

DEVELOPMENT OF THE LIGHTHOUSE PRECINCT, AGULHAS NATIONAL PARK

ARCHITECTURAL COMPETITION

SANParks, as the implementer of a Department of Environmental Affairs and Tourism funded *'Infrastructure Development Programme'*, requires the services of an architect to design the facilities of the Light House Precinct in the Agulhas National Park. This document sets out the expectations of the competition and the constraints pertaining to any proposal.

1. DOCUMENT PURPOSE

- To initiate the concept design process for the Light House Precinct as part of Southern Most Precinct Plan.
- To list existing ideas, concepts and even principles that has emerged from various sources thus far and functions needed relating to the precinct for consideration during the design process.
- To provide information and guidelines for the architectural competition to result in the selection of a design for the proposed Lighthouse Precinct development.
- To form a baseline document to communicate with planners, decision makers and other stakeholders

2. GUIDELINES FOR EVALUATION

Herewith the basic guidelines and format for the submission of your proposed design in terms of the brief given for the Light House Precinct, Agulhas National Park.

2.1 The Guidelines for evaluation will be based on these three disciplines:

- **Firmness (Structures)**
 - Simplicity of the structure
 - Job creation – labour intensive
 - Details
 - Type of Construction materials
 - Sensitivity for environment
 - Building Regulations
- **Commodities (Functionality)**
 - Sustainability
 - Functionality
 - Services
 - Energy Efficiency
 - Green Building

- **Delight (Experience)**
 - Aesthetics
 - Context
 - SANParks Image
 - Visual impact

2.2 Financial aspects

- The budget for the Light House Precinct Plan and amenities (excluding furniture, bulk services & civil works and VAT) amounts to R 9,5 million.

2.3 Submission requirements

- Drawings
- Gross Area or Volume Tabulation
- Cost estimate of the proposed design
- Method of Presentation

The submission format must be based on the following guidelines:

- A maximum of ten (10) A3 sheets may be used for your presentation which must include your:
 - Site plan
 - Architectural Impression
 - Basic Layouts, Sections & Elevations
 - Explanatory Drawings
 - Aerial view
- All drawings to be done on a 1: 200 Scale
- All drawings to be Landscape (horizontal)

Should your company be short listed from the initial submission, you might be expected to do a presentation. The date and venue will be confirmed.

The Presentation must be inclusive of the following:

- Verbal with drawings or PowerPoint presentation.
- A CD with your design must be made available at the presentation for evaluation purposes.
- One hour will be allocated to each contestant for the presentation. (15 minutes will be allocated at the start for the erection of your presentation a maximum talk time of 15 minutes; the rest of the hour will be allocated to view the presentation and time for questions).

2.4 General

Competitors are reminded that this is a conceptual design that must be based on the budget provided, with the indication of possible future expansion of the design.

The concept drawings and details provided in terms of the competition will be done at risk and no compensation will be paid for any expenses incurred in this phase of the project. The competition prize will be the appointment for the full architectural services of the design of the Lighthouse Precinct with a winner takes all approach. Entries will be judged by a multi dimensional panel of judges. The decision of the panel of judges will be final and no correspondence will be entered into with unsuccessful proposals. Participants will be informed in writing of the outcome.

Interested parties should confirm interest to participate in writing. Your confirmation can be e-mailed to danaljar@sanparks.org or faxed to (012) 426 5522 and must be submitted before 2008-10-17.

Any additional information that might be required should be requested in writing via e-mail, and will be circulated to all of the participants.

2.5 Competition closure

The closing time for receipt of submissions is 12:00 on 31 October 2008. Please submit proposals in a sealed envelope marked clearly with the identification details: Lighthouse Precinct Development – Architects Competition. Submission must be delivered to Ms. Danalja Rautenbach at 643 Leyds Street, Muckleneuk, Pretoria, 0002 on or before the stated closing time.

3. GENERAL OVERVIEW

3.1 Cape Agulhas Lighthouse Background

The most southernly cape on the African continent is part of a coastline fringed with dangerous reefs, on which more ships have been wrecked than on any other part of the South African coast.

The necessity for a lighthouse at Cape Agulhas was recognised by Colonel CC Michell, surveyor-general and civil engineer of the Cape colonial government early in 1837. Like many others, he was probably spurred on by the tragic shipwreck of the *Doncaster* the previous year at the mouth of the Ratel River, during which most of the crew and passengers died. He requested Governor Sir Benjamin D'Urban to send him to Cape Agulhas to investigate the feasibility of constructing a lighthouse there. Michell visited the cape in March 1839 and reported finding a suitable spot, namely a low limestone hill that was high enough for a lighthouse and where building materials could be obtained. Michiel van Breda, who owned the land, was prepared to donate it.

On 11 July 1840 a public meeting was held in Cape Town to discuss the erection of a lighthouse. It was resolved that such a lighthouse should be built, but with private sponsorships, since the Cape and British governments were reluctant to budget for the lighthouse. A fund was established to receive contributions. Contributions to the fund also

came from India, the Philippines, St Helena and London. However, by June 1843 the fund only stood at £1 479.3.9, which was far short of what was actually estimated. Mounting criticism from the Cape, India and other British colonies on the lack of progress caused the British government eventually in 1847 to allocate an amount of £25 000 for the construction of lighthouses at Cape Agulhas and Cape Recife, another danger spot on the coast.

After the approval of the site and design for the lighthouse (designed by Michell) construction work started late in 1847. The building contractor was William Martin from Cape Town. On 8 January 1848 the foundation block was laid. The building was constructed of local limestone, quarried from the hillside behind the lighthouse. About 90 workers were employed. On 15 December 1848 the lighthouse was declared to be completed and on 1 March 1849 the light was lit.

Staff living quarters were built adjacent to the tower in 1848.

In August 1920 a separate house for the senior light keeper was completed, some distance away from the lighthouse.

Various additions to improve the living conditions of the occupants were made to the quarters adjacent to the tower over the years. Front verandahs were erected, since removed. In 1935 an addition was made at the southern side of the lighthouse to accommodate the diesel-electric generator and the radio beacon. This plant comprised two water-cooled diesel engines driving 110 volt generators. A 4kW electric lamp replaced the vapour burner on 1 June 1936, increasing the candlepower to 12 million. An electric motor and a gearbox replaced the mechanical clockwork optic drive unit. In 1956 the generating plant was replaced by a set of electrical units to power the light, radio beacon, quarters and general lighting.

An improvement was a new engine room with a watch room that faced the sea, next to the lighthouse. In the days of the wick and vapour burners, the light keepers had to spend almost the entire watch in the lantern. There were only two light keepers and they had to share the watch throughout the night. Cleaning duties were performed during daylight hours as well as keeping a lookout for ships signalling the lighthouse. With the automation of the lighthouse, part of this building was converted into rest rooms for the maintenance staff.

In February 1939 a Marconi type radio beacon came into operation. The aerial was suspended between a steel lattice mast erected at the new engine room and the lighthouse tower.

In 1960 a structural investigation of the lighthouse tower confirmed serious defects due to weathering of the soft and porous limestone. It was considered to demolish the tower. To preserve the lighthouse, the Bredasdorp and Agulhas local authorities took it over and assumed responsibility for its maintenance. An agreement whereby the lighthouse and all the buildings adjoining the tower were to be handed over to the Bredasdorp Divisional Council was concluded in May 1971. The lighthouse was declared a national monument on 2 March 1973.

In February 1968 a new fully automatic lighthouse came into operation to replace the old lighthouse, consisting of a 23-m aluminium tower, a 2,1-m lantern and an automatic

revolving optic pedestal, a new fully automatic radio beacon and a 30-m aluminium aerial tower.

After much discussion and controversy, an agreement was reached during the 1980s between the Divisional Council and the SA Transport Services on the restoration of the lighthouse with a view to recommissioning it as a working unit again. SATS restored the optic and converted it for fully automatic operation. The Council restored the tower, replacing the weather-worn limestone blocks with replacement blocks from the original quarry. On 25 March 1988 the lighthouse was officially recommissioned.

The aluminium lighthouse tower that functioned between 1968 and 1988 was dismantled and re-installed at Quoin Point to replace the original steel tower. The lantern and optic were installed at the Groenrivier Lighthouse on the Namaqualand coast.

(Dr Robert De Jong, 2007)

HIGHLIGHTS OF THE CAPE AGULHAS LIGHTHOUSE

1847 June 10	Colonel Michell started the planning and the laying of the foundations. The building was modelled on the design of the Pharos of Alexandria in Egypt – one of the seven wonders of the Ancient World.
1848 January 8	The foundation stone was laid
1848 December 15	The Lighthouse was completed at a cost of £15 871 sterling.
1968 February 20	The old building was declared unsafe because of serious decomposition of the limestone, and a 12-metre aluminium tower with a revolving optic was commissioned. The resident lightkeeper and staff were withdrawn in December
1973	The old building was declared a National Monument (National Heritage Site).
1983	The restoration programme started.
1988 March 25	The automatic light came into operation.
1994 January 28	The Lighthouse Museum was officially opened.
1999 September 23	The Agulhas National Park was proclaimed.

INTERESTING FACTS

Date of Installation	1 March 1849
Character of Light	One flash every 5 seconds
Type of Light	Revolving-electric

Candlepower	7 500 000
Range	30 sea miles
Height of Focal plane	31 metres above H.W.O.S.T
Structure	27 metres white round tower with red bands
Position: Latitude	S34° 49' 08"
Longitude	E20° 00' 33"

3.2 Approach

- The Lighthouse Precinct will be the gateway of the southernmost point and Agulhas National Park.
- Must be placed and designed in context of the proximity to the southernmost point.
- Integrated and multi-disciplinary – commercial, cultural and general management for the Agulhas National Park and other role-players.
- Because the Lighthouse development should be the focal point of the park, it should be part of the park's headquarters and administrative support base. The Lighthouse remains the iconic attraction to the Lighthouse Precinct.
- Light House Precinct: Modular, inter-active, world class, general to detail by choice.
- The international navigational function of the Lighthouse Precinct should not be compromised and must be accommodated.
- The Light House Precinct will be developed in collaboration with relevant partners and local authorities in line with the broader planning framework of the area.

4. CONCEPT

4.1 Background:

It is the vision of SANParks and its partners "to grow the Cape Agulhas area into one of South Africa's top tourist destinations that will provide visitors with a unique and memorable experience, guided by the parameters of sustainable development". Within the Cape Agulhas area, the priority is to get the Lighthouse precinct operational as a visitor node and park headquarters, as part of the bigger southernmost precinct development. As such it will serve as an important gateway to the park.

4.2 Objectives:

The main objectives are:

- The development of concepts for the proposed infrastructure development for the Lighthouse Precinct in order to select the most suitable design for the area.
- To guide the planning and implementation of the Lighthouse project.

5. DESIGN REQUIREMENTS

Please refer to the Lighthouse Gateway Precinct Plan available at www.sanparks.co.za under the link Agulhas National Park Architects Competition. Other relevant information is also available under this link which includes a survey map, photos and aerial photos.

5.1 Infrastructure requirements

Provide concept drawings within the approved concept lay-out plans as pertained in the above mentioned Lighthouse Gateway Precinct Plan for the Lighthouse Precinct Development inclusive of:

- Commercial Facilities for visitors, including a restaurant, curio shop and vendor stalls
- Park Administration Facilities inclusive of a reception area and offices
- Cultural centre
- Public ablution facilities
- Public areas inclusive of a picnic area, walkways and open use areas.

5.2 Specific requirements

1. SANParks/TNPA/Telkom Offices (170m²)

- Must take into consideration phased approach focusing on requirements for TNPA & Telkom immediately, and future expansion
- This facility must make provision for:
 - SANParks Offices for 1 x Park Manager, 1 x Admin Manager, 1 x Admin Assistant/HR, 1 x PC Officers, 1 x Conservation Officer, open plan reception area, kitchenette and ablution facilities.
 - Transnet National Ports Authority Offices: 6 x 6m Engine Room, 6 x 3 m Workshop and 3 x 3m Office
 - Telkom office: 3 x 3m Office

2. A cultural centre (200m²)
 - To accommodate virtual and physical displays, artefacts, maps etc interpreting the Park's natural and cultural heritage/history and interactions with local communities. This facility must include:
 - Office & work area
 - Store room
 - Display area
 - Lecture hall to accommodate 60 people

3. Restaurant (270m²)
 - Design to make provision for 60 people, but must take into consideration future expansion to accommodate 200 people.

4. Tourist Offices (170m²)
 - This facility must make provision for:
 - Shared office space for 2 x tourist officers with working space area
 - Tourist Bureau Offices (38m²)
 - Store room
 - Staff kitchenette
 - Staff Ablution with 1 x male and 1 x female
 - Curio shop (50m²)

5. Public Toilets (50m²) – visitors only
 - Female: 1 x universal access and 6x toilets
 - Male: 1 x universal access; 4x urinals and 2x toilets

6. Picnic Area (270m²)
 - General picnic area - no braai facilities

7. Vendor Stores (80m²)
 - Small scale vendor area

8. Existing Lighthouse Keepers House
 - Architect to submit either proposal to either utilize or demolish house as part of infrastructure proposal

9. 'Hard' Landscaping

- Viewing decks – 200m²
- Walkways – 1,350m

9. 'Soft' Landscaping

- Architects to indicate soft landscaping required for proposed design in line with the natural surroundings.

5.3 Services – will be designed by Consulting Engineers appointed by SANParks

- Ground works and platforms
- Water reticulation
- Sewage System
- Electrical
- Communication
- TNPA & Telkom requirements
- Parking
- Roads

5.4 Design guidelines

- All design features, materials and construction methods must be in accordance with “sustainable development” principles, and afford *universal access* to persons with special needs.
- Green building and energy efficiency of buildings are requirements of proposed concept.
- The design of the buildings should be such that the construction methods should maximize the use of labour, job creation and skills development.
- Due to local extreme corrosion factors careful consideration must be given to low maintenance equipment and structures, with durable natural materials and finishes to be used as far as possible throughout.