

DRAFT BASIC ASSESSMENT REPORT

**PROPOSED UPGRADING OF STORMWATER INFRASTRUCTURE IN VALENCIA,
ADDO OF THE SUNDAYS RIVER VALLEY MUNICIPALITY,
EASTERN CAPE PROVINCE**

DEDEAT Ref No: EC06/C/LN1&3/M/27-2013

July 2013

TITLE : **DRAFT BASIC ASSESSMENT REPORT – PROPOSED UPGRADING OF INFRASTRUCTURE IN THE VALENCIA, ADDO OF THE SUNDAYS RIVER VALLEY MUNICIPALITY, EASTERN CAPE PROVINCE**

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Applicant : *Sundays River Valley Municipality*

BKS Project No : *J02128*

Status of Report : *Draft*

BKS Report No : *J02128/01*

Key Words : *Basic Assessment Report, BAR, Environmental Management Programme, EMPr, Public Participation Process, PPP*

Date of this Issue : *15 July 2013*

For AECOM (Pty) Ltd

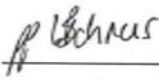
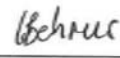

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**PROVINCE OF THE EASTERN CAPE
DEPARTMENT OF ECONOMIC DEVELOPMENT
ENVIRONMENTAL AFFAIRS AND TOURISM**

BASIC ASSESSMENT REPORT

(For official use only)

File Reference Number:
Application Number:
Date Received:

Basic assessment report in terms of the Environmental Impact Assessment Regulations, 2010, promulgated in terms of the National Environmental Management Act, 1998(Act No. 107 of 1998), as amended.

Kindly note that:

1. This basic assessment report is a standard report that may be required by a competent authority in terms of the EIA Regulations, 2010 and is meant to streamline applications. Please make sure that it is the report used by the particular competent authority for the activity that is being applied for.
2. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
3. Where applicable tick the boxes that are applicable or black out the boxes that are not applicable in the report.
4. An incomplete report may be returned to the applicant for revision.
5. The use of "not applicable" in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.
6. This report must be handed in at offices of the relevant competent authority as determined by each authority.
7. No faxed or e-mailed reports will be accepted.
8. The report must be compiled by an independent environmental assessment practitioner.

9. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.
10. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.

SECTION A: ACTIVITY INFORMATION

Has a specialist been consulted to assist with the completion of this section?

YES ✓ NO

If YES, please complete form XX for each specialist thus appointed:

Any specialist reports must be contained in Appendix D.

Please refer to Appendix D for the Heritage and Biodiversity Specialist Reports.

1. ACTIVITY DESCRIPTION

Describe the activity, which is being applied for, in detail

1.1. INTRODUCTION

The proposed project entails the upgrading of the Valencia stormwater management system, within the town of Addo, and is located approximately 50km north of Port Elizabeth. This will include the construction of three (3) stormwater detention ponds, the expansion of four (4) bulk stormwater outlets and interconnecting stormwater infrastructure.

The proposed project is located within the urban area of Valencia, situated on the south western border of the town of Addo (Figure 1: Locality Map). Addo falls under the jurisdiction of the Sundays River Valley Municipality (SRVM), which forms part of the Cacadu District Municipality in the Eastern Cape. Valencia is bounded by a railway line along the western boundary and the provincial road DR01971 on the northern and eastern boundary.

The township of Valencia is located at the base of a 7,36km² local catchment area. The existing stormwater management system consists of one (1) attenuation (detention) pond, located in the center of the township, and two (2) culverts located along the western boundary (under the railway line). Currently, surface stormwater is directed to the existing detention pond via overland flow routes and discharges into the lower lying areas to the west. The existing stormwater management system is no longer effective in controlling the stormwater during minor and major rainfall events. This is due to the increase in stormwater runoff and velocity (from the expansion of Valencia and additional concrete drains), flat gradients, and insufficient culverts for the drainage of stormwater. The existing facility's inlet and outlet pipes are 375mm in diameter. The existing facility's lowest area is located lower than the outlet pipe, resulting in stormwater not being able to drain out of the existing pond effectively.

With the construction of the proposed stormwater detention ponds, the existing pond (17,279m²) will be filled with excavated material from the proposed ponds and a sports fields constructed within this area.

Extensive stormwater runoff results in the lower central and western portions of Valencia (including roads and houses) to be flooded which damages property and infrastructure. The need for the upgrade to the existing stormwater system is in order to minimize the flood risk from minor (1:2) and major (1:50) storm events.

1.2. PROPOSED PROJECT DESCRIPTION

1.2.1 Stormwater Detention Ponds

Three (3) stormwater detention ponds are proposed to accommodate the 1:2 to 1:50 year flood. Stormwater Pond 1 is located on the northern border of Valencia, adjacent to provincial road DR01971 (northern side). Stormwater Ponds 2 and 3 are located between the western border of Valencia and on the eastern side of the railway line. Table 1 indicates the central points (latitude and longitude) of the stormwater detention ponds.

The stormwater detention ponds will be grass lined and will vary in storage capacity, footprint size and depth. The combined footprint area is 2.37ha and the combined storage capacity is 47,370m³.

Table 1: Proposed Stormwater Detention Ponds

Stormwater Detention Pond	Location & Dimensions	Latitude	Longitude
Pond 1	The northern border of Valencia, directly north of the provincial road DR01971. Area: 15 069m ² Capacity: 30 138m ³	33° 33' 1.84"S	25° 41' 59.64"E
Pond 2	Between the western border of Valencia and on the eastern side of the railway line, adjacent to the existing sports field and within the netball field. Area: 6 159m ² Capacity: 12 318m ³	33° 33' 3.39"S	25° 41' 39.89"E
Pond 3	Between the western border of Valencia and on the eastern side of the railway line, approximately midway on the Valencia border. Area: 2 457m ² Capacity: 4 914m ³	33° 33' 13.73"S	25° 41' 31.43"E

1.2.2 Stormwater Bulk Outlets and Interconnecting Pipelines

Sub-surface stormwater pipes are proposed to drain stormwater to the western boundary of Valencia. The stormwater pipes will either connect into existing or new culverts running under the railway line. The concrete stormwater pipes range in size from 375mm to 1200mm in diameter.

Table 2 indicates the location and central points (latitude and longitude) of the stormwater bulk outlets and the length of the stormwater pipelines.

Table 2: Proposed Stormwater Bulk Outlets and Pipelines

Stormwater Bulk Outlet	Location	Latitude	Longitude
Bulk Outlet 1	To the north of the DR01971, between the two railway lines.	33°32'55.40"S	25°41'39.14"E
Bulk Outlet 2	Located between the railway line (eastern side) and the R335 (western side).	33°33'5.31"S	25°41'32.99"E

Bulk Outlet 3	Located on the western border of Valencia and on the eastern side of the railway line.	33°33'16.24"S	25°41'26.66"E
Bulk Outlet 4	Located between the railway line (eastern side) and the R335 (western side).	33°33'29.78"S	25°41'19.32"E
Stormwater Pipeline	Location	Length & Diameter	
SW Pipe 1	The pipe traverses on the northern side of DR01971, within the road reserve, towards the railway line and will traverse under the first railway line.	238m 750 - 1200mm	
SW Pipe 2	From the road bordering the western boundary of Valencia, the pipe heads north west and turns north east after 25m, entering into pond 2. From pond 2, the new pipe traverses in a south westerly direction, under the railway line.	110m 450 – 750mm	
SW Pipe 3	From pond 3, the pipe traverses in a southerly direction, entering into the existing stormwater line, thereafter the line heads west into the existing culvert under the railway line.	56m 600 – 750mm	
SW Pipe 4	The pipe traverses in a southerly direction, on the eastern side of the road, and turns west after 63m. Thereafter the pipe enters the existing stormwater line and heads west into the existing culvert under the railway line.	89m 750 – 1200mm	

1.3 DESCRIPTION OF THE SITE

1.3.1 Land Use

The surrounding study area is developed and the natural landscape has been altered to accommodate housing, schooling and community structures.

As per the SRVM Spatial Development Framework (2012) for Addo, the proposed sites are located within public open space, residential and agricultural zones.

The study area is utilised by the community for livestock grazing (as evidence by cow manure), dumping of waste and a number of access footpaths traverse the sites. The proposed site for Stormwater Pond 1 had a faecal odour suggesting sewage pollution, and excavation hollows due to sand winning activities. The proposed Stormwater Pond 2 site has been partially transformed by a concrete netball court. Sand excavation was also evident at the Stormwater Pond 3 site.

1.3.2. Terrestrial Ecology

a) Vegetation

According to Mucina & Rutherford, the study area falls within the Albany Alluvial Vegetation (Refer to Appendix A, Figures 2), which is essentially the equivalent of the Sundays Doringveld of the STEP Vegetation Map (Refer to Appendix A, Figures 3). The Albany Alluvial Vegetation is assigned an Ecosystem Status of Endangered, according to the national biodiversity targets (Scherman Colloty & Associates, 2013). Albany Alluvial Vegetation is also a listed Threatened Ecosystem in terms of the National Environmental Management: Biodiversity Act (Act 10 of 2004).

Many of the common species of the Albany Alluvial Vegetation, as well as the Sundays Doringveld,

were recorded within the study area. However, the study area for the proposed stormwater management upgrades is significantly degraded. Degradation on site is extensive with a high degree of disturbance and some transformation (Scherman Colloty & Associates, 2013).

The SW Pond 1 area is largely dominated by grasses, groundcovers and herbs, as well as low shrublets, and a few clumps of *Acacia karroo* (distinguished by the large spines, as opposed to *Acacia natalita* which has small spines). A storm-water pipe discharge area has allowed for the establishment of *Phragmites australis*, with a mix of *Agave americana* (an alien succulent plant) and *Acacia natalita*. Low shrublets dominated the second stormwater pond site, with a number of *Acacia natalita* emerging, as well as several *Euphorbia mauritanica*, which is not evident in the other stormwater pond sites. SW Pond 2 area is also partially transformed due to the presence of a concrete netball field. Groundcovers and grasses dominated the SW Pond 3 area, although low shrublets, as well as a few *Lycium ferocissimum* and *Acacia karroo*, were scattered as clumps within this site (Scherman Colloty & Associates, 2013).

b) Critical Biodiversity Areas and Species of Special Concern

A total of three plant Species of Special Concern (Protected) were recorded at the study sites, namely (Scherman Colloty & Associates, 2013):

1. *Drosanthemum hispidum*
2. *Ruschia* species
3. *Mallephora crassa*

The above species are Mesembryanthemaceae species, which are protected in terms of the Nature and Environmental Conservation Ordinance (No 19 of 1974) and require permits to be removed or destroyed from the Provincial Department of Economic Development, Environmental Affairs and Tourism (Port Elizabeth Branch: Mr Alan Southwood) (Scherman Colloty & Associates, 2013).

Plant species protected in terms of the National Forest Act (84 of 1998) and the National Environmental Management: Biodiversity Act (10 of 2004) were not recorded on any of the sites. No red data listed species, which encompasses threatened or rare species, were observed (as listed in terms of the International Union for Conservation of Nature, IUCN) (Scherman Colloty & Associates, 2013).

In accordance with the Eastern Cape Biodiversity Conservation Plan (ECBCP), the study area falls mainly within an urban transformed area, classified as towns and settlements. This area is surrounded by a Critical Biodiversity Area (CBA 2) and a small portion of the study area to the north and south is located within the CBA 2. Refer to Appendix A, Figure 4.

c) Alien Vegetation

The study area has been invaded by alien invasive species, largely of the herbaceous kind, although the succulent *Opuntia ficus-indica* (Prickly Pear) was recorded at all sites (Scherman Colloty & Associates, 2013).

1.3.3. Avifauna

According to the South African Bird Atlas Project (SABAP1) (Harrison et al., 1997), an average of 145 bird species have been recorded from the quarter degree grid cells (QDGC) that overlaps with the study area. However, recent data suggests that the diversity of habitat types prevalent within the study area is more likely to sustain approximately 184 species (www.sabap2.adu.org.za). Potentially 22 bird species are likely to occur within the study (Scherman Colloty & Associates, 2013).

No butterflies were noted during the site visit undertaken on 3 June 2013.

1.3.4 Aquatic Ecology

The study area is located in close proximity (63m – SW Outlet 1 - A1, 24m – SW Outlet 1 – A2) to a watercourse (unnamed non-perennial tributary) that is associated with the Sundays River, flowing in a southerly direction. This system has lost most of its function due to the surrounding development, and present estimates based on land cover have shown that 55% of the surrounding catchment has already been transformed (Scherman Colloty & Associates Present Ecological State data, 2013). Other present day impacts on these systems include illegal dumping, modified river beds and alien plant infestation. The non-operational sewer pump located at the Masizakhe/Nomathamsanqa Township upstream of the SW Pond 1 site (approx. 2.1km) has created water quality issues, with untreated sewage flowing through the pump bypass and into the unnamed non-perennial stream (result of the odours indicated in Section 1.3.1) (Scherman Colloty & Associates, 2013). Refer to **Appendix A, Figure 5**.

The Present Ecological State (PES) score for the Sundays River was rated as D, i.e. Largely modified. The PES system has been revised and updated, however the PES score has remained unchanged and still remains D or Largely modified (Scherman Colloty & Associates, 2013).

This is further supported by the National Freshwater Ecosystems Priority Atlas (NFEP) (Nel et al., 2012), and indicates that no such priority areas are located within or adjacent to the study area. The database does however indicate the presence of wetlands near the site but most were confirmed to be agricultural irrigation balancing dams and as such are not functioning as wetlands. All the wetland areas are situated in excess of 600m from any of the proposed development areas, inclusive of the Sunday River reed beds (Scherman Colloty & Associates, 2013).

The ECBCP does indicate that the study area falls within an Aquatic CBA, namely A1, i.e. a critically important sub-catchment. Refer to **Appendix A, Figure 5**. This is possibly due to the proximity of the Sundays River and its associated wetland areas (reed beds). The portion of the Sundays River in near proximity to the study area is also known to support important eel populations (*Anguilla marmorata*) (Scherman Colloty & Associates, 2013).

The proposed project will have no direct connection with any of these aquatic ecological systems.

1.3.5. Quaternary Catchment and Geology

The study area falls within the N40E Quaternary Catchment, and the development contains an unnamed tributary of the Sundays River, which flows in a southerly direction to the west of the study area. Refer to **Appendix A, Figure 6**.

The area is underlain by shale and sandstone of the Karies Formation of the Bokkeveld Group, Cape Super Group. These Bokkeveld Group (Cape Super group) rocks have been covered by Cretaceous sediments of the Kirkwood Formation, which represents weathered mudstone (residual clay) and is the dominant material type in the Addo Valley. The site is generally overlain by hillwash and sandy loamy type soils (Letsunyane Associates, 2013).

1.3.6 Heritage Resources

No archaeological and cultural heritage resources, as defined and protected by the National Heritage Resources Act 25 of 1999, were identified (G&A Heritage, 2013).

1.3.7 Infrastructure and Services

Infrastructure and services located within or adjacent to the study area includes water and sewer mains, storm water and overhead electrical cables (Letsunyane Associates, 2013).

A Transnet railway line, and the district road DR01971 is located within the study area.

1.4 OTHER AUTHORISATIONS

1.4.1 Water Uses

No functioning wetlands occur within 600m of the proposed project. The proposed stormwater management system will not discharge stormwater directly into a watercourse and as such should not require any authorisation from the Department of Water Affairs (DWA). The stormwater detention ponds are not classified as dams, storing permanent water, and as such should not require DWA authorisation. Confirmation will be requested from the DWA.

1.4.2 Heritage

A Heritage Impact Assessment (HIA) was conducted (Refer to Appendix D 2). No features of heritage, graves or cultural significance were found within the study area. The area has been significantly altered in the past and it is unlikely that any heritage sites would have survived intact or in such a state as to provide for their conservation.

1.4.3 Protected Species

Protected plant species (*Drosanthemum hispidum*, *Ruschia* species and *Mallephora crassa*) will require permits prior to their disturbance, removal or relocation from the Department of Economic Development, Environmental Affairs and Tourism (DEDEAT, (Port Elizabeth Branch: Mr Alan Southwood).

2. FEASIBLE AND REASONABLE ALTERNATIVES

“alternatives”, in relation to a proposed activity, means different means of meeting the general purpose and requirements of the activity, which may include alternatives to—

- (a) the property on which or location where it is proposed to undertake the activity;
- (b) the type of activity to be undertaken;
- (c) the design or layout of the activity;
- (d) the technology to be used in the activity;
- (e) the operational aspects of the activity; and
- (f) the option of not implementing the activity.

Describe alternatives that are considered in this application. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity could be accomplished in the specific instance taking account of the interest of the applicant in the activity. The no-go alternative

must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed. The determination of whether site or activity (including different processes etc.) or both is appropriate needs to be informed by the specific circumstances of the activity and its environment. After receipt of this report the competent authority may also request the applicant to assess additional alternatives that could possibly accomplish the purpose and need of the proposed activity if it is clear that realistic alternatives have not been considered to a reasonable extent.

Alternatives that have been considered are design or layouts for the proposed stormwater management system.

Alternative 1 – Preferred alternative:

Three (3) stormwater detention ponds are proposed to accommodate the 1:50 year flood. Stormwater Pond 1 is located on the northern border of Valencia, adjacent to provincial road DR01971 (northern side). Stormwater Ponds 2 and 3 are located between the western border of Valencia and on the eastern side of the railway line. The stormwater detention ponds will be grass lined. The combined footprint area is 2.37ha and the combined storage capacity is 47,370m³.

Sub-surface stormwater pipes are proposed to drain stormwater to the western boundary of Valencia. The stormwater pipes will either connect into existing or new culverts running under the railway line. The concrete stormwater pipes range in size from 375mm to 1200mm in diameter.

The position of the bulk stormwater outlet 1 is located outside of the 32m buffer of the drainage line and the bulk stormwater outlet 2 has been moved out of the footpath utilised by the community. Gabion mattresses have been catered for at bulk stormwater outlets 3 and 4 to ensure adequate drainage and as erosion protection measures.

Additional detail on Alternative 1 is provided in Section A 1: Activity Description.

Alternative 2

Alternative 2 is similar to Alternative 1, with the following differences:

Two (2) stormwater detention ponds are proposed. Stormwater Pond 1 is located on the northern border of Valencia, adjacent to provincial road DR01971 (northern side). Stormwater Pond 2 is located between the western border of Valencia and on the eastern side of the railway line. The combined footprint area is 1.4ha and the combined storage capacity is 28,270m³.

The position of the bulk stormwater outlet 1 is located within the drainage line and the bulk stormwater outlet 2 is within the footpath utilised by the community. No erosion protection measures have been proposed for this alternative.

The proposed stormwater pipe from pond 1 is located on the southern side of the DR01971, and two crossings for this road will be required.

No-Go Alternative

This alternative entails that the stormwater management system for the area of Valencia is not upgraded and that the existing system remains. Residences and infrastructure will continually be flooded during minor (1:2) and major (1:50) storm events, resulting in further damage to property and infrastructure.

Paragraphs 3 – 13 below should be completed for each alternative.

3. ACTIVITY POSITION

Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees and decimal minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

List alternative sites if applicable.

Alternative:	Latitude (S):		Longitude (E):	
Alternative S1 ¹ (preferred or only site alternative)		'	°	'
Pond 1	33°	33.030'	25°	41.991'
Pond 2	33°	33.056'	25°	41.665'
Pond 3	33°	33.229'	25°	41.524'
Bulk Outlet 1	33°	32.913'	25°	41.656'
Bulk Outlet 2	33°	33.081'	25°	41.559'
Bulk Outlet 3	33°	33.283'	25°	41.492'
Bulk Outlet 4	33°	33.491'	25°	41.309'
Alternative S2 (if any)	°	'	°	'
Pond 1	33°	33.030'	25°	41.991'
Pond 2	33°	33.056'	25°	41.665'
Bulk Outlet 1	33°	32.836'	25°	41.693'
Bulk Outlet 2	33°	33.089'	25°	41.550'
Bulk Outlet 3	33°	33.271'	25°	41.444'
Bulk Outlet 4	33°	33.496'	25°	41.322'
Alternative S3 (if any)	°	'	°	'

In the case of linear activities:

Alternative:	Latitude (S):		Longitude (E):	
Alternative S1 (preferred or only route alternative)		'	°	'
Stormwater Pipe 1				
• Starting point of the activity	33°	33.013'	25°	41.933'
• Middle point of the activity	33°	32.954'	25°	41.798'
• End point of the activity	33°	32.913'	25°	41.656'
Stormwater Pipe 2a				
• Starting point of the activity	33°	33.110'	25°	41.665'
• Middle point of the activity	33°	33.091'	25°	41.661'
• End point of the activity	33°	33.073'	25°	41.671'
Stormwater Pipe 2b				
• Starting point of the activity	33°	33.059'	25°	41.636'
• Middle point of the activity	33°	33.066'	25°	41.597'
• End point of the activity	33°	33.081'	25°	41.559'
Stormwater Pipe 3				
• Starting point of the activity	33°	33.243'	25°	41.512'
• Middle point of the activity	33°	33.269'	25°	41.498'
• End point of the activity	33°	33.274'	25°	41.473'

¹ "Alternative S.." refer to site alternatives.

Stormwater Pipe 4				
• Starting point of the activity	33°	33.459'	25°	41.370'
• Middle point of the activity	33°	33.491'	25°	41.332'
• End point of the activity	33°	33.477'	25°	41.281'

Alternative S2 (if any)

Stormwater Pipe 1				
• Starting point of the activity	33°	33.013'	25°	41.942'
• Middle point of the activity	33°	32.954'	25°	41.743'
• End point of the activity	33°	32.836'	25°	41.693'

Stormwater Pipe 2				
• Starting point of the activity	33°	33.059'	25°	41.634'
• Middle point of the activity	33°	33.071'	25°	41.591'
• End point of the activity	33°	33.089'	25°	41.550'

Stormwater Pipe 3				
• Starting point of the activity	33°	33.286'	25°	41.506'
• Middle point of the activity	33°	33.275'	25°	41.476'
• End point of the activity	33°	33.271'	25°	41.444'

Stormwater Pipe 4				
• Starting point of the activity	33°	33.459'	25°	41.414'
• Middle point of the activity	33°	33.471'	25°	41.363'
• End point of the activity	33°	33.496'	25°	41.322'

Alternative S3 (if any)

• Starting point of the activity	o	'	o	'
• Middle point of the activity	o	'	o	'
• End point of the activity	o	'	o	'

For route alternatives that are longer than 500m, please provide an addendum with co-ordinates taken every 250 meters along the route for each alternative alignment.

4. PHYSICAL SIZE OF THE ACTIVITY

Indicate the physical size of the preferred activity/technology as well as alternative activities/technologies (footprints):

Alternative:

Alternative A1² (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

or, for linear activities:

Alternative:

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

Size of the activity:

23 685 m ²
14 315 m ²
m ²

Length of the activity:

Stormwater pipes: 983 m.
Stormwater pipes: 1 083 m
m

Indicate the size of the alternative sites or servitudes (within which the above footprints will occur):

Alternative:

Alternative A1 (preferred activity alternative)

Size of the site/servitude:

23 685 m ²

² "Alternative A.." refer to activity, process, technology or other alternatives.

Alternative A2 (if any)
Alternative A3 (if any)

14 135 m ²
m ²

5. SITE ACCESS

Does ready access to the site exist?

YES	NO
✓	
m	

If NO, what is the distance over which a new access road will be built

Describe the type of access road planned:

The proposed sites for the stormwater management system can be accessed from the provincial road R335 (MR450) from Port Elizabeth branching off onto the district road DR01971 to the east.

Include the position of the access road on the site plan and required map, as well as an indication of the road in relation to the site.

6. SITE OR ROUTE PLAN

A detailed site or route plan(s) must be prepared for each alternative site or alternative activity. It must be attached as Appendix A to this document.

The site or route plans must indicate the following:

- 6.1 the scale of the plan which must be at least a scale of 1:500;
- 6.2 the property boundaries and numbers of all the properties within 50 metres of the site;
- 6.3 the current land use as well as the land use zoning of each of the properties adjoining the site or sites;
- 6.4 the exact position of each element of the application as well as any other structures on the site;
- 6.5 the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, street lights, sewage pipelines, storm water infrastructure and telecommunication infrastructure;
- 6.6 all trees and shrubs taller than 1.8 metres;
- 6.7 walls and fencing including details of the height and construction material;
- 6.8 servitudes indicating the purpose of the servitude;
- 6.9 sensitive environmental elements within 100 metres of the site or sites including (but not limited thereto):
 - rivers;
 - the 1:100 year flood line (where available or where it is required by DWA);
 - ridges;
 - cultural and historical features;
 - areas with indigenous vegetation (even if it is degraded or invested with alien species);
- 6.9 for gentle slopes the 1 metre contour intervals must be indicated on the plan and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the plan; and
- 6.10 the positions from where photographs of the site were taken.

Refer to Appendix A for the following maps:

Figure 1: Locality Map

Figure 2: Mucina and Rutherford Vegetation Map

Figure 3: STEP Vegetation Map

Figure 4: ECBCP CBA Map

Figure 5: Water Resources

Figure 6: Quaternary Catchments

Figure 7: Site Photographs

7. SITE PHOTOGRAPHS

Colour photographs from the centre of the site must be taken in at least the eight major compass directions with a description of each photograph. Photographs must be attached under Appendix B to this form. It must be supplemented with additional photographs of relevant features on the site, if applicable.

Please refer to Appendix B for the site photographs.

8. FACILITY ILLUSTRATION

A detailed illustration of the activity must be provided at a scale of 1:200 as Appendix C for activities that include structures. The illustrations must be to scale and must represent a realistic image of the planned activity. The illustration must give a representative view of the activity.

Please refer to Appendix C for drawings of the :
 C-1: Alternative 1 Stormwater Management System
 C-2: Alternative 2 Stormwater Management System

9. ACTIVITY MOTIVATION

9(a) Socio-economic value of the activity

What is the expected capital value of the activity on completion?
 What is the expected yearly income that will be generated by or as a result of the activity?
 Will the activity contribute to service infrastructure?
 Is the activity a public amenity?
 How many new employment opportunities will be created in the development phase of the activity?
 What is the expected value of the employment opportunities during the development phase?
 What percentage of this will accrue to previously disadvantaged individuals?
 How many permanent new employment opportunities will be created during the operational phase of the activity?
 What is the expected current value of the employment opportunities during the first 10 years?
 What percentage of this will accrue to previously disadvantaged individuals?

R 27 million
Not Applicable
YES✓ NO
YES✓ NO
20
R 500 000
60 %
None
Not Applicable
Not Applicable

9(b) Need and desirability of the activity

Motivate and explain the need and desirability of the activity (including demand for the activity):

The ineffective stormwater management system is the contributing factor to widespread flooding during minor (1:2) and major (1:50) storm events in Valencia which results in damages to residential property and civil engineering infrastructure. This is due to the increase in stormwater runoff and velocity (from the expansion of Valencia and additional concrete drains), flat gradients, and insufficient culverts for the drainage of stormwater. The existing facility's inlet and outlet pipes are 375mm in diameter. The existing facility's lowest area is located lower than the outlet pipe, resulting in

stormwater not being able to drain out of the existing pond effectively. As a result the existing stormwater management system is no longer effective in controlling the stormwater during minor and major rainfall events.

Indicate any benefits that the activity will have for society in general:

The proposed project will contribute to minimizing the potential flood risk from storm events, thereby reducing the high risk to residences and infrastructure being flooded within the lower areas of the Valencia area.

Indicate any benefits that the activity will have for the local communities where the activity will be located:

The proposed project will contribute to minimizing flood events from storm events, thereby reducing the high risk to the residences being flooded on the lower areas of the Valencia area.

Limited temporary work opportunities would be provided for people living in the surrounding area during construction, depending on the skills required.

10. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

List all legislation, policies and/or guidelines of any sphere of government that are applicable to the application as contemplated in the EIA regulations, if applicable:

Title of legislation, policy or guideline:	Administering authority:	Date:
GNR 544 of the EIA Regulations (2010) promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) Listed activities No.:9, 11, 12, 18, 24, 37, 39 and 41	Eastern Cape Department of Economic Development, Environmental Affairs and Tourism	2010
GNR 546 of the EIA Regulations (2010) promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) Listed activities No.: 12 and 16	Eastern Cape Department of Economic Development, Environmental Affairs and Tourism	2010
DEA (2010) Guideline 7: Public Participation in the EIA Process. Integrated Environmental Management Guideline Series, Department of Environmental Affairs (DEA), Pretoria	Eastern Cape Department of Economic Development, Environmental Affairs and Tourism	2010
National Water Act, 1998 (Act No. 36 of 1998)	Department of Water Affairs	1998
National Heritage Resources Act, 1999 (Act No. 25 of 1999)	Eastern Cape Provincial Heritage Resource Council	1999
National Environmental Management Act (Act No. 107 of 1998)	Eastern Cape Department of Economic Development, Environmental Affairs and Tourism	1998
National Environmental Management: Waste Act (Act No. 59 of 2008)	Eastern Cape Department of Economic Development, Environmental Affairs and Tourism	2008
National Environmental Management: Biodiversity Act (Act No. 10 of 2004)	Eastern Cape Department of Economic Development, Environmental Affairs and Tourism	2004
National Environmental Management: Air Quality	Eastern Cape Department of Economic	2004

Act (Act No. 39 of 2004) and Regulations	Development, Environmental Affairs and Tourism	
Integrated Development Plan, 2011 - 2016	Sundays River Valley Municipality	2011
Spatial Development Framework	Sundays River Valley Municipality	2012

11. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

11(a) Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?

<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO
70 m ³	

If yes, what estimated quantity will be produced per month?

How will the construction solid waste be disposed of (describe)?

General construction solid waste, e.g. miscellaneous general waste, and excavated material that will not be re-used as infill, will be removed from the construction site by trucks.

Where will the construction solid waste be disposed of (describe)?

Solid waste that cannot be reused or recycled will be disposed of (within 14 days) at a licensed waste disposal (landfill) site in Addo, i.e. Langbos landfill.

Will the activity produce solid waste during its operational phase?

<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
m ³	

If yes, what estimated quantity will be produced per month?

How will the solid waste be disposed of (describe)?

Solid waste would be produced indirectly by waste or litter being collected with the stormwater runoff. The waste within the stormwater management system would be collected by the SRVM (infrastructure maintenance team) and removed from site by trucks.

Where will the solid waste be disposed if it does not feed into a municipal waste stream (describe)?

Waste that is collected will be disposed of at the licensed waste disposal site in in Addo, i.e. Langbos landfill.

If the solid waste (construction or operational phases) will not be disposed of in a registered landfill site or be taken up in a municipal waste stream, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Can any part of the solid waste be classified as hazardous in terms of the relevant legislation?

<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
------------------------------	--

If yes, inform the competent authority and request a change to an application for scoping and EIA.

Is the activity that is being applied for a solid waste handling or treatment facility?

<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
------------------------------	--

If yes, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

11(b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?

<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
------------------------------	--

If yes, what estimated quantity will be produced per month?

m ³	
----------------	--

Will the activity produce any effluent that will be treated and/or disposed of on site?

<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> NO
------------------------------	--

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Will the activity produce effluent that will be treated and/or disposed of at another facility?

YES	<input checked="" type="checkbox"/> NO
-----	--

If yes, provide the particulars of the facility:

Facility name:			
Contact person:			
Postal address:			
Postal code:			
Telephone:	Cell:		
E-mail:	Fax:		

Describe the measures that will be taken to ensure the optimal reuse or recycling of waste water, if any:

None.

11(c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere?

<input checked="" type="checkbox"/> YES	NO
YES	<input checked="" type="checkbox"/> NO

If yes, is it controlled by any legislation of any sphere of government?

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If no, describe the emissions in terms of type and concentration:

Dust will occur during the construction phase as a result of clearing of vegetation, construction vehicles and/or equipment movement. Dust will also occur during the rehabilitation phase until vegetation has been established. Dust levels are not to exceed 300mg/m ² /day averaged over an annual period for residential areas and 600mg/m ² /day for industrial and rural areas Standard emissions from construction vehicles and generators will be at low levels during construction.
--

11(d) Generation of noise

Will the activity generate noise?

<input checked="" type="checkbox"/> YES	NO
YES	<input checked="" type="checkbox"/> NO

If yes, is it controlled by any legislation of any sphere of government?

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If no, describe the noise in terms of type and level:

During construction, noise will be generated by generators and construction equipment (e.g. grader). This will, however, be limited to daylight hours and will be temporary, i.e. occurring only during construction. No noise impacts are anticipated once the stormwater management system is operational.

12. WATER USE

Please indicate the source(s) of water that will be used for the activity by ticking the appropriate box(es)

Municipal (construction phase only) ✓	water board	groundwater	river, stream, dam or lake	other	the activity will not use water (operational phase only) ✓
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If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate

the volume that will be extracted per month:

N/A
YES ✓ NO

Does the activity require a water use permit from the Department of Water Affairs?

If yes, please submit the necessary application to the Department of Water Affairs and attach proof thereof to this application if it has been submitted.

No functioning wetlands occur within 600m of the proposed project. The proposed stormwater management system will not discharge stormwater directly into a watercourse and as such should not require any authorisation from the Department of Water Affairs (DWA). The stormwater detention ponds are not classified as dams, storing permanent water, and as such should not require DWA authorisation. To be confirmed by the DWA.

13. ENERGY EFFICIENCY

Describe the design measures, if any, that have been taken to ensure that the activity is energy efficient:

None.

Describe how alternative energy sources have been taken into account or been built into the design of the activity, if any:

None.

SECTION B: SITE/AREA/PROPERTY DESCRIPTION

Important notes:

- For linear activities (pipelines, etc) as well as activities that cover very large sites, it may be necessary to complete this section for each part of the site that has a significantly different environment. In such cases please complete copies of Section C and indicate the area, which is covered by each copy No. on the Site Plan.

Section C Copy No. **A**
(e.g. A):

- Paragraphs 1 - 6 below must be completed for each alternative.

- Has a specialist been consulted to assist with the completion of this section? YES NO

If YES, please complete form XX for each specialist thus appointed:

All specialist reports must be contained in Appendix D.

Please refer to Appendix D for the Heritage and Biodiversity Specialist Reports.

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1:

<input checked="" type="checkbox"/> Flat	<input checked="" type="checkbox"/> 1:50 - 1:20	<input type="checkbox"/> 1:20 - 1:15	<input type="checkbox"/> 1:15 - 1:10	<input type="checkbox"/> 1:10 - 1:7,5	<input type="checkbox"/> 1:7,5 - 1:5	<input type="checkbox"/> Steeper than 1:5
--	---	--------------------------------------	--------------------------------------	---------------------------------------	--------------------------------------	---

Alternative S2 (if any):

<input checked="" type="checkbox"/> Flat	<input checked="" type="checkbox"/> 1:50 - 1:20	<input type="checkbox"/> 1:20 - 1:15	<input type="checkbox"/> 1:15 - 1:10	<input type="checkbox"/> 1:10 - 1:7,5	<input type="checkbox"/> 1:7,5 - 1:5	<input type="checkbox"/> Steeper than 1:5
--	---	--------------------------------------	--------------------------------------	---------------------------------------	--------------------------------------	---

Alternative S3 (if any):

Flat	1:50 - 1:20	1:20 - 1:15	1:15 - 1:10	1:10 - 1:7,5	1:7,5 - 1:5	Steeper than 1:5
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2. LOCATION IN LANDSCAPE

Indicate the landform(s) that best describes the site:

- 2.1 Ridgeline
- 2.2 Plateau
- 2.3 Side slope of hill/mountain
- 2.4 Closed valley
- 2.5 Open valley
- 2.6 Plain
- 2.7 Undulating plain / low hills
- 2.8 Dune
- 2.9 Seafront

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

Is the site(s) located on any of the following (tick the appropriate boxes)?

	Alternative S1:		Alternative S2 (if any):		Alternative S3 (if any):	
Shallow water table (less than 1.5m deep)	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> YES	<input type="checkbox"/> NO
Dolomite, sinkhole or doline areas	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES	<input type="checkbox"/> NO
Seasonally wet soils (often close to water bodies)	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> YES	<input type="checkbox"/> NO
Unstable rocky slopes or steep slopes with loose soil	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES	<input type="checkbox"/> NO
Dispersive soils (soils that dissolve in water)	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES	<input type="checkbox"/> NO
Soils with high clay content (clay fraction more than 40%)	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES	<input type="checkbox"/> NO
Any other unstable soil or geological feature	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES	<input type="checkbox"/> NO
An area sensitive to erosion	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES	<input type="checkbox"/> NO

If you are unsure about any of the above or if you are concerned that any of the above aspects may be an issue of concern in the application, an appropriate specialist should be appointed to assist in the completion of this section. (Information in respect of the above will often be available as part of the project information or at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by the Council for Geo Science may also be consulted).

4. GROUNDCOVER

Indicate the types of groundcover present on the site:

4.1 Natural veld – good condition ^E	<input type="checkbox"/>
4.2 Natural veld – scattered aliens ^E	<input type="checkbox"/>
4.3 Natural veld with heavy alien infestation ^E	<input checked="" type="checkbox"/>
4.4 Veld dominated by alien species ^E	<input type="checkbox"/>
4.5 Gardens	<input type="checkbox"/>
4.6 Sport field	<input checked="" type="checkbox"/>
4.7 Cultivated land	<input type="checkbox"/>
4.8 Paved surface	<input checked="" type="checkbox"/>
4.9 Building or other structure	<input type="checkbox"/>
4.10 Bare soil	<input checked="" type="checkbox"/>

The location of all identified rare or endangered species or other elements should be accurately indicated on the site plan(s).

Natural veld - good condition ^E	Natural veld with scattered aliens ^E	Natural veld with heavy alien infestation ^E ✓	Veld dominated by alien species ^E	Gardens
Sport field ✓	Cultivated land	Paved surface ✓	Building or other structure	Bare soil ✓

If any of the boxes marked with an “E” is ticked, please consult an appropriate specialist to assist in the completion of this section if the environmental assessment practitioner doesn’t have the necessary expertise.

Many of the common species of the Albany Alluvial Vegetation, as well as the Sundays Doringveld, were recorded within the study area. However, the study area for the three (3) proposed Stormwater Pond sites are significantly degraded. Degradation on site is extensive with a high degree of disturbance and some transformation (Scherman Colloty & Associates, 2013).

The SW Pond 1 site was largely dominated by grasses, ground – covers and herbs, as well as low shrublets, and a few clumps of *Acacia karroo* (distinguished by the large spines, as opposed to *Acacia natalita* which has small spines). A storm-water pipe discharge area has allowed for *Phragmites australis* to establish, with a mix of *Agave Americana* (an alien succulent plant) and *Acacia natalita*. Low shrublets dominated the second stormwater pond site, with a number of *Acacia natalita* emerging, as well as several *Euphorbia mauritanica*, which is not evident in the other stormwater pond sites. The SW Pond 2 site was also partially transformed due to the presence of a concrete netball field. Ground covers and grasses dominated the third site, although low shrublets, as well as a few *Lycium ferocissimum* and *Acacia karroo*, were scattered as clumps within this site (Scherman Colloty & Associates, 2013).

A total of three plant Species of Special Concern (Protected) were recorded at the study sites. Plant species protected in terms of the National Forest Act (84 of 1998) and the National Environmental Management: Biodiversity Act (10 of 2004) were not recorded in any of the sites. No red data listed, which encompasses threatened or rare species, were observed (as listed in terms of the International Union for Conservation of Nature, IUCN)

The sites have been invaded by alien invasive species, largely of the herbaceous kind, as well as the succulent *Opuntia ficus-indica*, *Pennisetum clandestinum*, *Cynodon dactylon*, *Agave americana*, *Atriplex nummularia subspecies nummularia*, *Chenopodium album*, *Cirsium vulgare*, *Emex australis*, *Hypochaeris radicata*, *Nicotinia glauca*, *Pereskia aculeate*, *Ricinus communis*, *Salsola kali*, *Solanum elaeagnifolium*, *Solanum sisymbriifolium* and *Sonchus asper*.

Refer to Appendix D for the Biodiversity Specialist Study.

5. LAND USE CHARACTER OF SURROUNDING AREA

Indicate land uses and/or prominent features that currently occur within a 500m radius of the site and give description of how this influences the application or may be impacted upon by the application:

- 5.1 Natural area ✓
- 5.2 Low density residential
- 5.3 Medium density residential ✓
- 5.4 High density residential ✓
- 5.5 Informal residential
- 5.6 Retail commercial & warehousing ✓

5.7 Light industrial
5.8 Medium industrial ^{AN}
5.9 Heavy industrial ^{AN}
5.10 Power station
5.11 Office/consulting room
5.12 Military or police base/station/compound ✓
5.13 Spoil heap or slimes dam ^A
5.14 Quarry, sand or borrow pit
5.15 Dam or reservoir
5.16 Hospital/medical centre
5.17 School ✓
5.18 Tertiary education facility
5.19 Church ✓
5.20 Old age home
5.21 Sewage treatment plant ^A
5.22 Train station or shunting yard ^N ✓
5.23 Railway line ^N ✓
5.24 Major road (4 lanes or more) ^N
5.25 Airport ^N
5.26 Harbour
5.27 Sport facilities ✓
5.28 Golf course
5.29 Polo fields
5.30 Filling station ^H ✓
5.31 Landfill or waste treatment site
5.32 Plantation ✓
5.33 Agriculture ✓
5.34 River, stream or wetland ✓
5.35 Nature conservation area
5.36 Mountain, koppie or ridge
5.37 Museum
5.38 Historical building
5.39 Protected Area
5.40 Graveyard
5.41 Archaeological site
5.42 Other land uses (describe)

If any of the boxes marked with an "N" are ticked, how will this impact / be impacted upon by the proposed activity.

Stormwater infrastructure will be located in close proximity to the Transnet railway lines. Two new culverts are required underneath the railway line.

The railway line will not pose a noise risk on the proposed activity. The proposed activity will not pose a noise risk on the railway line.

If any of the boxes marked with an "An" are ticked, how will this impact / be impacted upon by the proposed activity.

If YES, specify and explain:

If YES, specify:

|

If any of the boxes marked with an "H" are ticked, how will this impact / be impacted upon by the proposed activity.

If YES, specify and explain:

A filling station is located on the main road (R335), 350m to the west of the proposed activities.

The filling station will not pose a health risk on the proposed activity. The proposed activities will not pose a safety risk on the filling station.

6. CULTURAL/HISTORICAL FEATURES

Are there any signs of culturally or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including	YES	✓ NO
Archaeological or palaeontological sites, on or close (within 20m) to the site?	Uncertain	
If YES, explain:		
If uncertain, conduct a specialist investigation by a recognised specialist in the field to establish whether there is such a feature(s) present on or close to the site.		
Briefly explain the findings of the specialist:	No archaeological and cultural heritage resources, as defined and protected by the NHRA 1999, were identified during the Heritage Study that was conducted. Refer to Appendix D for the Heritage Impact Assessment.	
Will any building or structure older than 60 years be affected in any way?	YES	✓ NO
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?	YES	✓ NO
If yes, please submit or, make sure that the applicant or a specialist submits the necessary application to SAHRA or the relevant provincial heritage agency and attach proof thereof to this application if such application has been made.		

SECTION C: PUBLIC PARTICIPATION

Refer to Appendix E for the Public Participation Report.

1. ADVERTISEMENT

The person conducting a public participation process must take into account any guidelines applicable to public participation as contemplated in section 24J of the Act and must give notice to all potential interested and affected parties of the application which is subjected to public participation by—

- (a) fixing a notice board (of a size at least 60cm by 42cm; and must display the required information in lettering and in a format as may be determined by the competent authority) at a place conspicuous to the public at the boundary or on the fence of—
 - (i) the site where the activity to which the application relates is or is to be undertaken; and
 - (ii) any alternative site mentioned in the application;
- (b) giving written notice to—
 - (i) the owner or person in control of that land if the applicant is not the owner or person in control of the land;
 - (ii) the occupiers of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
 - (iii) owners and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
 - (iv) the municipal councillor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area;
 - (v) the municipality which has jurisdiction in the area;
 - (vi) any organ of state having jurisdiction in respect of any aspect of the activity; and
 - (vii) any other party as required by the competent authority;
- (c) placing an advertisement in—
 - (i) one local newspaper; or
 - (ii) any official *Gazette* that is published specifically for the purpose of providing public notice of applications or other submissions made in terms of these Regulations;
- (d) placing an advertisement in at least one provincial newspaper or national newspaper, if the activity has or may have an impact that extends beyond the boundaries of the metropolitan or local municipality in which it is or will be undertaken: Provided that this paragraph need not be complied with if an advertisement has been placed in an official *Gazette* referred to in subregulation 54(c)(ii); and
- (e) using reasonable alternative methods, as agreed to by the competent authority, in those instances where a person is desiring of but unable to participate in the process due to—
 - (i) illiteracy;
 - (ii) disability; or
 - (iii) any other disadvantage.

2. CONTENT OF ADVERTISEMENTS AND NOTICES

A notice board, advertisement or notices must:

- (a) indicate the details of the application which is subjected to public participation; and
- (b) state—

- (i) that the application has been submitted to the competent authority in terms of these Regulations, as the case may be;
- (ii) whether basic assessment or scoping procedures are being applied to the application, in the case of an application for environmental authorisation;
- (iii) the nature and location of the activity to which the application relates;
- (iv) where further information on the application or activity can be obtained; and
- (iv) the manner in which and the person to whom representations in respect of the application may be made.

Please refer to the Public Participation Report in **Appendix E** for the relevant advertisements and notices.

3. PLACEMENT OF ADVERTISEMENTS AND NOTICES

Where the proposed activity may have impacts that extend beyond the municipal area where it is located, a notice must be placed in at least one provincial newspaper or national newspaper, indicating that an application will be submitted to the competent authority in terms of these regulations, the nature and location of the activity, where further information on the proposed activity can be obtained and the manner in which representations in respect of the application can be made, unless a notice has been placed in any *Gazette* that is published specifically for the purpose of providing notice to the public of applications made in terms of the EIA regulations.

Advertisements and notices must make provision for all alternatives.

4. DETERMINATION OF APPROPRIATE MEASURES

The practitioner must ensure that the public participation is adequate and must determine whether a public meeting or any other additional measure is appropriate or not based on the particular nature of each case. Special attention should be given to the involvement of local community structures such as Ward Committees, ratepayers associations and traditional authorities where appropriate. Please note that public concerns that emerge at a later stage that should have been addressed may cause the competent authority to withdraw any authorisation it may have issued if it becomes apparent that the public participation process was inadequate.

5. COMMENTS AND RESPONSE REPORT

The practitioner must record all comments and respond to each comment of the public before the application is submitted. The comments and responses must be captured in a comments and response report as prescribed in the EIA regulations and be attached to this application. The comments and response report must be attached under Appendix E.

The comments and response report is attached as part of the Public Participation Report and associated documentation in **Appendix E**

6. AUTHORITY PARTICIPATION

Authorities are key interested and affected parties in each application and no decision on any application will be made before the relevant local authority is provided with the opportunity to give input.

The planning and the environmental sections of the local authority must be informed of the application at least 30 (thirty) calendar days before the submission of the application.

List of authorities informed:

Department of Economic Development, Environmental Affairs and Tourism
Sundays River Valley Municipality
Department of Water Affairs
Eastern Cape Heritage Resources Authority
Eastern Cape Department of Roads and Public Works
Transnet Freight Rail

List of authorities from whom comments have been received:

None.

7. CONSULTATION WITH OTHER STAKEHOLDERS

Note that, for linear activities, or where deviation from the public participation requirements may be appropriate, the person conducting the public participation process may deviate from the requirements of that subregulation to the extent and in the manner as may be agreed to by the competent authority.

Any stakeholder that has a direct interest in the site or property, such as servitude holders and service providers, should be informed of the application at least 30 (thirty) calendar days before the submission of the application and be provided with the opportunity to comment.

Has any comment been received from stakeholders?

YES NO

If "YES", briefly describe the feedback below (also attach copies of any correspondence to and from the stakeholders to this application):

The Draft Basic Assessment Report will be available for review and comment from the 16 July – 26 August 2013. The comments from the Draft Basic Assessment Report will be incorporated into the Final Basic Assessment Report by yellow highlighting. Comments received will be included in Appendix E.

SECTION D: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2010, and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts.

1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

List the main issues raised by interested and affected parties.

None received to date.

Response from the practitioner to the issues raised by the interested and affected parties (A full response must be given in the Comments and Response Report that must be attached to this report):

None.

2. IMPACTS THAT MAY RESULT FROM THE PLANNING AND DESIGN, CONSTRUCTION, OPERATIONAL, DECOMMISSIONING AND CLOSURE PHASES AS WELL AS PROPOSED MANAGEMENT OF IDENTIFIED IMPACTS AND PROPOSED MITIGATION MEASURES

List the potential direct, indirect and cumulative property/activity/design/technology/operational alternative related impacts (as appropriate) that are likely to occur as a result of the planning and design phase, construction phase, operational phase, decommissioning and closure phase, including impacts relating to the choice of site/activity/technology alternatives as well as the mitigation measures that may eliminate or reduce the potential impacts listed.

ALTERNATIVE 1 (PREFERRED ALTERNATIVE)			
Potential Impact	Significance before Mitigation	Mitigation Measure	Significance after Mitigation
DIRECT IMPACTS:			
Planning and Design Phase			
Loss of biodiversity habitat, specifically the protected Mesembryanthemaceae species, due to stormwater infrastructure.	Medium (-)	Permits are required for removal/destruction of protected species. Mesembryanthemaceae plants to be kept and cared for in a SRVM nursery for use in rehabilitation works. Mesembryanthemaceae plants not affected by construction but in close vicinity to the construction activities need to be marked or cordoned off as no-go areas.	Low (-)
Impacts relating to sports facilities include the removal of the netball field located at pond 2.	Medium (-)	A netball field to be included in the design of the sports facilities within Valencia.	Low (+)
Disruption and removal of pedestrian access within the proposed stormwater management system.	Medium – High (-)	Bulk stormwater outlet 2 is positioned away from the pedestrian footpath. Pedestrian access to be provided at pond 3.	Low (-)
Aquatic environment, i.e. hydrological regime and increased potential for erosion impacts relate to the natural run-off patterns by either diverting or increasing velocity of surface water	Medium (-)	Capacity of stormwater detention ponds to cater for increase in surface water flows. Gabion mattresses for culvert outlets as erosion protection measures.	Low (-)

ALTERNATIVE 1 (PREFERRED ALTERNATIVE)			
Potential Impact	Significance before Mitigation	Mitigation Measure	Significance after Mitigation
flows. This then has the potential to increase erosion.		Ponds will be grass-lined to prevent further erosion. Stormwater channels to be formally canalised.	
Disruption to rail and vehicle traffic due to stormwater pipelines crossings.	Medium – High (-)	Pipe-jacking to be incorporated into the design parameters for construction. Additional stability measures to be incorporated for stormwater drainage under the railway lines.	Low (-)
Construction & Decommissioning Phases			
Social impacts relating to: Health and safety in terms of the spread of HIV and STDs. General safety of persons is a concern due to construction activities, e.g. open excavations and machinery. Security impacts due to potential theft of construction materials.	Medium (-)	HIV and STD awareness training with construction staff. Excavations to be demarcated with solid barriers. Security to be provided after hours to protect equipment in the construction camp.	Low (-)
Terrestrial ecological impacts include the following due to vegetation clearance for construction areas: a) Loss of vegetation b) Loss of habitats containing protected species or species of special concern c) Potential spread of alien vegetation	Medium (-)	Clearing of vegetation to be limited to areas for construction works only, i.e. 5m on either side of the footprint of the ponds and stormwater infrastructure. Only shrubs are to be removed for the construction camp area and laydown areas. Grass is to be left in place. Alien plant regrowth is to be monitored on-site by the Contractor's Environmental Officer and any such species to be removed physically or through chemical destruction by the Contractor. Rehabilitation of disturbed areas to be done with indigenous plants and Mesembryanthemaceae species.	Low (-)
Impacts relating to the construction camp include impacts to vegetation, visual.	Low (-)	Construction camp fence to be covered with shade netting (or similar type of material). Pre-construction photographs to be taken by the Contractor's Environmental Officer and overseen by the ECO to determine the condition of the site before construction begins. This will provide a benchmark for rehabilitation to a similar or better state once construction has ended. Construction workers are not to be accommodated on-site. Only shrubs are to be removed for the construction camp area and laydown areas. Grass is to be left in place. Construction camp to be located in a disturbed or developed area, and the location of the construction camp must be approved by the ECO prior to construction starting.	Very Low (-)

ALTERNATIVE 1 (PREFERRED ALTERNATIVE)			
Potential Impact	Significance before Mitigation	Mitigation Measure	Significance after Mitigation
Visual impacts relate to the removal of trees and bushes, and the erection of a temporary construction camp.	Low (-)	Stormwater detention ponds and pipeline routes to be rehabilitated with indigenous grass species and Mesembryanthemaceae shrubs (outside of the pond area). Trees and bushes are to be removed from the footprint areas only. The construction camp will be fenced off with a 1.5m high diamond mesh wire and fitted with shade cloth inside the fence to reduce the visual impact.	Very Low (-)
Soil and water pollution impacts due to spillages from construction materials, such as diesel, oils and cement, if dispersed via surface run-off, or are allowed to permeate into the groundwater.	Low (-)	Chemicals must be stored safely on site, on an impermeable lined surface and surrounded by lined bunds, as per SANS 10128. Emergency plans must be in place in case of spillages onto road surfaces and/or open areas. All stockpiles must be protected from erosion, stored on flat areas where run-off will be minimised, and be surrounded by lined bunds. Stockpiles are not to be higher than 2 m and steeper than 1:3. All stockpiles should also be covered to prevent alien vegetation growth and contamination from outside/inside sources. The topsoil layer (300mm of the top surface layer, including organic matter) must be stockpiled separately from the subsoil layers and used during reinstatement thus allowing plants to rapidly re-colonise the bare soil areas.	Very Low (-)
Air quality impacts relating to dust from the clearing of vegetation, earthworks and construction traffic on gravel, as well as from wind erosion of the temporary soil (topsoil and excavated material) stockpiles during high winds. Air quality will also be affected from the exhaust emissions of vehicles and plant.	Medium (-)	Dust suppression techniques to be used on all dust generating surfaces. Screening measures to be placed adjacent to roads and residences. Handling of soils is not to be conducted during high winds (25km/h). Soil stockpiles to be covered with hessian or chip/mulch from cleared shrubs/trees to prevent dust generation. The speed of construction vehicles to be restricted to 25km/h within the construction area or near stockpiles. Trucks transporting any form of soil or waste should be covered with a tarpaulin.	Low (-)
Noise impacts relating from the construction works and vehicles or plant on the surrounding area.	Low (-)	Vehicles and machinery to be kept in good working order with the prescribed mufflers and silencers. Noisy activities to be undertaken during normal working hours (i.e. 07h00 to 18h00 on weekdays, 07h00 to 13h00 on Saturdays). No work is to be undertaken on Sundays or public	Very Low (-)

ALTERNATIVE 1 (PREFERRED ALTERNATIVE)			
Potential Impact	Significance before Mitigation	Mitigation Measure	Significance after Mitigation
		<p>holidays. In the event that work is to be conducted outside of these hours permission needs to be obtained from the local authority and adjacent residential areas to be informed in writing 24 hours prior to such work being undertaken.</p> <p>No loud music will be allowed on site or in the construction camp.</p> <p>Noise should be restricted in close proximity to schools.</p>	
<p>Waste management impacts relating to ineffective waste management procedures leading to littering and pollution of the surrounding areas as well as unsanitary (toilet) conditions. Domestic and construction waste will increase the amount of waste disposed to landfill.</p>	Medium (-)	<p>Waste bins are to be located at the construction camp and construction sites. Bins are to have secured lids to prevent waste from being blown into the surrounding area.</p> <p>Excess excavated material not used in the construction works or as infill for the sports field to be disposed of at the Langbos licensed landfill site.</p> <p>Domestic and general construction waste to be disposed of at the Langbos licensed landfill site. The Contractor may not utilise the municipal waste collection services.</p> <p>Toilet facilities to be provided at construction areas.</p> <p>Excavated material (uncontaminated) from the new pond areas to be used as infill for the existing pond.</p> <p>Awareness raising to be undertaken with the construction workers and the local community regarding health and environmental impacts from illegal dumping.</p>	Low (-)
<p>Traffic impacts relate to the disruption of vehicle traffic along the DR01971 and the western boundary road of Valencia as well as an anticipated increase in construction vehicles on roads. Railway traffic may be disrupted by construction within the immediate area of the railway lines.</p>	Medium – High (-)	<p>Public to be notified 7 days prior to construction commencing and vehicle traffic to be accommodated on the DR01971 and the western boundary road of Valencia.</p> <p>Alternative routes to be provided and approved by the ECO should road closures be required.</p> <p>Flagmen to be posted when construction works are being undertaken adjacent to roads.</p> <p>Signage is to be displayed regarding construction activities.</p> <p>Rail traffic to be accommodated when construction is being undertaken within the rail reserve. Transnet Rail and PRASA to be contacted prior to construction commencing. Adherence of construction regulations relating to working within a railway line (no red flags to be used at the railway areas as</p>	Low (-)

ALTERNATIVE 1 (PREFERRED ALTERNATIVE)			
Potential Impact	Significance before Mitigation	Mitigation Measure	Significance after Mitigation
		this may indicate the train driver to stop). Additional stability measures to be incorporated for stormwater drainage under the railway lines.	
Operational Phase			
Social impacts relating to the new sports facilities and reduction of the health hazards associated with stormwater ponding and waste.	Medium (+)	Infilling of existing stormwater pond to provide netball and other sports fields.	Medium (+)
Maintenance / operational impacts relate to sedimentation and debris build-up within the system.	Medium (-)	Regular maintenance to be undertaken by the SRVM on the stormwater management system regarding removal of sedimentation, waste or debris collected during high storm events. Collected waste or debris to be disposed of at the Langbos licensed landfill site.	Low (-)
INDIRECT IMPACTS			
Construction & Decommissioning Phases			
Potential impacts on the existing infrastructure and services. These services may be disrupted if damaged.	Low (-)	Location of existing services to be demarcated to avoid damage and to ensure disruption to surrounding social environment is avoided. Should an existing service be damaged, affected residents will be notified in writing within 8 hours of the incident occurring and temporary alternative services will be provided by the Contractor.	Very Low (-)
A low positive impact is temporary employment opportunities that are expected to be created during the construction phase. An adverse effect on this impact may occur in that high expectations are formed regarding temporary employment opportunities and that these expectations cannot be sustained.	Low (+)	Local labour from the surrounding community to be used for unskilled positions. A Community Liaison Officer is to liaise with the local community regarding the amount of temporary employment opportunities that are available.	Low (+)
Operational Phase			
Spread of alien vegetation if not managed due to the present dominant alien plant cover within the study area.	Medium – high (-)	Alien plant growth to be monitored by the SRVM and area to be kept free of alien invasive and noxious plants. An active Alien Plant Monitoring and Removal Programme to be implemented by the SRVM to ensure no further spreading of alien plants occur. Alien and noxious plant species to be removed physically or through chemical destruction by the SRVM.	Low (-)
A potential impact relating to rail traffic is the subsidence of the new stormwater drainage under the railway line.	Medium (-)	Stormwater drainage under the railway line to be checked by the SRVM for any instability and to advise Transnet.	Low (-)

ALTERNATIVE 1 (PREFERRED ALTERNATIVE)			
Potential Impact	Significance before Mitigation	Mitigation Measure	Significance after Mitigation
Waste management impacts relating to trapping of litter within the stormwater system and local community using the pond areas for illegal dumping areas.	Low (-)	Weekly litter collection to be undertaken by the SRVM within the stormwater pond systems. Awareness raising to be undertaken with the local community regarding health and environmental impacts from illegal dumping.	Very Low (-)
CUMULATIVE IMPACTS:			
Construction, Operational & Decommissioning Phases			
Spreading of alien vegetation within and outside of the project area.	Medium (-)	Alien plant growth to be monitored by the Environmental Officer and area to be kept free of alien invasive and noxious plants by the Contractor. An active Alien Plant Monitoring and Removal Programme to be implemented by the Contractor to ensure no further spreading of alien plants occur. Alien and noxious plant species to be removed physically or through chemical destruction by the Contractor.	Low (-)
Social impacts relating to the spread of HIV and STDs.	Medium (-)	HIV and STD awareness training with construction staff.	Low (-)

Please note: The majority of the impacts identified for Alternative 1 will be the same for Alternative 2. As such only the impacts that differ are presented for the Alternative 2 assessment.

ALTERNATIVE 2			
Potential Impact	Significance before Mitigation	Mitigation Measure	Significance after Mitigation
DIRECT IMPACTS:			
Planning and Design Phase			
Disruption and removal of pedestrian access within the proposed stormwater management system.	Medium (-)	The position of the bulk stormwater outlet 2 is to be placed away from the footpaths.	Low (-)
Aquatic environment, i.e. hydrological regime and increased potential for erosion impacts relate to the natural run-off patterns by either diverting or increasing velocity of surface water flows. This then has the potential to increase erosion.	Medium - High (-)	Capacity of stormwater detention ponds to cater for increase in surface water flows. Gabion mattresses for culvert outlets as erosion protection measures. The position of the bulk stormwater outlet 1 to be positioned away from the drainage line.	Low (-)
Disruption to rail and vehicle traffic due to stormwater pipelines crossings	Medium - High (-)	Pipe-jacking to be incorporated into the design parameters for construction activities crossing roads and rail. The stormwater pipeline from pond 1 to outlet 1 to be repositioned on the northern side of the DR01971.	Medium (-)

ALTERNATIVE 2			
Potential Impact	Significance before Mitigation	Mitigation Measure	Significance after Mitigation
Construction & Decommissioning Phases			
As per impacts assessed in Alternative 1			
Operational Phase			
As per impacts assessed in Alternative 1			
INDIRECT IMPACTS			
Construction & Decommissioning Phases			
As per impacts assessed in Alternative 1			
Operational Phase			
As per impacts assessed in Alternative 1			
CUMULATIVE IMPACTS:			
Construction, Operational & Decommissioning Phases			
As per impacts assessed in Alternative 1			

3. ENVIRONMENTAL IMPACT STATEMENT

Taking the assessment of potential impacts into account, please provide an environmental impact statement that summarises the impact that the proposed activity and its alternatives may have on the environment after the management and mitigation of impacts have been taken into account, with specific reference to types of impact, duration of impacts, likelihood of potential impacts actually occurring and the significance of impacts.

ALTERNATIVE 1 (PREFERRED ALTERNATIVE)				
Potential Impacts	Duration	Probability	Significance before Mitigation	Significance after Mitigation
Planning & Design Phase – Direct Impacts				
Loss of biodiversity habitat	Long Term	Definite	Medium (-ve)	Low (-ve)
Removal of sports facilities	Long Term	Definite	Medium (-ve)	Low (+ve)
Disruption and removal of pedestrian access	Long Term	Definite	Medium - High (-ve)	Low (-ve)
Aquatic environment impacts	Long Term	Likely	Medium (-ve)	Low (-ve)
Disruption to rail and vehicle traffic	Short Term	Likely	Medium - High (-ve)	Low (-ve)
Construction & Decommissioning Phases: Direct Impacts				
Social impacts	Short-Med Term	Possible	Medium (-ve)	Low (-ve)
Terrestrial ecological impacts	Long Term	Likely	Medium (-ve)	Low (-ve)
Construction camp	Short-Med Term	Likely	Low (-ve)	Very Low (-ve)
Visual impacts	Short – Med Term	Definite	Low (-ve)	Very Low (-ve)
Soil and water pollution	Medium Term	Likely	Low (-ve)	Very Low (-ve)
Air quality impacts	Short – Med Term	Definite	Medium (-ve)	Low (-ve)
Noise impacts	Short – Med Term	Definite	Low (-ve)	Very Low (-ve)
Waste management	Short – Med Term	Definite	Medium (-ve)	Low (-ve)
Traffic impacts	Short – Med Term	Definite	Med – High (-ve)	Low (-ve)
Construction & Decommissioning Phases: Indirect Impacts				
Existing infrastructure and services	Short – Med Term	Possible	Low (-ve)	Very Low (-ve)
Temporary employment opportunities	Short – Med Term	Likely	Low (+ve)	Low (+ve)
Operational Phase – Direct Impacts				
Social impacts	Long Term	Definite	Medium (+)	Medium (+)
Rail traffic impacts	Medium Term	Possible	Medium (-ve)	Low (-ve)
Sedimentation and debris build up	Long Term	Likely	Medium (-ve)	Low (-ve)
Operational Phase – Indirect Impacts				
Spread of alien vegetation	Long Term	Likely	Medium - High (-ve)	Low (-ve)

ALTERNATIVE 1 (PREFERRED ALTERNATIVE)				
Potential Impacts	Duration	Probability	Significance before Mitigation	Significance after Mitigation
Waste management	Long Term	Likely	Low (-ve)	Very Low (-ve)
Cumulative Impacts				
Spread of alien vegetation	Long Term	Likely	Medium (-ve)	Low (-ve)
Social impacts	Long Term	Possible	Medium (-ve)	Low (-ve)
Environmental Impact Statement				
<p>The construction related impacts are similar in nature to those expected with the decommissioning phase (should the stormwater management system be removed) and thus have been assessed together.</p> <p>The proposed Alternative 1 design caters for sufficient capacity in the ponds to meet the increase in stormwater run-off. Bulk stormwater outlet 1 has been repositioned outside of the 32m area of the drainage line. Erosion protection measures have been included in the design for the bulk stormwater culverts.</p> <p>Stormwater drainage in relation to the pedestrian footpaths at outlet 2 has been further considered in this design as stormwater will not drain directly onto the footpaths. Additional provision for pedestrian access needs to be provided at pond 3.</p> <p>Pipe-jacking will be undertaken for areas where infrastructure traverses under the railway line and roads. Additional stability measures to be incorporated for stormwater drainage underneath the railway line.</p> <p>The netball field (sports facility) will be removed with the construction of pond 2. However a netball field and other sports fields will be created at the existing detention pond which will be filled to ground level.</p> <p>The proposed stormwater management system will involve a greater area of vegetation to be cleared. However no pristine vegetation areas are located within the proposed sites.</p> <p>A low positive impact is limited temporary employment opportunities during construction.</p> <p>The negative impacts identified can be mitigated to a low – very low negative significance if all mitigation measures identified and included in the Environmental Management Programme (EMPr) attached in Appendix F are implemented.</p>				

ALTERNATIVE 2				
Potential Impacts	Duration	Probability	Significance before Mitigation	Significance after Mitigation
Planning & Design Phase – Direct Impacts				
Loss of biodiversity habitat	Long Term	Definite	Medium (-ve)	Low (-ve)
Removal of sports facilities	Long Term	Definite	Medium (-ve)	Low (+ve)
Disruption and removal of pedestrian access	Long Term	Definite	Medium (-ve)	Low (-ve)
Aquatic environment impacts	Long Term	Likely	Medium - High (-ve)	Low (-ve)
Disruption to rail and vehicle traffic	Short Term	Likely	Medium - High (-ve)	Medium (-ve)
Construction & Decommissioning Phases: Direct Impacts				
Social impacts	Short-Med Term	Possible	Medium (-ve)	Low (-ve)
Terrestrial ecological impacts	Long Term	Likely	Medium (-ve)	Low (-ve)
Construction camp	Short-Med Term	Likely	Low (-ve)	Very Low (-ve)
Visual impacts	Short – Med Term	Definite	Low (-ve)	Very Low (-ve)
Soil and water pollution	Medium Term	Likely	Low (-ve)	Very Low (-ve)
Air quality impacts	Short – Med Term	Definite	Medium (-ve)	Low (-ve)
Noise impacts	Short – Med Term	Definite	Low (-ve)	Very Low (-ve)
Waste management	Short – Med Term	Definite	Medium (-ve)	Low (-ve)
Traffic impacts	Short – Med Term	Definite	Med – High (-ve)	Low (-ve)
Construction & Decommissioning Phases: Indirect Impacts				
Existing infrastructure and services	Short – Med Term	Possible	Low (-ve)	Very Low (-ve)
Temporary employment opportunities	Short – Med Term	Likely	Low (+ve)	Low (+ve)

ALTERNATIVE 2				
Potential Impacts	Duration	Probability	Significance before Mitigation	Significance after Mitigation
Operational Phase – Direct Impacts				
Social impacts	Long Term	Definite	Medium (+)	Medium (+)
Rail traffic impacts	Medium Term	Possible	Medium (-ve)	Low (-ve)
Sedimentation and debris build up	Long Term	Likely	Medium (-ve)	Low (-ve)
Operational Phase – Indirect Impacts				
Spread of alien vegetation	Long Term	Likely	Medium - High (-ve)	Low (-ve)
Waste management	Long Term	Likely	Low (-ve)	Very Low (-ve)
Cumulative Impacts				
Spread of alien vegetation	Long Term	Likely	Medium (-ve)	Low (-ve)
Social impacts	Long Term	Possible	Medium (-ve)	Low (-ve)
Environmental Impact Statement				
<p>The construction related impacts are similar in nature to those expected within the decommissioning phase (should the stormwater management system be removed) and thus have been assessed together.</p> <p>The proposed Alternative 2 design does not cater for sufficient capacity in the ponds to meet the increase in stormwater run-off. Bulk stormwater outlet 1 is positioned within a drainage line and would discharge stormwater directly into the watercourse. No erosion protection measures have been included in the design for the bulk stormwater culverts.</p> <p>The position of stormwater outlet 2 is directly within a pedestrian footpath that is utilised by the community for access to the town of Addo.</p> <p>Pipe-jacking will be undertaken for areas where infrastructure traverses under the railway line, however conventional trenching would be undertaken for road crossings. The stormwater pipeline from pond 1 to outlet 1 is positioned on the southern side of the DR01971 and would require 2 road crossings thereby increasing disruption to local traffic.</p> <p>The proposed stormwater management system will involve a smaller area of vegetation to be cleared. However no pristine vegetation areas are located within the proposed sites.</p> <p>Alternative 2 will have an impact on the drainage line associated with bulk outlet 1 and does not provide sufficient capacity for the stormwater runoff which may still lead to flooding of the western area of Valencia.</p>				

NO-GO ALTERNATIVE (COMPULSORY)				
Potential Impacts	Duration	Probability	Significance before Mitigation	Significance after Mitigation
High risk of flooding and employment opportunities	Permanent	Definite	High (-ve)	High (-ve)
Environmental Impact Statement				
<p>This alternative entails that the stormwater management system for the area of Valencia is not upgraded and that the existing system remains. Residences and infrastructure will continually be flooded during minor (1:2) and major (1:50) storm events, resulting in further damage to property and infrastructure.</p> <p>Stormwater is not drained effectively from the existing detention pond thereby resulting in water ponding for long periods of time. The pond is also utilised as an illegal dumping ground by the community and as such poses health and safety risks.</p>				

SECTION E. RECOMMENDATIONS OF PRACTITIONER

Is the information contained in this report and the documentation attached hereto sufficient to make a decision in respect of the activity applied for (in the view of the environmental assessment practitioner)?

YES ✓	NO
YES ✓	NO

Is an EMPr attached?

The EMPr must be attached as Appendix F.

If "NO", indicate the aspects that should be assessed further as part of a Scoping and EIA process before a decision can be made (list the aspects that require further assessment):

N/A

If "YES", please list any recommended conditions, including mitigation measures that should be considered for inclusion in any authorisation that may be granted by the competent authority in respect of the application:

It is recommended that the activity (Alternative 1) is granted with the following recommendations:

1. All mitigation measures in the Environmental Management Programme (EMPr, Appendix F) are implemented, an experienced Environmental Officer is appointed by the Contractor and an experienced independent ECO is appointed by the NMBM to monitor compliance with the EMPr.
2. Temporary provisions must be made for pedestrian access.
3. Permits must be obtained for the removal and/or destruction of all protected Mesembryanthemaceae plant species prior to construction commencing.
4. Alien plant regrowth is to be monitored and managed during the construction by the Contractor and operational phases by the SRVM.
5. Rehabilitation to be undertaken with indigenous plants and Mesembryanthemaceae species.
6. Construction camp to be located 100m away from the non-perennial stream (drainage line) and to be located in a disturbed or developed area. The location of the camp must be approved by the ECO prior to construction commencing.

SECTION F: APPENDICES

The following appendixes must be attached as appropriate:

Appendix A: Site plan(s)

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports

Appendix E: Comments and responses report

Appendix F: Environmental Management Programme (EMPr)

Appendix G: Other information