

BACKGROUND INFORMATION DOCUMENT AND INVITATION TO COMMENT

ST FRANCIS PROPERTY OWNERS NPC PROPOSED COASTAL PROTECTION SCHEME, ST FRANCIS BAY, ON BEHALF OF KOUGA LOCAL MUNICIPALITY, EASTERN CAPE PROVINCE

AIM OF THIS DOCUMENT

The purpose of this Background Information Document (BID) is to ensure that people who are interested in, or affected by, the proposed project are provided with the relevant information, including the process being followed. Registering as an Interested and/or Affected Party (I&AP) allows individuals or groups to contribute ideas, issues, and concerns relating to the proposed project. I&APs also have an opportunity to review all of the reports and submit their comments on these reports. All of the comments that are received will be included in the final reports that are submitted to the Competent Authority (CA).

INTRODUCTION

Notice is hereby given in terms of the National Environmental Management Act (NEMA) (Act No. 107 of 1998, as amended) of the coastal protection scheme proposed for St Francis Bay beach, extending from the Kromme River mouth in a southerly direction along the Cape St Francis headland (Figure 1). The coastal protection scheme will include sand material sourcing from the Kromme River, beach nourishment of St Francis Bay beach and the development of coastal structures to retard the erosion of St Francis Bay beach.



Figure 1: Locality map of the proposed coastal protection scheme.

PROJECT DESCRIPTION

As a result of significant erosion events occurring over the past few decades the St Francis Bay beach has lost a considerable amount of sand material and the existing dune area across the frontage. This has resulted in existing infrastructure becoming more vulnerable to loss and damage, should more significant erosion events take place. The erosion has led to a reduction in the width of the beach. The width of beach is not only important from a recreational and tourism amenity point of view but offers significant coast protection by reducing the wave energy. A reduction in wave energy reduces the ability for sediment to be moved and therefore reduces the severity of erosion. The effects of the erosion of the beach (in both width and depth of sediment) has been realised across the full frontage, stretching from the car park at the end of Nevil Rd in the south to the Kromme Estuary mouth in the north (Figure 2). Approximately 700 m of the frontage, referred to as “the spit” is particularly vulnerable, in that should a breach occur, there would be significant risk to existing infrastructure (e.g. houses, roads and canals) which are located behind the spit.



Figure 2: Location of the proposed beach nourishment (from Advisian, 2018).

The erosion has been significant and dramatic that over the 42 year period between 1975 and 2017, the high water mark has retreated by 75 metres. As a result, the beach has effectively been lost, and erosion of the vegetated sand spit is occurring, resulting in ecological impacts on the dune system, and in the foreseeable future impacts on social infrastructure and property will occur. Consequently, various interventions including a beach nourishment scheme, revetment construction and the construction of groynes is required to arrest the rapid erosion of the beach, and ultimately restore it to its pre-erosion status, or at least to a condition that affords protection from storm attack, sea level rise and erosion events associated with these natural perturbations.

A number of interventions have been implemented in the past, including the construction and subsequent maintenance, repair work and upgrading of rock revetments, sand-pumping, Pressure Equalization Modules (PEM) and nourishment of the St Francis Bay beach. However, these are short term solutions and a more long term solution has been proposed in order to protect this section of coastline from undergoing further erosion. Numerous historic studies have been undertaken to investigate and evaluate the erosion problems, and several studies have proposed possible remedial solutions (Figure 3). These solutions have proved insufficient over the past twenty to thirty years and therefore a more permanent solution is required.

Beach Nourishment

The option to artificially nourish the beach with sand from suitable borrow sources has been identified as the least environmentally intrusive method to protect the St Francis Bay coastline from further erosion. The aim of the beach nourishment will be to establish a minimum horizontal dry beach width of 40 m. This additional sand will provide added protection from erosion as waves will dissipate their energy over this re-established sand beach before reaching the existing eroding area. Long term maintenance will be required to maintain the required beach level.

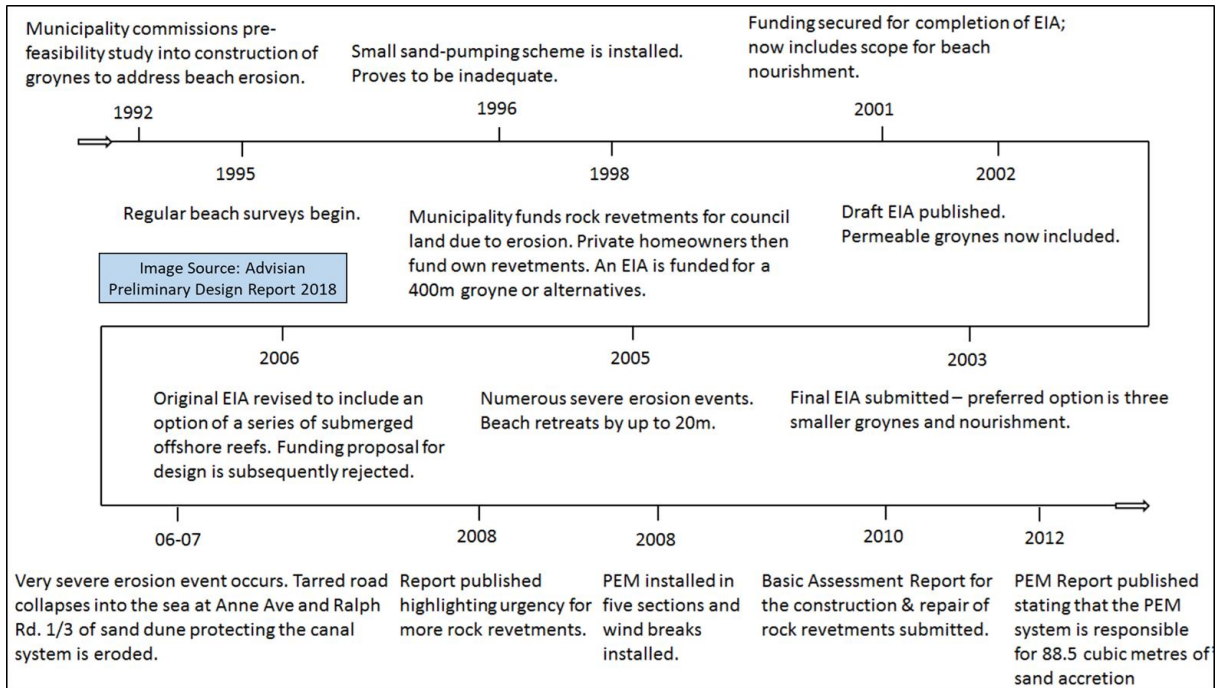


Figure 3: Time-line showing the historical report and interventions which were implemented for the St Francis coastal protection scheme (from Advisian, 2018).

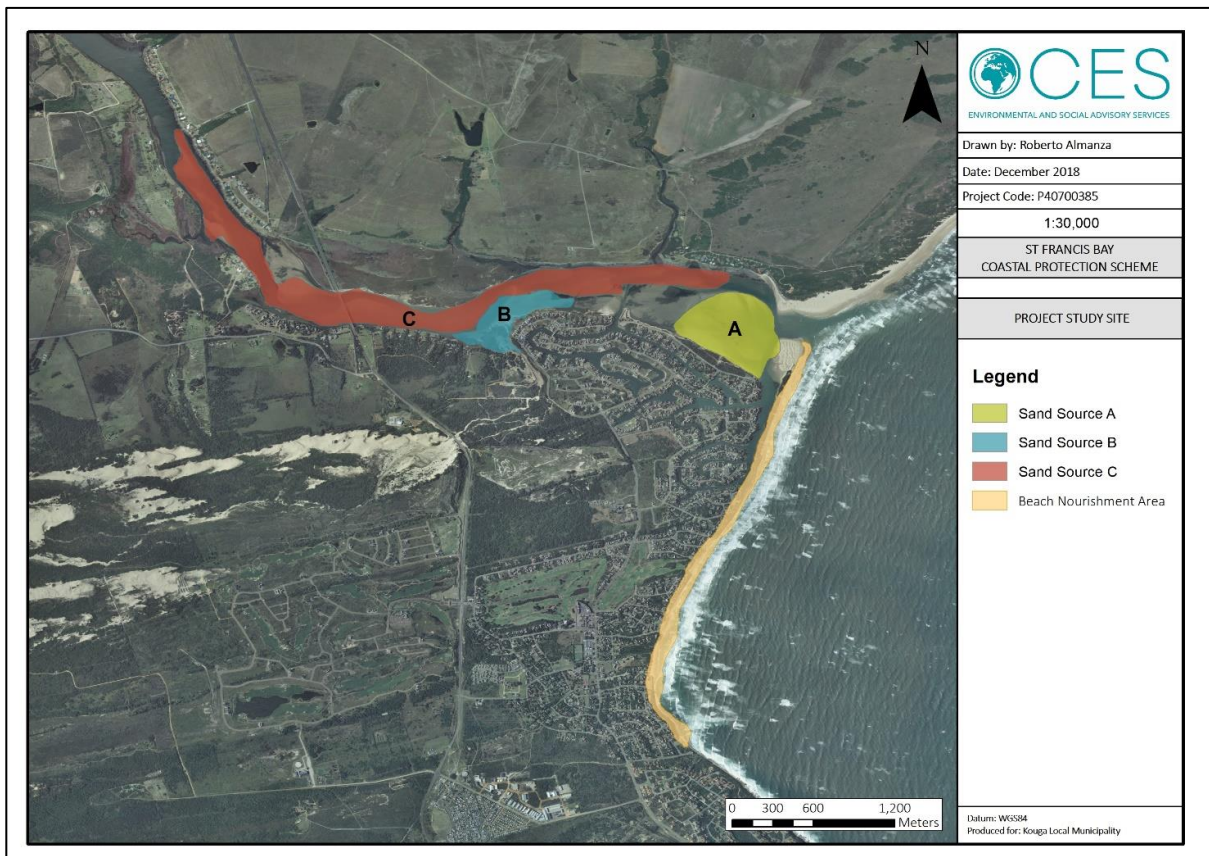


Figure 4: Potential areas to be used to source sand material.

Sand Sourcing and Transportation of Material

In order for beach nourishment to be implemented, sand must first be obtained from a suitable source area. The identification of a suitable source area is based largely on finding an area where sand will consist of similar grain size to that which is required on the beach as well as being feasible to extract and place along the beach. Three (3) potential source areas have initially been identified and all are located within the Kromme River estuarine functional zone (Figure 4). The maximum volume of sand which will need to be sourced is approximately 854 000 m³ and will be transported either via dredger, truck or a pipeline and pumping system. Should trucks be

used to transport the sand material, there will be an increase in the number of vehicles using the roads in and around St Francis Bay, including heavy construction vehicles.

Revetment Structures

To prevent the sea from breaking through the St Francis Bay beach spit during a strong storm surge event, revetment structures have been proposed as an additional coastal protection measure to be implemented. The revetment structures will extend for approximately 620 m along the length of the beach spit. Three potential options have been considered for the revetment structures, namely a simple rock revetment, a geotextile sand container (GSC) revetment and a composite revetment option.

Stub Groynes

In order to retain the sand in the nearshore and beach area following the implementation of beach nourishment, and to promote increased sedimentation in the future, five (5) stub groynes will be constructed along the length of the beach. These stub groynes will extend from the back end of the beach and reach a length of between 170m and 200m offshore. The stub groynes will be angled obliquely to the predominant wave direction, and will be shorter than full length groynes which are generally used for erosion prevention. The shorter (stub) groynes will allow a certain percentage of sediment to pass between each groyne. A maximum of approximately 41 550 m³ of rock material will be required for the proposed stub groynes. The rock material used for the groynes will be sourced from a licenced local quarry, the details of which will be subject to availability and grading of rock material, and will become known during the EIA phase.

APPLICABLE LEGISLATION

The proposed development constitutes a number of listed activities in terms of the 2014 Environmental Impact Assessment (EIA) Regulations (as amended in April 2017), as promulgated under NEMA. As such, the proposed development requires Environmental Authorisation prior to commencement of construction and operation. The following overarching listed activities published in GN R. 982 (as amended in GN R. 326), which require an Scoping and Environmental Impact Reporting (S&EIR) process, are likely to be triggered:

Listing Notice 2 - GN R 984 (GN R 325) (Full Scoping & EIR)	14	The development and related operation of—(iii) any other structure or infrastructure — on, below or along the sea bed.	Stub groynes will be developed along the sea bed.
	23	The reclamation of an island or parts of the sea.	Part of the sea will be reclaimed by the proposed development.
	26	Development – (i) In the sea; (ii) In an estuary; (iii) Within the littoral active zone; (iv) In front of a development setback; or (v) If no development setback exists, within a distance of 100 metres inland of the high-water mark of the sea or an estuary, whichever is the greater. In respect of – (c) Inter- and sub-tidal structure for entrapment of sand.	The positioning of the stub groynes, for the entrapment of sand will, occur within the littoral active zone and within 100m of the HMW of the sea.

Scoping and Environmental Impact Assessment Process

The listed activities trigger the requirement of an S&EIR process (Figure 5). This process is initiated through a scoping phase as dictated by Section 21 of the 2017 Amended EIA Regulations. The scoping process serves to bring stakeholders on board by means of consultation with relevant government departments, allowing for the identification of potential issues and concerns at the onset of the study. After completion of the scoping phase, detailed specialist studies will be undertaken in order to address issues identified during the scoping phase. The drafting of the EIA report is then undertaken in accordance with Section 23 of the 2017 Amended EIA Regulations. All draft reports are submitted for public review as per Section 41 of 2017 Amended EIA Regulations. The recommendations cited in the EIA report are detailed in an Environmental Management Programme (EMPr), which defines the actions to be implemented, and is required to be submitted alongside the EIA report.

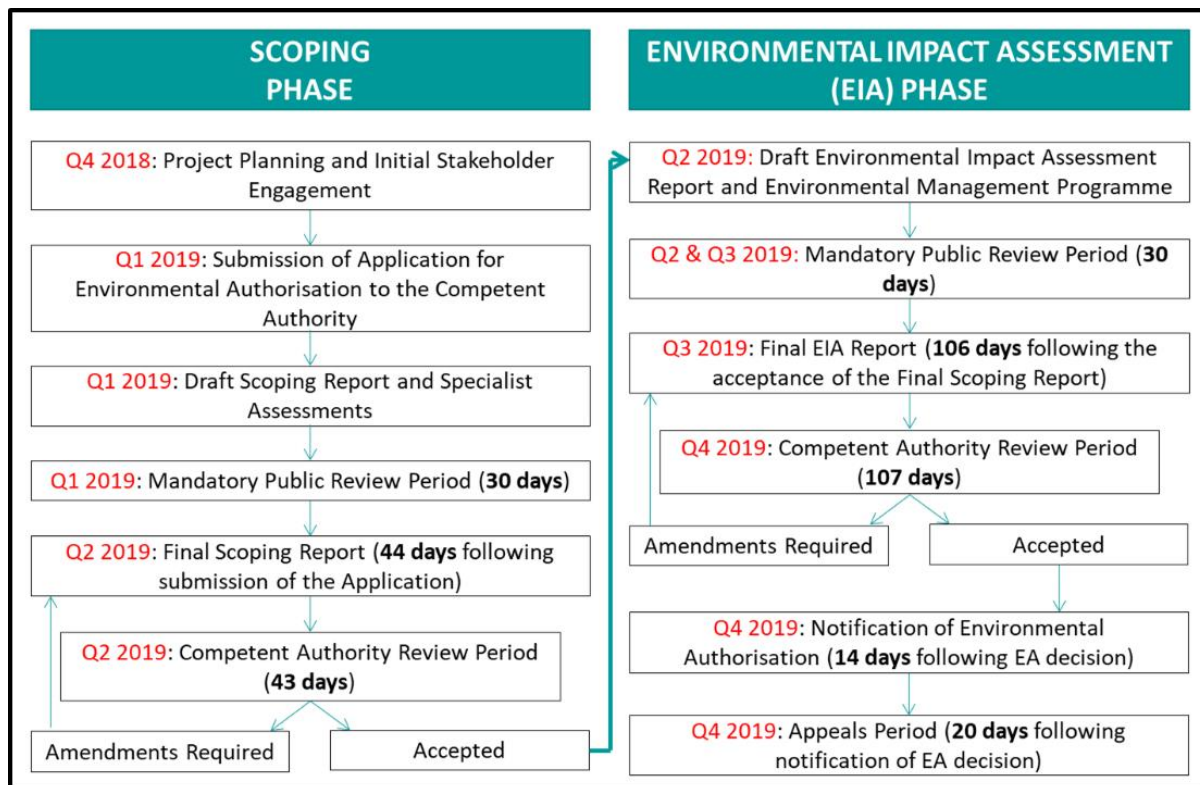


Figure 5: Scoping and Environmental Impact Reporting (S&EIR) process.

POTENTIAL IMPACTS

The following preliminary environmental issues have been identified and will be investigated during the application process:

- Impact of the proposed coastal protection infrastructure on the physical environment;
- Impacts on the coastal and estuarine ecosystems;
- Traffic, dust, noise and other general impacts associated with construction activities; and
- Social and economic benefits of the proposed development.

These and other impacts will be assessed in detail during the S&EIR process and mitigation provided in the EMPr.

INVITATION TO COMMENT

Should you wish to express your views regarding this proposed development, please send us your written comments. The names of all registered Interested and Affected Parties (I&APs), together with the comments received, will be incorporated into the Issues and Responses Report and will be submitted to the competent authority. Please submit your name, contact information (address, telephone number, email address, postal address) and any written comments to the contact person below either via email, telephone or post.

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