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NOTIFICATION OF INTENT TO DEVELOP

Reference: 10756

Date: 30 March 2017

Coastal Engineering Infrastructure Activities – Proclaimed Fishing Harbours Work Package 3: West Coast – Maintenance and Repair of Infrastructure Elements at Laaiplek Harbour

INTRODUCTION

Aurecon South Africa (Pty) Ltd (Aurecon) was requested by Coega Development Corporation (CDC), on behalf of the Department of Public Works (DPW), to undertake the coastal engineering infrastructure activities Work Package 3 of the Proclaimed Fishing Harbours Western Cape Development Programme, also known as the small harbours programme. This work package includes the three west coast harbours at St Helena Bay, Laaiplek and Lambert's Bay.

This document constitutes a Notification of Intent to Develop (NID) in support of the aforementioned works at Laaiplek Harbour.

PROJECT OVERVIEW

Part of the overarching Operation Phakisa initiative is the focus on developing and growing the country's Ocean Economy. It has been estimated that South Africa's oceans could contribute between 129 to 177 billion Rand to the GDP by 2033, as well as hundreds of thousands of jobs. An aspect which is critical to realising this potential is the rehabilitation and rejuvenation of the existing small harbours along the coastline.

The small harbours programme aims to drive the rejuvenation and upgrading of the small (fishing) harbours forming part of Operation Phakisa, to promote economic growth within the communities they serve. Currently, there are 13 proclaimed fishing harbours in the Western Cape. Within this programme six main project packages have been identified and DPW has established a Small Harbours Development Unit to implement and facilitate these packages which is already underway.

In order to ensure the efficient rehabilitation of existing infrastructure and reinstatement of the original operational capabilities at each of the proclaimed harbours in the Western Cape, the 13 harbours were split into four packages. Of these four packages, Aurecon was awarded the Proclaimed Fishing Harbours Western Cape Work Package 3, which focuses solely on the three west coast harbours at St Helena Bay, Laaiplek and Lambert's Bay. All of these harbours play a significant role in the local economy of the west coast, whether that be in the fishing or resource (in particular diamonds) sectors.

Small harbours are often the life source and focal point for the neighbouring communities they serve, and integrated into businesses and communities in and around the towns in which they are located. In many cases, such harbours are the main source of employment in sectors including fishing, tourism and manufacturing industries or personnel of the harbour itself. Over time, a number of the existing small harbours along our coastline have been neglected both from an infrastructure and operations perspective as well as from a governance aspect. This in turn has hindered the growth and development of the harbours and has subsequently had a negative impact on the surrounding communities. The long term potential of the fishing industry, issuing of quotas managed by government, and the interface of the harbour infrastructure with the surrounding town and environment, are all critical aspects to be understood in order to determine future steps for infrastructure related decisions.

In 1968, a channel was blasted to link the Berg River with St. Helena Bay, thus completing the formation of Laaiplek Harbour. The Laaiplek Harbour was developed to service the needs of the commercial, as well as subsistence fishing sectors. The harbour was proclaimed a fishing harbour in 1990 in terms of Section 26(1) of the Sea Fisheries Act (Act no. 12 of 1988).

Laaiplek Harbour contains a main wharf with approximately 330 m quay length and a number of smaller jetties. The wharf consists of a wooden piled structure with timber plank decking and small bollards. Two boat ramp slipways with training walls are also present. Fishing vessels of up to 40 m can be accommodated.

PROPOSED HARBOUR MAINTENANCE AND REPAIR

The proposed works will entail the repair and / or maintenance of existing harbour structures within the harbour jurisdiction. No expansion to the existing development footprint will occur as a result of the required works. The maintenance and repair activities required at the harbour will include the following aspects:

- Repair concrete breakwater and training wall structures:

Structural repair will be undertaken on the eastern breakwater and training wall. The existing breakwater consists of two rows of concrete sheetpiles with infill material placed between and a concrete capping slab on top. The envisaged repairs will entail the removal of the broken concrete slabs and any unsuitable infill material. New suitable infill material will be placed in between the existing concrete sheetpiles to reinstate the core of the breakwater. If possible a geotextile membrane will be laid between the concrete sheetpile rows prior to the placement of the new infill in an attempt to prevent future loss of the infill material. A new concrete capping beam will be cast on top of and along the length of each of the concrete sheetpile rows. New concrete capping slabs will then be cast between the new capping beams to reinstate the breakwater surface slab. This process will attempt to tie in with the previous repairs works undertaken on the breakwater in 2002/2003.

The training wall currently has sink holes behind concrete sheet piles. The loss of material and necessary repairs will be undertaken using a suitable method. This will most likely include the use of a geotextile membrane to prevent further loss of fill material through the concrete sheetpile wall.

- Replacement of the timber quay:

The upgrade of the timber quay will involve the removal of the existing quay and replaced with a new quay. It is anticipated that approximately 350 piles will be installed. The piles will be installed by initially drilling through the existing rip-rap/hard material layer and installing a steel circular tube (to maintain the drilled hole). The precast concrete circular pile will be guided through the steel sleeve and hammered/impacted down through the underlying material until the required bearing capacity is obtained. It is anticipated that the placement of approximately 230 m³ of concrete will be required in order to bind the rip-rap material together as to allow the drill bit to be able to drill through the hard material. It is expected that the placed concrete for the binding of the rip-rap material will cover a surface area of approximately 0.5m by 0.5m (area = 0.25m²) per pile.

The precast concrete U-beams will be installed with the aid of a crane which will lower the precast beams into position alongside the installed piles and connected/fastened to the piles to create the initial structural frame (support structure). The precast concrete deck panels which will be supported by the U-beams and form the sub-deck of the quay will be installed on-top of the precast U-beams. Along the quay line (berth line) precast concrete fender panels will be hung which will be concreted to the front row of piles and U-beams. Both the precast fender and deck panels will be placed using a crane. Once the precast sub-structure is installed the cast in-situ concrete topping will be poured on-top of the deck panels until the final design level of the quay.

- Replacement of shore crane:

The existing derrick crane on the timber quay will be replaced with a new knuckle crane.

- Routine dredging of the harbour basin:

Dredging of the harbour basin is a standard maintenance requirement for harbour operations, and should occur regularly to ensure the proper functioning of the harbour activities. This maintenance activity has been neglected in Laaiplek Harbour in recent years. It has been determined that up to 9 600 m³ of sediment will need to be dredged within the harbour basin to previously chartered depths, and future routine dredging activities will be necessary as a standard maintenance practice for the harbour. The most suitable location for the dredged sediment to be deposited is yet to be determined, but it is proposed that the dredged sediment be removed and deposited offshore in accordance with requirements of a Dumping at Sea Permit and specific Dredging and Dumping at Sea Maintenance Management Plan.

- Removal of two sunken vessels:

Two sunken vessels will be removed from the harbour. The South African Heritage Resources Agency (SAHRA) was contacted to provide assistance in determining if the removal of sunken vessels will require permitting in terms of the National Heritage Resources Act (Act no. 25 of 1999) (NHRA). Ms Lesa le Grange of SAHRA confirmed that the sunken vessels are modern therefore would not require a permit in terms of the NHRA for the removal thereof.

An Environmental Management Specification (EM Specification) for the removal of sunken vessels was prepared by Aurecon's Environmental Team, for the Specialist Service Provider that will be removing them. The EM Specification covers the standard requirements for controlling the impact of sunken vessel removal activities on the environment including the coastal environment. Due to the specialist nature of sunken vessel removal works, the planned approach is to request detailed Method Statements from the Specialist Service Providers during the tender process. These Method Statements will be evaluated with particular emphasis placed on compliance to the EM Specification and Safety Management Plans, which will include a plan for reuse, scraping and/or disposal.



Figure 1: Site map indicating the location of the proposed works

THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998) (NEMA)

The Applicability Checklist of the EIA Regulations, 2014 in terms of Listing Notices as defined in GN No. R.983, R.984 and R.985 of 4 December 2014 based on the project activities was submitted to the Department of Environmental Affairs (DEA).

DEA examined the information provided on the checklist and concluded that the proposed development does not constitute any listed activities defined in terms of the NEMA Environmental Impact Assessment Regulations, 2014. However, the dredging and disposal of dredged material triggers the exclusion clause as per Activity 19 of GN R. 983, which states that a Maintenance Management Plan (MMP) must be submitted to DEA for approval before commencement of the proposed maintenance and repair works for Laaiplek Harbour. Additionally, no listed activities were triggered for the removal of sunken vessels.

THE NATIONAL HERITAGE RESOURCES ACT, 1999 (ACT NO. 25 OF 1999) (NHRA)

In terms of Section 38(1e) the dredging operations trigger the need for NID as during these operations material of archaeological value might be encountered and this material, if found, would require correct handling and management.

The table below summarises the project activities that may trigger the need for a NID as per the NHRA:

National Heritage Resources Act 25 of 1999	Description of project activity/aspect that may trigger the need for NID
<p><i>Part 2: General protections</i></p> <p><i>35. Archaeology, palaeontology and meteorites</i></p> <p>...</p> <p><i>(4) No person may, without a permit issued by the responsible heritage resources authority -</i></p> <p><i>(a) destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite;</i></p> <p><i>(b) destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological material or object or any meteorite;</i></p>	<p>Approximately 9 600 m³ of sediment will be dredged from Laaiplek Harbour basin down to previously chartered depths, forming part of a standard maintenance requirement for harbour operations. The dredged material will most likely be disposed of on the eroded beach (just north of the harbour) for beach nourishment or in the sea (either within the harbour limits or offshore) however disposal sites have not be identified or evaluated as yet.</p> <p>No known archaeological or palaeontological site or material is present within the harbour basin.</p>
<p><i>Part 2: General protections</i></p> <p><i>38. Heritage resources management</i></p> <p><i>(1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorised as -</i></p>	
<p><i>(a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;</i></p>	<p>Repair and/or maintenance work on existing harbour structures will take place however these repair works will be reinstating the original state of the structures due to the safety and operational risk they currently impose.</p>
<p><i>(b) the construction of a bridge or similar structure exceeding 50 m in length;</i></p>	<p>Repair and/or maintenance work on existing harbour structures will take place however these repair works will be reinstating the original state of the structures due to the safety and operational risk they currently impose.</p>
<p><i>(c) any development or other activity which will change the character of a site -</i></p> <p><i>(i) exceeding 5 000 m² in extent; or</i></p>	<p>At this stage it is not foreseen that individual sections of the harbour requiring maintenance and repair work will exceed 5 000 m² in extent although, collectively it may but these areas are spread across the harbour. The structures in its current state is a safety and operational risk and would need to be repaired in order to ensure the safety of the users and the functionality of the harbour. The repairs will be done in such a way as to reinstate the original state of the structures.</p>
<p><i>(ii) involving three or more existing erven or subdivisions thereof; or</i></p>	<p>Not applicable</p>

<p><i>(iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or</i></p>	<p>Not applicable</p>
<p><i>(iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;</i></p>	<p>Clarification from SAHRA required in terms of the applicability hereof.</p>
<p><i>(d) the re-zoning of a site exceeding 10 000m² in extent; or</i></p>	<p>Not applicable</p>
<p><i>(e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.</i></p>	<p>Clarification from SAHRA required in terms of the applicability hereof.</p>

CONCLUSION

In its current state, the harbour is considered a safety risk and without the repair and/or maintenance work being undertaken on existing structures, its functionality is limited and constrained.

Routine maintenance dredging is also required because currently, sediment build-up in the harbour basin is hindering access of larger fishing vessels to dock in the harbour.

According with the information provided in this letter, Aurecon issues this Notification of Intent to Develop to SAHRA in terms of the requirements set out in the National Heritage Resources Act, 1999 Regulations.

Should you have any queries please do not hesitate to contact the undersigned.

Yours sincerely
AURECON



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