


**2022**

**SCOPE OF WORKS –  
DANGER POINT  
LIGHTHOUSE**

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LIGHTHOUSE AND NAVIGATIONAL SYSTEMS

8/17/2022

	<b>Site:</b> Danger Point Lighthouse <b>Title:</b> Paving		<b>Document Number:</b> SOW-WR-182
	<b>Inspection :</b> Yolande Rasmeni Ikeraam Matthews	<b>Revision:</b> 0	<b>Date Issued:</b> 17 August 2022

## TABLE OF CONTENTS

1. PURPOSE
2. SCOPE OF WORK
3. SPECIFICATIONS
4. GENERAL
5. SIGN OFF

	<b>Site:</b> Danger Point Lighthouse <b>Title:</b> Paving		<b>Document Number:</b> SOW-WR-182
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## 1. PURPOSE

The purpose of this document is to outline the scope of work required for paving at Danger Point lighthouse.

## 2. SCOPE OF WORK

**The work shall consist of providing all labour, materials and equipment required for the complete execution of all paving and repair work specified herein.**

### 2.1 Scope of work

- 2.1.1 Paving of the driveway including incorporating the storm water drainage system.
- 2.1.2 All measurements to be taken and confirmed onsite.

## 3. SPECIFICATIONS

### 3.1 Paving

#### 3.1.1 Materials


- 3.1.1.1 The units supplied shall be free from cracks that diminish from their general appearance.
- 3.1.1.2 Use interlocking heavy duty pavers complying with ASTM C 902.
- 3.1.1.3 Sand for bedding and jointing shall be free from substances that may be harmful to the pavers.
- 3.1.1.4 Joint sand shall conform to the grading requirements of ASTM C 144.
- 3.1.1.5 The sand to be used should be SABS approved sand.
- 3.1.1.6 The particles shall be sharp, angular and conform to the grading requirements of ASTM C33.

#### 3.1.2 Examination

- 3.1.2.1 Verify that the compacted base is dry, uniform, even and ready to support sand, pavers and imposed loads.
- 3.1.2.2 Do not fill low areas with bedding sand when adjusting final G4 gravel base course, use base material.

#### 3.1.3 Installation

- 3.1.3.1 Proper preparation for the area to be paved to be done; for example, removing of all vegetation etc.
- 3.1.3.2 The area to be paved should be treated with an approved weed killer to prevent re-growth of the vegetation.
- 3.1.3.3 Big rocks will be paved around; no major excavations should be done to the grounds.
- 3.1.3.4 Compact the ground according to supplier's specifications.

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- 3.1.3.5 Lay 100mm base course of G4 gravel on well compacted ground.
- 3.1.3.6 Lay 50 mm sand bed on top of the compacted crusher run gravel.
- 3.1.3.7 Use first grade cement pavers on top of the 50mm sand bed.
- 3.1.3.8 Provide curb stones as restraints for paving.
- 3.1.3.9 Edges of paving to have a 200 x 200mm foundation.
- 3.1.3.10 Install edge restraints prior to placing pavers.
- 3.1.3.11 Ensure that pavers are free of foreign material before installation.
- 3.1.3.12 Full pavers are to be laid first.
- 3.1.3.13 The pavers should be laid hand tight using the herringbone method.
- 3.1.3.14 Maintain straight pattern lines and adjust as necessary.
- 3.1.3.15 Vibrate the pavers into the sand first with no joint sand, and then begin sweeping dry joint sand into the joints until they are full.
- 3.1.3.16 Proper drainage for storm water to be incorporated in the layout of the paving.
- 3.1.3.17 The paving must be strong enough to bear a 10 ton truck.

#### **4. GENERAL**

##### **4.1 Works to be left tidy**

During the construction of the works, the site shall at all times be kept neat and in a tidy condition. The Project Manager (Lighthouse and Navigational Systems) may order the Contractor to stop all work, until such time as, in his opinion, this condition has been met.

##### **4.2 Cleaning of site**

The Contractor must clear away all rubble/waste within 14 days of completion of work or part of the works and leave the site and surrounding area in a clean and acceptable state. All rubble to be dumped at an approved dumping site; and proof of dumping must be produced.

##### **4.3 Quality and workmanship**


All works must be done to the satisfaction of Lighthouse and Navigational Systems. All work must be guaranteed at least one year after satisfactory completion.

##### **4.4 Accommodation**

No accommodation camp can be set up at the site.

##### **4.5 Water**

There is no water available at the site.

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#### 4.6 Electricity

There is no electricity available at the site. Contractor should make provision for a generator and rock breaking equipment.

#### 4.7 Access

Special access arrangements will have to be made for the Contractor, vehicles and personnel.

#### 4.8 Security


No security will be provided by LNS for material stored on site or for the safety of the contractor's staff. LNS will not be liable for damage to tools and equipment occurred through vandalism or theft.

#### 4.9 Compliance

- 4.9.1 The contractor shall not be exempt from compliance with any statute, regulation or by-law imposing duties or obligations upon him/her as a contractor, and that he/she shall not be entitled to claim relief from any burden or infringement of his/her rights resulting from the operation of any such statute, regulation or by-law or any action lawfully taken there under by any local or other competent authority.
- 4.9.2 The Contractor shall comply with the following:
  - 4.9.2.1 The Safety Standards and regulations as laid down in the Occupational Health and Safety Act, No 85 of 1993.
  - 4.9.2.2 The latest Construction Regulations
  - 4.9.2.3 Lighthouse and Navigational Systems Safety, Health and Environment (S.H.E.Q) Specification.
  - 4.9.2.4 The Environmental Laws of South Africa, in particular the National Environment Management Act 107 of 1998, as amended.
- 4.9.3 The responsibility for adherence to these requirements rests with the Principal Contractor, failure which will result in stop work being issued.
- 4.9.4 The contractor must understand that TNPA Lighthouse and Navigational Systems has the right to stop all work if non-compliances are observed. Work stopped by TNP LNS due to non-compliance will be liable to penalties.

#### 4.10 Penalties


Penalties shall be applicable when work is not completed on time and not according to the Scope of Works. If the contract is not completed or completion is delayed as a result of non-adherence to the safety standards, and/or environmental management principles, the penalty clause shall come into effect.

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#### 6.10 Bill of quantities


No Bill of quantities is provided. The Tenderer shall determine and verify all work and materials required and quote accordingly. Quotations submitted by Tenderers to specify in detail the type of material being used as well as the manufacturer's name and part numbers of all fixtures/fittings that is being replaced. No variations orders shall be applicable.

#### 5. SIGN OFF

Compiled by:  ..... 22/08/2022 .....

Technical Services Manager

Date

Supported by:  ..... 22/08/2022 .....

Operational Supervisor

Date

Approved by:  ..... 22/08/2022 .....

Acting Regional Manager

Date