parking bays shown on site plans should be practically workable and not just lines on drawing. Also, buildings should not be expanded after initial approval.
- Is aware of remote parking concept and supports this for casual or business parking, but not for boats.

4. Meeting with Kleinbaai Slipway Management Committee, 16 May 2014

- Most people present were happy with the short term proposals for the upgrading of the harbour area.
- Most people present were not happy with long term proposals like the removing of parking from the harbour. Concern was raised for the size of some of the boats and trailers that would need to be towed in and out of the harbour up steep gradients etc.
- The issuing of licenses for the shark diving industry was questioned as these licenses are issued on a National level and the limitations of the harbour and environment are not kept in mind.
- More information regarding the capacity of the harbour in terms of Shark boat parking and licensing was requested.
- The provision of parking to the south of the harbour was proposed to be investigated to increase the harbour capacity in terms of parking.
- Proposes that Erf 114 should be acquired for potential parking provision, subject to budgetary provision bening made.

ANNEXURE B
ENGINEERING REPORT DRAWINGS

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deca CONSULTING ENGINEERS

KLEINBAAI ROADS

FIGURE 1

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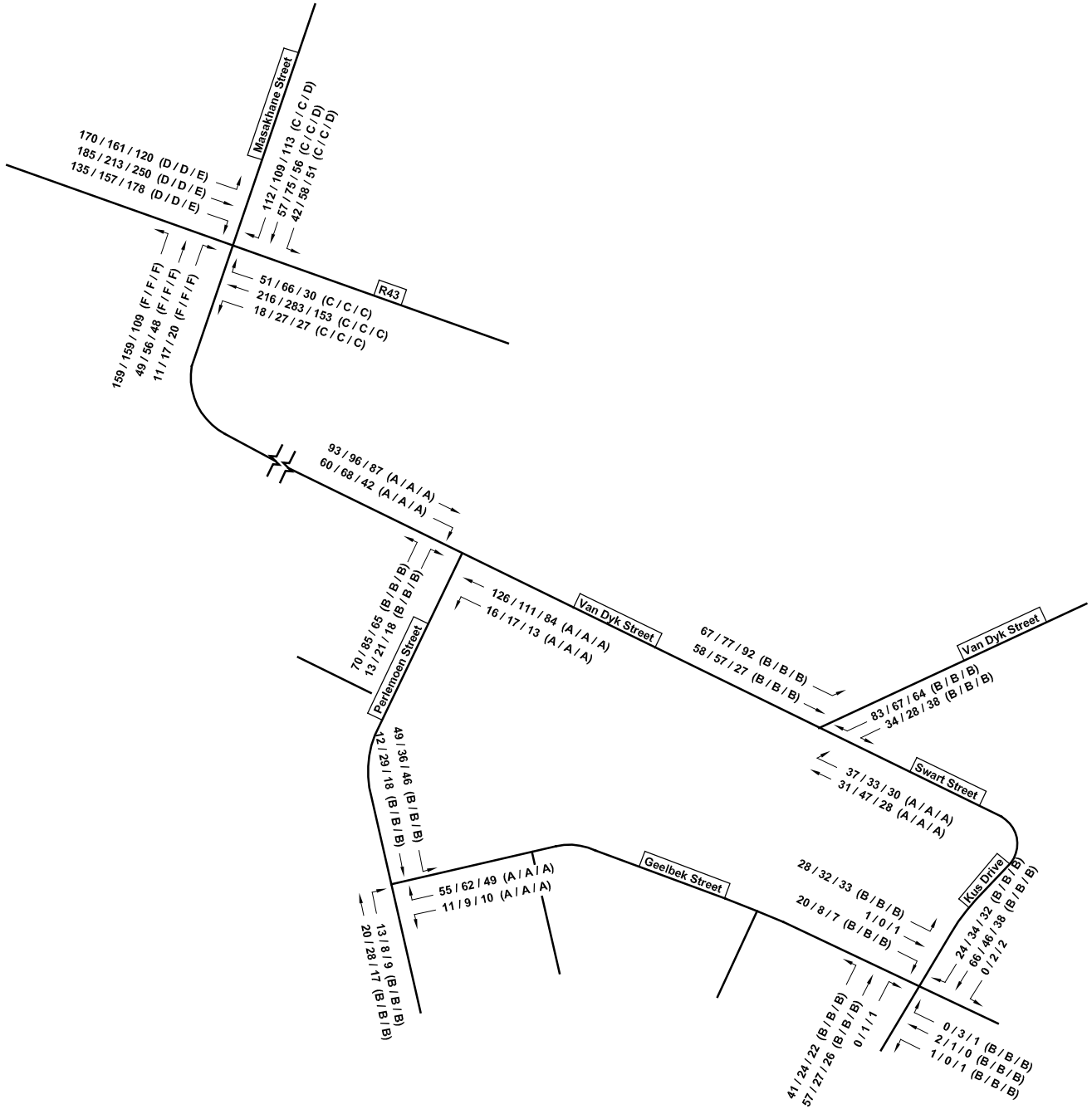
ERF 11 HOUSE STRUCTURE EXCEEDING BUILDING LINE

FIGURE 2



LEGEND

93 / 96 / 87 (A / A / A) →

93 / 96 / 87: Traffic volumes during the AM / midday / PM peak hour

A / A /A: Movement service levels during the AM / midday / PM peak hour

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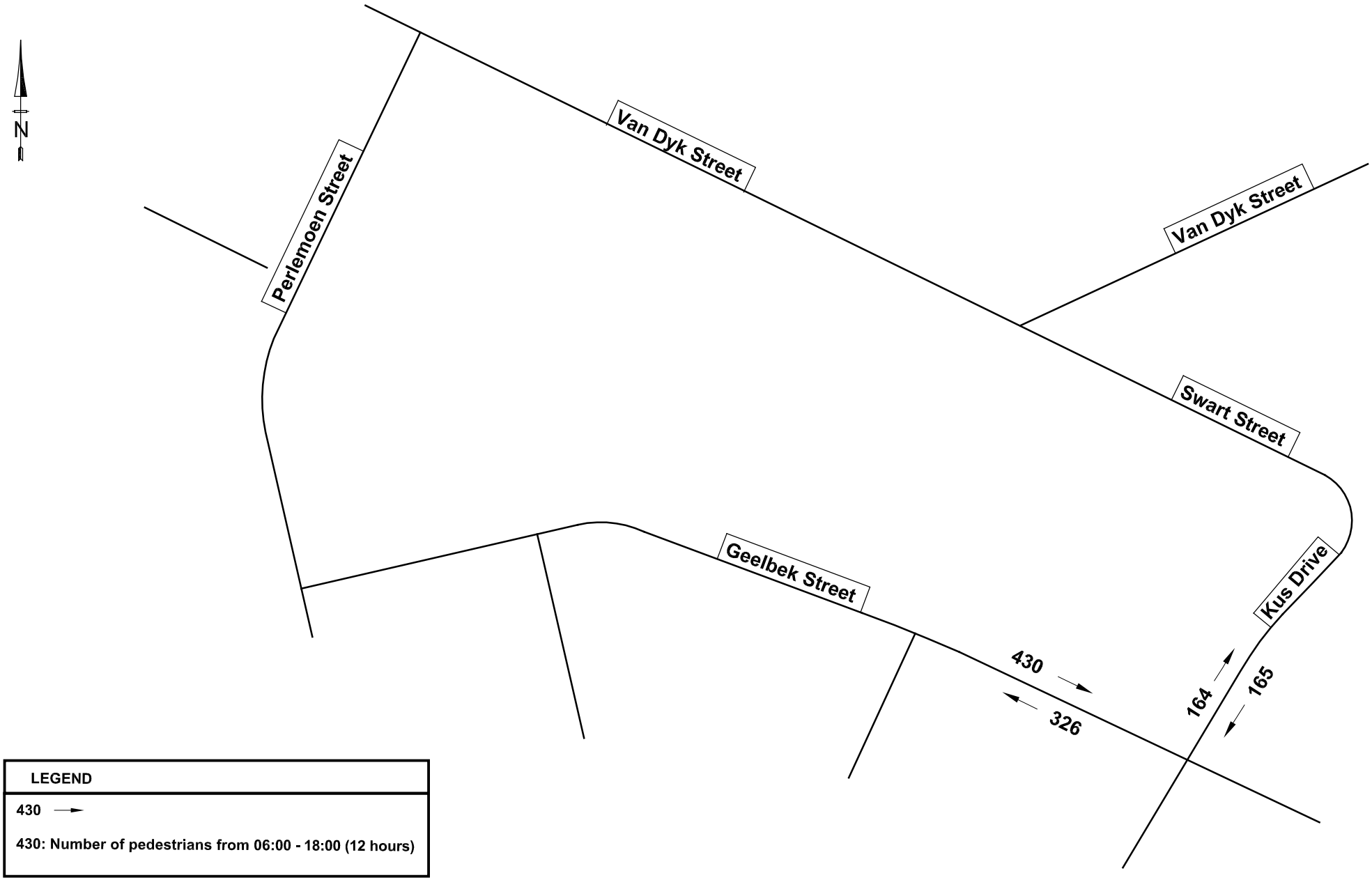
EXISTING (2013) TRAFFIC VOLUMES AND SERVICE LEVELS

FIGURE 3



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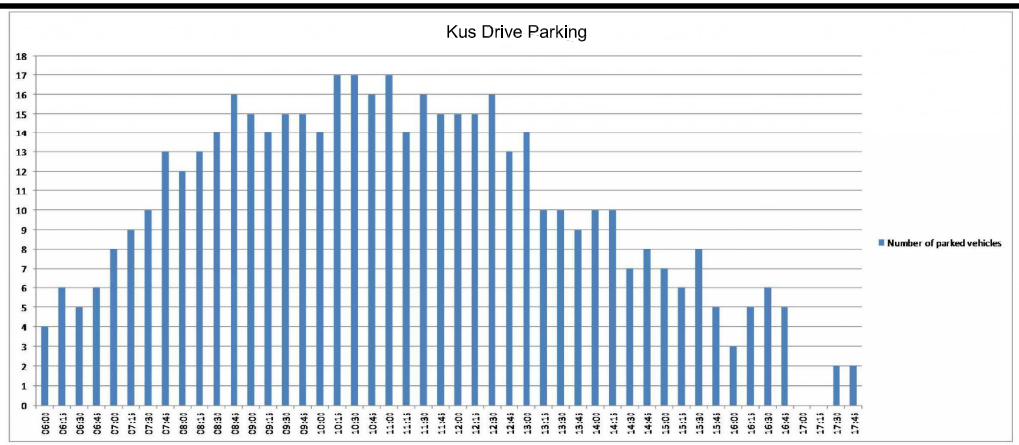
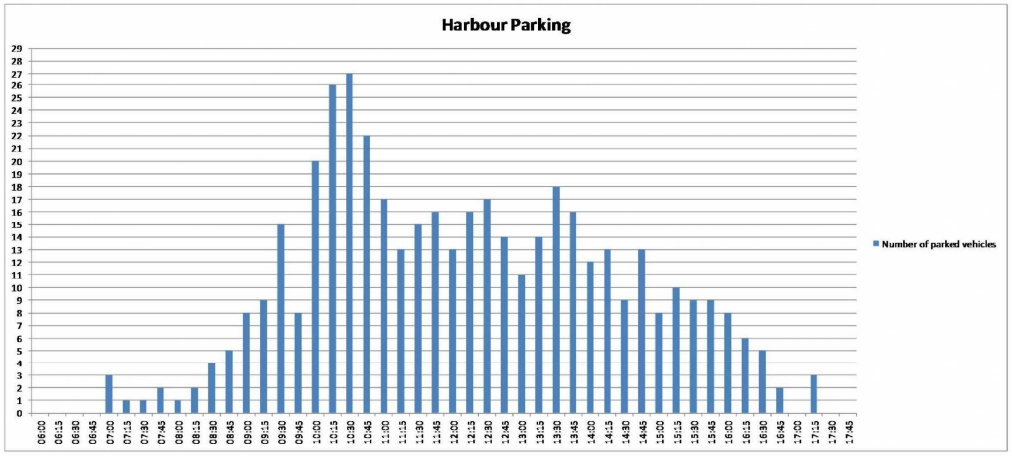
EXISTING (2013) PEDESTRIAN TRAFFIC

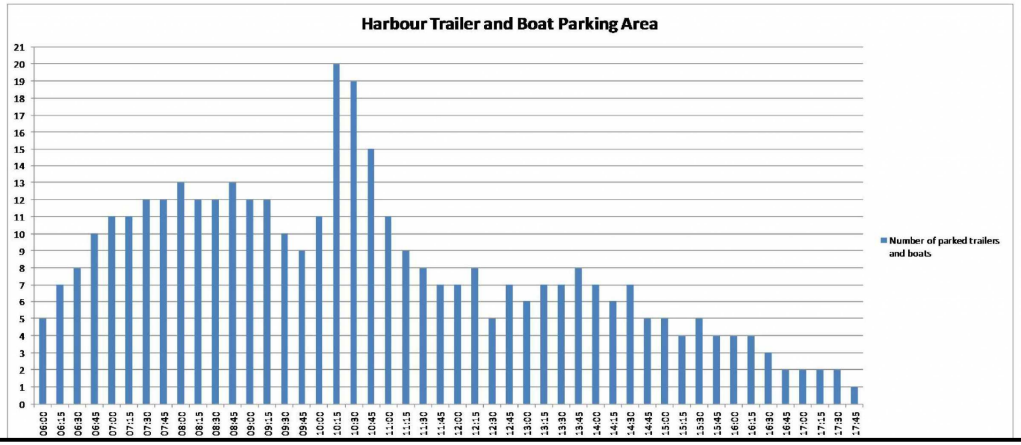
FIGURE 4



Available parking bays (approximate): 24
Number of bays utilised during peak period: 17



Available parking bays (approximate): 60
Number of bays utilised during peak period: 27



Available parking bays: 26
Number of bays utilised during peak period: 20

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PARKING UTILISATION IN AND AROUND KLEINBAAI HARBOUR

FIGURE 5

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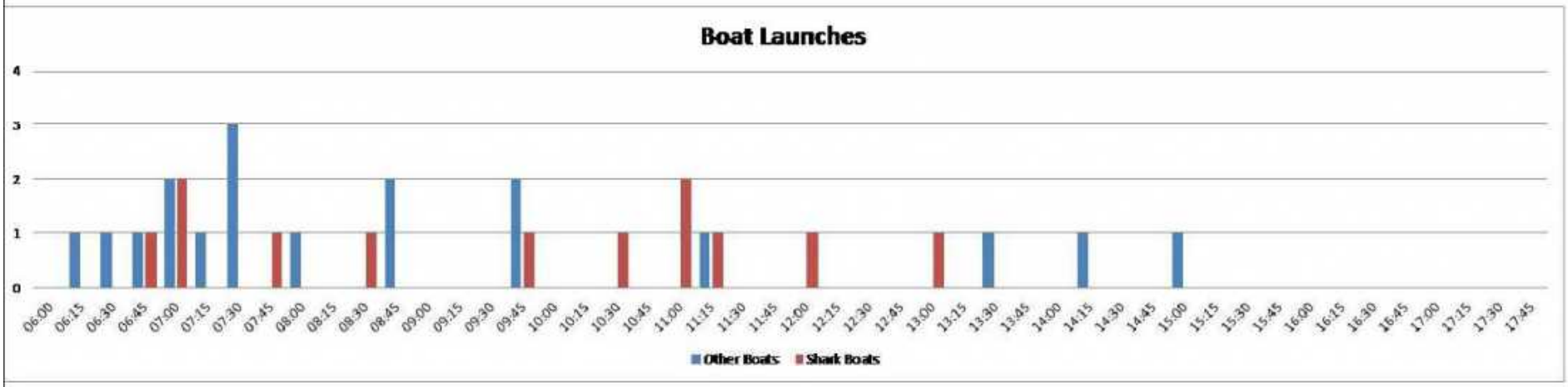
LAND USE IN CENTRAL KLEINBAAI

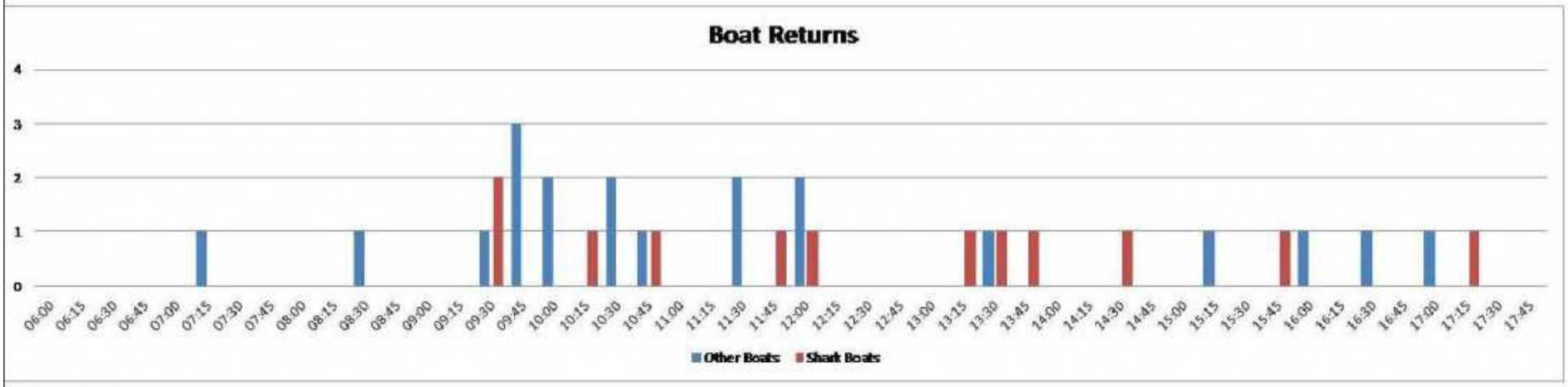
FIGURE 6



12 hour totals:

Shark Boats: 12

Other Boats: 18



12 hour totals:

Shark Boats: 12

Other Boats: 20

SHARK BOATS

SHARK BOAT	SHARK TEAM	BARRACUDA	APEX PREDATOR	MEGALODAN	THE WHITE SHARK	SHARK LADY	TOTAL	AVERAGE
NO. OF TRIPS	2	2	1	2	2	3	**12**	**2**
AVE TIME AT SEA PER TRIP (hh:mm)	04:02	02:46	07:40	02:39	02:17	02:25	**21:50**	**03:38**
AVE LAUNCH TIME (hh:mm)	00:03	00:03	00:02	00:06	00:07	00:05	**00:27**	**00:04**

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BOAT LAUNCHES AT KLEINBAAI HARBOUR

FIGURE 7

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EXISTING LAYOUT OF KLEINBAAI HARBOUR

FIGURE 8

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SHORT TERM IMPROVEMENT PROPOSALS FOR KLEINBAAI HARBOUR

FIGURE 9

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PROPOSED EXTENT OF KLEINBAAI BUSINESS AREA

FIGURE 10

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ENGINEERING CONCEPT OF LANDSCAPED PARKING AT THE ENTRANCE TO KLEINBAAI

FIGURE 11

PART B
URBAN DESIGN REPORT

csm

Kleinbaai Village Centre

A tourism Node Urban Design Framework

Prepared for

Prepared By

CSM consulting Services

In association with

Deca Consulting Engineers

Controlled Document No: S14.03.D.65152

Kleinbaai Tourism Node

CONTROL PAGE

CSM PROJECT NO:	01182MDS	**CSM CONTROLLED DOCUMENT NO:**	

Issue	Date of Report	Description	Revision
1	20/02/2014	Stage 3 Report: Urban Design Framework	0
2			
3			

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Maria Laura Santamarina

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Page of Contents

Existing Built environment

Area with commercial activities in residential zoned properties.

Existing Residential neighbourhood

The approach from R43 along Rd is lined by a thick edge of indigenous vegetation

Existing

Open space edge

Open space edge

Existing Residential Neighbourhood

Harbour Existing parking boats and trailers

Exisitng facilities

Conceptual Framework

Synthesis of existing situation

A Existing residential neighbourhood:

B Existing residential neighbourhood with tourism related commercial activities in residential dwellings. Area in transition. Threat of increase volume of vehicular traffic / development pressure/ loss of village character

C Existing Harbour

Intruded upon by vehicular traffic - parking and in need for improvement of quality and sense of place

D Existing open space.

Threat of intrusion by increased tourism related commercial activities.

1 Area identified as future commercial:
Potential long term perimeter block development.

2 Inner block parking for boats, trailers and tourism related visitors (public)

3 Inner block parking for uses on perimeter block buildings

Conceptual Framework

Strategic Actions

A Existing residential Neighbourhoods

Provide independent access roads

Protect sense of place and scale

Prepare a design guideline document

B Formalise a new village Centre neighbourhood.

Based on New Urbanism and Non-motorised transport principles.

C Harbour

Remove all parking

Allow limited stand by area for a few boats-trailers

Improve finishes, surfaces, furniture

D Existing open space.

Protect against intrusion by increased tourism related commercial activities.

Kleinbaai Village centre

Urban Design

Framework

` **Perimeter block form**:

Primary built form response

Buildings are placed on the street boundary. Only controlled recesses are permitted. Few vehicular entrances. Many pedestrian entrances

Pedestrian Promenade

Inner block : landscaped parking

Mixed uses neighbourhood: Commercial, tourism, guest houses, boutique hotels. Low rise , maximum two storeys.

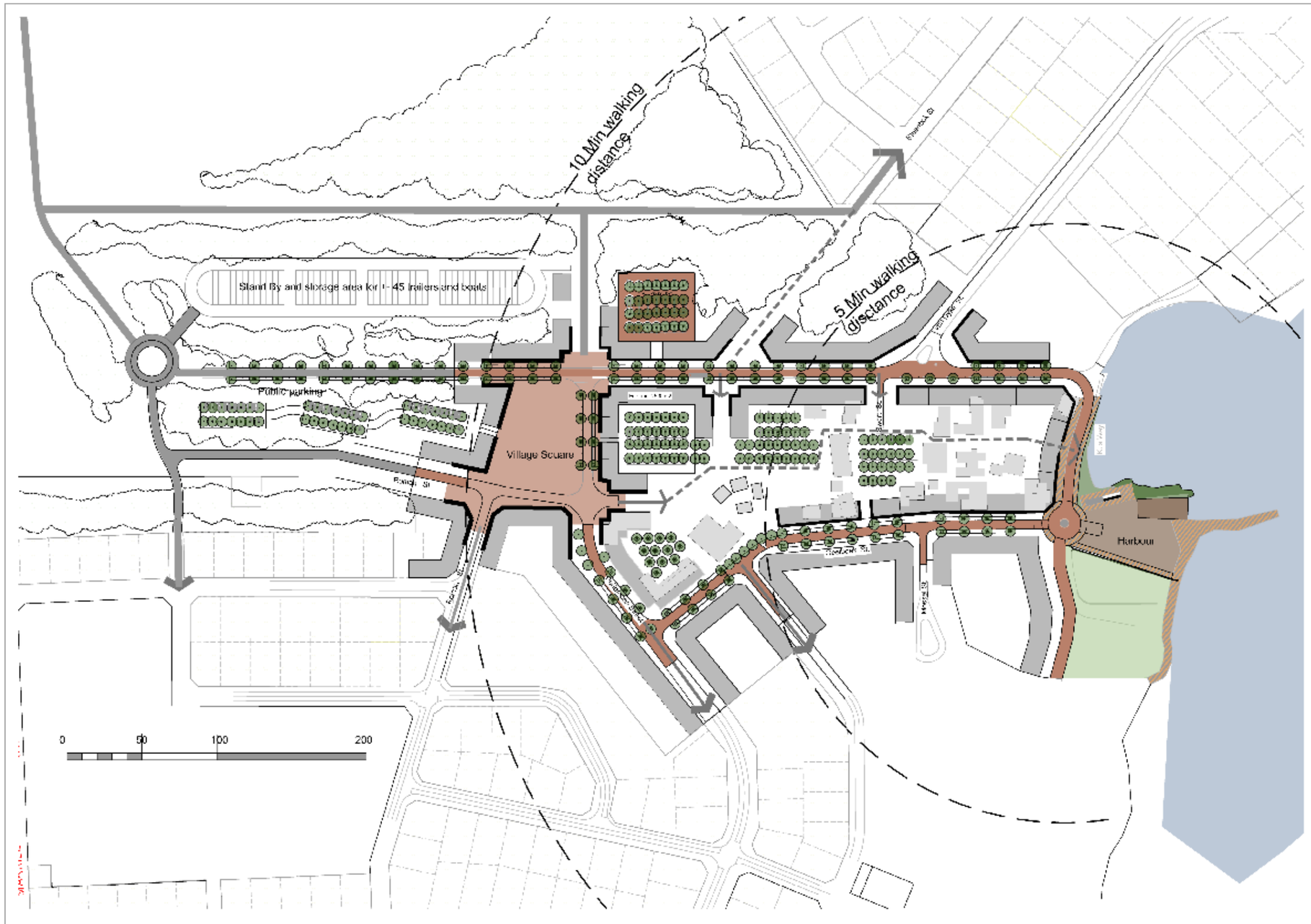
Place Structure: Neighbourhoods

Existing residential neighbourhoods: Single residential dwellings.

Mixed uses neighbourhood: Commercial, tourism, guest houses, boutique hotels. Community facilities

Focal places Village Square

Focal Places: Harbour



Implementation: Projects

Implementation: Phasing

To be discussed in detail

Short term

Public realm improvements

Detail Urban Design plan and Landscape masterplan, Transportation MP. Statutory applications.

Medium term - Incremental

Perimeter block and mixed uses village neighbourhood

Parking clusters

Long term

Potential upgrade of pier or additional jetty (To be thoroughly investigated)

- Boat trailer parking and storage
- Public parking
- Non- motorised transport streetscape design and improvement

- Village Square:
- Community and tourist facilities. Small shops, coffee shops, restaurants. Tourist accommodation above (apartments)

- Harbour Improvement
- Pedestrian promenade
- Furniture
- Extend facilities (minimal)

- Village centre Transportation management plan including harbour.
- Additional links into existing residential neighbourhoods. Street design

Neighbourhood Structure

Built Form: Perimeter block

Architectural treatment

Precedent: Village square Seaside Village

Precedent: Village square Seaside Village

Village square Kleinbaai

Streetscape

Kleinbaai :

A Non- Motorised Transport Village

All parking to be removed from the harbour except for boats to launch

Parking and storage of Boats and trailers in a cluster with controlled entrance, exit and circulation. Visually concealed from the public realm by a thick edge of indigenous vegetation

Circulation of trailers to the harbour from the parking and storage centre and back: restricted to a specific lane. (Red dotted line)

Bicycle lane incorporated in sidewalk

The transportation network is management based. Interventions in the public realm will be focused on adding quality, legibility and sense of place. Streets will be treated to depict a village centre scale and character

Parking and storage for bicycles,

Public parking to be arranged in pockets inside perimeter blocks

Street Parallel parking on both sides of all streets.

rollerblades

"Park and ride" and "park and walk" enables the village sense of place to be protected, preventing the creation of large parking lots and a volume of vehicular circulation inconsistent with the character and scale of the village.

tricycles and wheelchairs

The compromise is for visitors to walk and / or use non- motorised transport from the parking to the harbour. This creates an opportunity for exploring the village centre.

Walk

As people walk from the public parking to the harbour they enjoy the amenities that the village centre has to offer. People's presence adds vitality and an increased variety of economic activity.

Golf cart "trains" as a local tourist service (Similar to CT Airport)