



FINAL DRAFT ENVIRONMENTAL IMPACT

The development of an airstrip for emergency fire fighting services on Erf 221, Denneoord, George

THE CLIENT

Southern Cape Fire Protection Association

DATE

October 2016





Section 24G Environmental Impact Assessment Report for the consequences of unlawful commencement of listed activity/ies in terms of the:

- **National Environmental Management Act, 1998 (Act No. 107 of 1998), ("NEMA");**
- **Environment Conservation Act, 1989 (Act No. 73 of 1989) ("ECA");**
- **National Environmental Management: Waste Act, 2008 (Act 59 of 2008) ("NEM:WA")**

September 2015

Form Number: S24GEIAR/01/2015

Kindly note that:

1. This section 24G Environmental Impact Assessment ("EIA") report must be completed for all section 24G applications in terms of the above Acts, by an independent Environmental Assessment Practitioner ("EAP").
2. This EIA report is current as of January 2015. It is the responsibility of the Applicant/EAP to ascertain whether subsequent versions of the EIA report have been published or produced by the competent authority.

Contents:

Section A: Activity Information

Section B: Description of Receiving Environment

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3. An Independent EAP must be appointed to complete the section 24G EIA report on behalf of the applicant; the declaration of independence must be completed by the independent EAP and submitted with this EIA report. If a specialist report is required, the specialist will also be required to complete the declaration of independence.
4. Two hard copies and one electronic copy (CD/DVD) of this report must be submitted.
5. The required information must be typed within the spaces provided. The sizes of the spaces provided are not necessarily indicative of the amount of information to be provided. The space provided extend as each space is filled with typing. A legible font type and size must be used when completing the report. The font size should not be smaller than 10pt (e.g. Century Gothic 10). A digital copy of the Section EIA Report is available on the Department's website (details below).
6. The use of "not applicable" in the EIA report must be done with circumspection.
7. **No faxed or e-mailed EIA reports will be accepted.**
8. Unless protected by law, all information contained in and attached to this EIA report will become public information on receipt by the competent authority. Upon request, any Interested and Affected Party ("I&AP") should be provided with the information contained in and attached to this EIA report. During any stage of the application process, the information contained in and attached to it must be provided by the applicant / EAP.
9. This EIA report must be submitted to the Department at the postal address given below or by delivery thereof to the Registry Office of the Department. Unnecessary delays will be incurred should the application and attached information not be submitted to the correct address.

10. PROCESS TO BE FOLLOWED:

- a) A section 24G Application Form constitutes the initiation of the Section 24G application process. If you have failed to submit an application form, you may not proceed with the compilation and submission of this EIA report until such time that a section 24G application form has been submitted to the Department and subsequently acknowledged.
- b) Once the information requirements in respect of the application have been met, a **draft EIA report**, which must include an **Environmental Management Programme ("EMPr")**, must first be made available to the I&APs, including all the relevant State Departments that administer laws relating to a matter affecting the environment, for comment for a period of **30 (thirty) calendar days**. Unless otherwise indicated by the Department, a commenting period of at least **21 (twenty-one) days** must be provided to I&APs, including the relevant State Departments, to comment on any additional information, documentation or reports (including the final EIR), other than the draft EIR.
- c) The draft EIA report must be submitted to the Department in order to meet the requirements of section 24O of the NEMA. The Department will notify the State Departments of the 30 (thirty) day commenting after receipt of the draft EIA report.
- d) Upon submission of the **final EIA report**, the competent authority will reconsider the application and may undertake a site inspection or request such additional information as the competent authority may require from the Applicant/EAP.
- e) In terms of the provisions of section 24G of the NEMA, the applicant must pay an administrative fine up to a maximum of R5 million, before the Department may decide on the application. The Department will consider the final EIA report/additional information (if required) to determine the administrative fine (not exceeding R5 million) and inform the applicant accordingly. The fine must be paid within **60 days** from the date of the fine notice. The applicant is required to provide proof of payment of the fine to the Department.

In accordance with section 24G(2), the competent authority will then:

- refuse to issue an environmental authorisation; or
 - issue an environmental authorisation to such person to continue, conduct or undertake the activity subject to such conditions as may be deemed necessary, and that the environmental authorisation shall only take effect from the date on which it has been issued; or
 - together with the decision "to refuse to issue" or "issue an environmental authorisation", direct a person to rehabilitate the environment within such time and subject to such conditions as may deem necessary or take any other steps necessary under the circumstances.
11. Note, failure to comply with a directive calling for information to be submitted within a specified period may result in the institution of appropriate legal action as is deemed necessary by this Department and as provided for in the legislation.
 11. A person failing to comply with a directive or contravening or failing to comply with a condition of an environmental authorisation is guilty of an offence and is liable on conviction to a penalty of a fine not exceeding R10 million or to imprisonment for a period not exceeding ten years, or to both such fine and such imprisonment.
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DEPARTMENTAL DETAILS

DEPARTMENTAL REFERENCE NUMBER(S) (for official use)

Department of Environmental Affairs and Development Planning,
Directorate: Environmental Governance,
Attention: Sub-directorate: Section 24G Applications
 Private Bag X9086
 Cape Town, 8000

Registry Office
 1st Floor Utilitas Building
 1 Dorp Street, Cape Town

Queries should be directed to the Sub-directorate: Section 24G Applications at:
 Tel: (021) 483-8019 Fax: (021) 483-4033

File Reference number (S24G)	
Administrative Fine Reference	

DEPARTMENTAL REFERENCE NUMBER(S) (to be completed by the EAP)

File Reference number (Enforcement), if applicable	G14/1/1/E3/5/6/3/L782/15/VOL1
File reference number (EIA), if applicable:	14/2/1/3/D2/20/003/16
File reference number (Waste), if applicable:	
File reference number (Other (specify)):	

View the Department's website on <http://www.westerncape.gov.za/eadp> for the latest version of the documents

RELEVANT REGION IN WHICH THE ACTIVITY COMMENCED

Cross out the appropriate box "☒" in which region the unlawful activity has commenced.

City of Cape Town and West Coast District	Boland (Cape Winelands District)	Overberg (Overberg & Theewaterskloof Districts)	George (Eden & Central Karoo Districts)
			√

DETAILS OF THE APPLICANT

Applicant Name:	Southern Cape Fire Protection Association		
RSA Identity Number/Passport Number:	NOT APPLICABLE		
Name of contact Person for applicant (if other)	Paul Gerber		
RSA Identity Number/Passport Number:			
Company/Trading name (if any):			
Company Registration Number:			
Name of Trust			
Title Deed/s No/s. (copy/ies to be appended)			
Postal address:	Southern Cape Fire Protection Association, Private Bag x12, Knysna		
Telephone:	(044) 302 6912	Postal code:	6570
E-mail:	paulge@daff.gov.za	Cell:	082 805 5840
		Fax:	(086) 616 1682

DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER (EAP)

Company of Environmental Assessment Practitioner (EAP):	Ranger Consulting		
Contact person:	Sean Ranger		
Postal address:	3 Laborie Street, Courtrai, South Paarl		
Telephone:	(083) 294 8776	Postal code:	7646
E-mail:	Ranger.consult@gmail.com	Cell:	083 294 8776
EAP Qualifications	Master Inst Agrar – Sustainable Ecological Management		
EAP Registrations/Associations	Certified EAP with EAPSA, Ecological Scientist Pri. Sci. Nat. #400215/16		
	Member of IAIA SA		

SECTION A: ACTIVITY INFORMATION

1. PROJECT TITLE

The development of an airstrip for emergency fire fighting services on Erf 221, Denneoord, George

2. ACTIVITY DESCRIPTION

(Cross out the appropriate box "☒" and provide a description where required).

(a) Is/are the activity(ies) complete or is/are the activity(ies) still to be completed?	Completed	Incomplete
The activity was halted on instruction from the Department of Environmental Affairs and Development Planning Law Enforcement and Compliance Division in George. See Appendix F – Public Participation Report .		

(b) Is/was the project a new development or an upgrade of an existing development? Also indicate the date (e.g. 2 August 2010 or 08 December 2014) when the activity commenced <u>as well as</u> the original date of commencement if the application is an upgrade.	New	Upgrade
This is a new airstrip development.		

(c) Clearly describe the activity and associated infrastructure commenced with, indicating what has been completed and what still has to be completed.
<p>An area 1000 m x 50 m has been cleared of vegetation (primarily alien invasive trees) the cleared trees have been stockpiled along the border of the cleared area. Additionally a Helipad (Diameter = 20m) has been developed to the south of the existing buildings and paved with cement pavers, indicated as Existing Structure 2 in Appendix B – Site Plans. Parts of the site have been levelled by construction machinery (bulldozers). The clearing of alien invasive plants has been undertaken adjacent to the site to the east of the airstrip. Drainage furrows approximately 1 m in width and 0.5 m in depth have been created along the western boundary of the airstrip for storm water runoff. As the activity ceased as soon as the pre-compliance notice was issued in November 2015 topsoil that was still being graded is now stockpiled in rows within the site. An existing building (Area =18.5 x 12m) that was vacant and derelict has been upgraded and repaired to house the Fire Base office, ablution facilities and lounge for the staff and contracted pilots of the SCFPA and the Working on Fire Teams deployed to the area, indicated as Existing Structure 1 in Appendix B – Site Plans. A small garden has been created around the building and some minor landscaping has been undertaken. The area has been fenced off for security purposes. Parking outside the building is along an existing access road from 11th Avenue in the Fernridge suburb of George. The other infrastructure indicated on the image below has not been commenced with.</p> <p>The proposed additional infrastructure includes a structure for the Fire Brigade Services, indicated as Structure 1 in Appendix B – Site Plans. This building will be 40 x 50 m in extent and is located to the north west of the existing building. Structure 2 which will be an extension on the existing building and will house the male & female ablution facilities for the staff on duty at the site, see also Appendix B – Site Plans. A hangar to house aircraft will be built to the north east of the existing</p>

office and will be 25 x 25 m in extent, this is indicated as Hangar 1 in **Appendix B – Site Plans**. A refilling site for the fire fighting bombers is proposed and will be 30 x 35 m in extent and will be a thrown concrete slab, indicated in **Appendix B – Site Plan** as the refilling point. A taxiway from the Hangar to the refilling point which will be 10 x 115m in extent is proposed for aircraft to taxi from the hangars to the airstrip. An additional taxiway from the refilling point to the airstrip is proposed and will be 75 x 60m in extent. The runway itself will be 30 x 1000 m and extend from the taxiway 2. It will be surrounded by a 10m wide brushcut verge indicated as Cutting line 1 & 2 in **Appendix B – Site Map**. It is proposed that both taxiways and the runway will have a high quality gravel surface.

Municipal services are available on site and electricity, sewer and water connections were already in place between the existing building on site and the municipal services infrastructure network as indicated in **Appendix B – Site Map**

See also **Appendix A – Locality Map** and **Appendix B – Site Map** (Please note that at this early stage the site map is less detailed than it will be should the application and activity proceed, detailed plans will be submitted to the local authority for approval before construction will commence.).

(d) Please provide details of all components of the activity and attach diagrams (e.g. architectural drawings or perspectives, engineering drawings, process flow charts etc.).

Buildings	YES	NO
Provide brief description:		
<p>An existing building directly to the north of the helipad has been restored to function as the base office for the Southern Cape Fire Protection Association. Existing buildings will also be used as standby quarters. No new buildings have been commenced with. See Appendix C – Photographs</p> <p>The proposed additional infrastructure includes a structure for the Fire Brigade Services, indicated as Structure 1 in Appendix B – Site Plans. This building will be 40 x 50 m in extent and is located to the north west of the existing building. Structure 2 which will be an extension on the existing building and will house the male & female ablution facilities for the staff on duty at the site, see also Appendix B – Site Plans. A hangar to house aircraft will be built to the north east of the existing office and will be 25 x 25 m in extent, this is indicated as Hangar 1 in Appendix B – Site Plans. A refilling site for the fire fighting bombers is proposed and will be 30 x 35 m in extent and will be a thrown concrete slab, indicated in Appendix B – Site Plan as the refilling point. A taxiway from the Hangar to the refilling point which will be 10 x 115m in extent is proposed for aircraft to taxi from the hangars to the airstrip. An additional taxiway from the refilling point to the airstrip is proposed and will be 75 x 60m in extent. The runway itself will be 30 x 1000 m and extend from the taxiway 2. It will be surrounded by a 10m wide brushcut verge indicated as Cutting line 1 & 2 in Appendix B – Site Map. It is proposed that both taxiways and the runway will have a high quality gravel surface.</p>		
Infrastructure (e.g. roads, power and water supply/ storage)	YES	NO

Provide brief description:		
<p>No additional infrastructure required all municipal services reach the site as well as municipal road infrastructure. As indicated in Appendix B – Site Plan, services connections are already in place on the existing municipal sewer network</p> <p>An existing access road enters the site from the west as an extension of 11th Avenue in the Fernridge suburb of George. The building on site has municipal services from the George Municipality. These services will be extended to the other buildings as required. These include, electricity supply, water reticulation and connections to the waste and effluent services. No additional storage facilities have been developed See also Appendix A – Locality Map and Appendix E – Permits & Licenses, for the service letters from the Local Authority.</p>		
Processing activities (e.g. manufacturing, storage, distribution)	YES	NO
Provide brief description:		
None required		
Storage facilities for raw materials and products (e.g. volume and substances to be stored)		
Provide brief description	YES	NO
None required at this time		
Storage and treatment facilities for solid waste and effluent generated by the project	Yes	No
Provide brief description		
None, the site is connected to the waste and effluent treatment services of the George Municipality as such no treatment facility is required on site. See also service letters from the municipality in Appendix E – Permits & Licenses .		

(e) Other activities (e.g. water abstraction activities, crop planting activities)	Yes	No
Provide brief description		
NONE		

3. PHYSICAL SIZE OF THE ACTIVITY

Indicate the physical spatial size of the activity as well as associated infrastructure (footprints):	66 002	m ²
Indicate the area that has been transformed / cleared to allow for the activity as well as associated infrastructure	50 000	m ²
Total area:	66 002	m ²

4. SITE ACCESS

Was there an existing access road?	YES	NO
If NO, what was the distance over which the new access road was built?	m	
Describe the type of access road constructed:		
<p>The existing access road is an extension of 11th Avenue in the Fernridge suburb of George. The surface is paved (tarmac) all the way to the site. The road runs a linear distance of approx.. 325m from the last row of houses in Fernridge to the site boundary. The paved surface of the road is approx. seven metres wide, see also Appendix A – Locality Map.</p>		

Please Note: indicate the position of the access road on the site plan (See Section 5 below)

5. SITE PHOTOGRAPHS

Colour photographs of the site and its surroundings (taken of the site and from the site), both before (if available) and after the activity commenced, with a description of each photograph, must be attached to this application. The vantage points from which the photographs were taken must be indicated on the site plan, or locality plan as applicable. If available, please also provide past and recent aerial photographs. It should be supplemented with additional photographs of relevant features on the site. Date and source of photographs must be included. Photographs must be attached as an appendix to this form.

Please note: Should the relevant photographs not be included in the EIA report, the application will be deemed insufficient and further information in this regard will be requested.

6. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

Please list all legislation, policies and/or guidelines that were or are relevant to this activity.

LEGISLATION	ADMINISTERING AUTHORITY	TYPE Permit/ license/ authorization/comment	DATE (if already obtained):
National Heritage Resources Act, Act 25 of 1999	Heritage Western Cape	Notice of Intent to Develop	Underway
National Environmental Management Act, Act 107 of 1998	Department of Environmental Affairs and Development Planning	Current Application	Underway
Conservation of Agricultural Resources Act, Act 43 of 1983	Department of Agriculture	Removal of Alien Invasive Plants	Underway

POLICY/ GUIDELINES	ADMINISTERING AUTHORITY
Guidelines on Public Participation	DEA&DP
Guideline on Needs and Desirability	DEA&DP
Guideline on Transitional Arrangements	DEA&DP
Provincial Spatial Development Framework	DEA&DP
George Municipality Spatial Development Framework	George Municipality
Integrated Development Plan – George Municipality	George Municipality
CAPE Fine Scale Conservation Plans	SANBI
Biodiversity Sector Plans	SANBI

7. APPLICATIONS IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT (“NEMA”) & SPECIFIC ENVIRONMENTAL MANAGEMENT ACTS (“SEMAS”)

If not specifically applied for in terms of this application, does the development require an application for a waste management license in terms of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008)?	YES	NO	IF, YES PROVIDE A STATUS OF APPLICATION
If yes, has an application been submitted to the licensing authority?	YES	NO	N/A
Does the proposed project require an application for a water use license in terms of the National Water Act, 1998 (Act No. 36 of 1998)?	YES	NO	
If yes, has an application been submitted to the licensing authority?	YES	NO	N/A
Does the proposed project require an application for an atmospheric emissions license in terms of the National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004)?	YES	NO	
If yes, has an application been submitted to the licensing authority?	YES	NO	N/A

Does the proposed project require an application in terms of the National Environmental Management: Integrated Coastal Management Act ("NEM: ICMA")?	YES	NO	
If yes, has an application been submitted to the relevant competent authority?	YES	NO	N/A
If yes, provide more details of the application submitted/to be submitted in terms of the NEM: ICMA:			
NOT APPLICABLE			N/A

SECTION B: DESCRIPTION OF RECEIVING ENVIRONMENT

Site/Area Description

For linear activities (pipelines, etc) as well as activities that cover very large sites, it may be necessary to complete copies of 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. (e.g. 1, 2, or 3):

1. GRADIENT OF THE SITE

Indicate the general gradient of the site(s) (cross out the appropriate box).

Flat	Flatter than 1:10	1:10 – 1:5	Steeper than 1:5
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2. LOCATION IN LANDSCAPE

Indicate the landform(s) that best describes the site (cross out ("☒") the appropriate box(es)).

Ridgeline	Plateau	Side slope of hill/mountain	Closed valley	Open valley	Plain	Undulating plain/low hills	Dune	Sea-front	Other
					☒				
If other, please describe									
The site is located on the coastal plain at the foot of the Witfontein Nature Reserve mountains to the north of George.									

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

3.1 GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE (PRE-COMMENCEMENT)

Is the site(s) located on or near any of the following (cross out ("☒") the appropriate boxes)?

Shallow water table (less than 1.5m deep)	YES	NO	UNSURE
Seasonally wet soils (often close to water bodies)	YES ***	NO	UNSURE
Unstable rocky slopes or steep slopes with loose soil	YES	NO	UNSURE
Dispersive soils (soils that dissolve in water)	YES	NO	UNSURE
Soils with high clay content	YES	NO	UNSURE
Any other unstable soil or geological feature	YES	NO	UNSURE
An area sensitive to erosion	YES	NO	UNSURE

*** - Some sub site scale patches of seasonally wet soils were noted by the specialist botanist indicated by the presence of plant species associated with these areas. However it must be noted that from the vegetation perspective these sites do not pose a red flag but should be specifically addressed to ensure stability if the proposal is accepted and authorised. We have noted it in the

EMPr where the contractor must develop a specific method statement for these sites and that they should be identified by the ECO prior to the commencement of the construction phase.

3.2 GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE (POST-COMMENCEMENT)

Shallow water table (less than 1.5m deep)	YES	NO	UNSURE
Seasonally wet soils (often close to water bodies)	YES***	NO	UNSURE
Unstable rocky slopes or steep slopes with loose soil	YES	NO	UNSURE
Dispersive soils (soils that dissolve in water)	YES	NO	UNSURE
Soils with high clay content	YES	NO	UNSURE
Any other unstable soil or geological feature	YES	NO	UNSURE
An area sensitive to erosion	YES	NO	UNSURE

*** - Some sub site scale patches of seasonally wet soils were noted by the specialist botanist indicated by the presence of plant species associated with these areas. However it must be noted that from the vegetation perspective these sites do not pose a red flag but should be specifically addressed to ensure stability if the proposal is accepted and authorised. We have noted it in the EMPr where the contractor must develop a specific method statement for these sites and that they should be identified by the ECO prior to the commencement of the construction phase

If any of the answers to the above are "YES" or "unsure", specialist input may be requested by the Department. (Information in respect of the above will often be available at the planning sections of local authorities. Where it does not exist, the 1:50 000 scale Regional Geotechnical Maps prepared by Geological Survey may also be used).

4. SURFACE WATER

4.1 SURFACE WATER (PRE-COMMENCEMENT)

Indicate the surface water present on and or adjacent to the site and alternative sites (cross out ("☒") the appropriate boxes)?

Perennial River	YES	NO	UNSURE
Non-Perennial River	YES	NO	UNSURE
Permanent Wetland	YES	NO	UNSURE
Seasonal Wetland	YES	NO	UNSURE
Artificial Wetland	YES	NO	UNSURE
Estuarine / Lagoonal wetland	YES	NO	UNSURE

4.2 SURFACE WATER (POST-COMMENCEMENT)

Indicate the surface water present on and or adjacent to the site and alternative sites (cross out ("☒") the appropriate boxes)?

Perennial River	YES	NO	UNSURE
Non-Perennial River	YES	NO	UNSURE
Permanent Wetland	YES	NO	UNSURE
Seasonal Wetland	YES	NO	UNSURE
Artificial Wetland	YES	NO	UNSURE
Estuarine / Lagoonal wetland	YES	NO	UNSURE

5. VEGETATION AND/OR GROUNDCOVER

Please note: The Department may request specialist input/studies depending on the nature of the biodiversity occurring on the site and potential impact(s) of the activity/ies. To assist with the identification of the biodiversity occurring on site and the ecosystem status consult <http://bgis.sanbi.org> or BGIShelp@sanbi.org. Information is also available on compact disc ("cd") from the Biodiversity-GIS Unit, Ph (021) 799 8698. This information may be updated from time to time and it is the applicant/EAP's responsibility to ensure that the latest version is used. A map of the relevant biodiversity information (including an

indication of the habitat conditions as per (b) below) and must be provided as an overlay map to the property/site plan as an **appendix** to this form.

5.1 VEGETATION AND/OR GROUNDCOVER (PRE-COMMENCEMENT)

Cross out ("☒") the block **and** describe (where applicable) the vegetation types / groundcover present on the site before commencement of the activity.

Indigenous Vegetation - good condition	Indigenous Vegetation with scattered aliens	Indigenous Vegetation with heavy alien infestation	✓
Describe the vegetation type above:	Describe the vegetation type above:	<p>Historically the site supported Garden Route Shale Fynbos which has the national status of Endangered, see Appendix G – Specialist Reports (Botanical).</p> <p>The site was an old forestry site that has latterly been invaded by Black Wattle and invasive <i>Pinus</i> sp. The density of the infestation was very high as can be deduced from the infestations along the adjacent riverine areas and areas adjacent to the site.</p> <p>Prior to clearing the site it supported a vegetation community that indicates highly disturbed Garden Route Shale Fynbos and no naturally occurring forest was impacted by the development. This is corroborated by the findings of the specialist botanist</p> <p>The area had an uncontrolled fire burn through it a number of years ago and the resulting germination of invasive species has significantly increased the density of invasive aliens on the site.</p>	
Provide ecosystem status for above:	Provide ecosystem status for above:	<p>Provide Ecosystem status for above:</p> <p>The site formerly contained Garden Route Shale Fynbos which is regarded as Endangered in terms of the allocated National Conservation Status. As stated above the site is considered highly transformed</p>	
<p>Indigenous Vegetation in an ecological corridor or along a soil boundary / interface</p> <p>NONE – The underlying geology is homogenous and identified as quartzite only on the GIS geology datasets.</p>	<p>Veld dominated by alien species</p> <p>The bulk of the property is still heavily invaded by alien invasive species. The site was an old forestry site and as such transformed by agroforestry prodction.</p>	<p>Distinctive soil conditions (e.g. Sand over shale, quartz patches, limestone, alluvial deposits, termitaria etc.) – describe</p> <p>NONE noted.</p>	
Bare soil	Building or other structure	Sport field	NONE

NONE	As noted above the site contained an old derelict building that has now been renovated for staff accommodation. Other structures to the east of the site include a pump station for a bulk water supply line and a small reservoir.	
Other (describe below) NONE	Cultivated land Historically afforested to pine and eucalyptus trees.	Paved surface NONE

(a) Highlight the applicable pre-commencement biodiversity planning categories of all areas on site and indicate the reason(s) provided in the biodiversity plan for the selection of the specific area as part of the specific category.

Systematic Biodiversity Planning Category				If CBA or ESA, indicate the reason(s) for its selection in biodiversity plan
Critical Biodiversity Area (CBA)	Ecological Support Area (ESA)	Other Natural Area (ONA)	No Natural Area Remaining (NNR)	No CBA or ESA is indicated for the site of the proposed airstrip, the entire section is regarded as having no remaining natural vegetation. It is worth noting that no National Freshwater Ecosystem Priority Area is indicated for this site. CBA's are present in the surrounding landscape

(b) Highlight and describe the habitat condition on site.

Habitat Condition	Percentage of habitat condition class (adding up to 100%)	Description and additional Comments and Observations (including additional insight into condition, e.g. poor land management practises, presence of quarries, grazing/harvesting regimes etc).
Natural	0%	
Near Natural (includes areas with low to moderate level of alien invasive plants)	0%	
Degraded (includes areas heavily invaded by alien plants)	0%	
Transformed (includes cultivation, dams, urban, plantation, roads, etc)	100%	The site and adjacent land is fully transformed and invaded by alien invasive plants, grasses and herbaceous perennials

(c) Complete the table to indicate:
 (i) the type of vegetation, including its ecosystem status, that was previously present on the site; and
 (ii) whether an aquatic ecosystem was previously present on site.

Terrestrial Ecosystems		Aquatic Ecosystems						
Ecosystem threat status as per the National Environmental Management: Biodiversity Act (Act No. 10 of 2004)	Critical	Wetland (including rivers, depressions, channelled and un-channelled wetlands, flats, seeps pans, and artificial wetlands)	Estuary		Coastline			
	Endangered							
	Vulnerable							
	Least Threatened							
		YES	NO	UNSURE	YES	NO	YES	NO

(d) Please provide a description of the vegetation type and/or aquatic ecosystem present on site, including any important biodiversity features/information identified on site (e.g. threatened species and special habitats)

The ecosystem type indicated for the site is Garden Route Shale Fynbos which occurs over an area of 527.8 square kilometres of which 45.8% or 241.7 square kilometres remains intact. The conservation target set for this ecosystem type is 23% and currently 4% has formal protection. The ecosystem has been allocated a national conservation status of Endangered (E) according to the South African Vegetation Map.

The specialist botanist indicates that the site has areas that are seasonally wet and that should receive special attention to avoid erosion impacts.

No National Freshwater Ecosystem Priority Areas are indicated for the site (both river and wetland features). As the site is fully transformed and regarded as not having any natural vegetation remaining the probability of intact special habitats or rare and endangered species is low.

5.2 VEGETATION AND/OR GROUNDCOVER (POST-COMMENCEMENT)

Cross out ("☒") the block **and** describe (where required) the vegetation types / groundcover present on the site after commencement of the activity.

Indigenous Vegetation - good condition	Indigenous Vegetation with scattered aliens	Indigenous Vegetation with heavy alien infestation
Describe the vegetation type above:	<p>The site has now been cleared of alien invasive plants and since activities were ceased the site has been colonised by grasses and perennial and annual herbaceous plants.</p> <p>The specialist botanist assessment of the site reveals that there is no natural vegetation remaining on the site and areas adjacent to the site show signs of high levels of historical impact. The site itself is currently covered in alien invasive grasses.</p>	Describe the vegetation type above:
Provide ecosystem status for above:	Provide ecosystem status for above: The site was historically transformed and is regarded as having a very low to zero status in terms of the ecosystem currently present.	Provide Ecosystem status for above:
<p>Indigenous Vegetation in an ecological corridor or along a soil boundary / interface</p> <p>NONE – The underlying geology is deemed to contain quartzite only thus no apparent ecotone</p>	<p>Veld dominated by alien species</p> <p>The bulk of the property is still heavily invaded by alien invasive species. The site was an old forestry site and as such transformed by agroforestry practices. The commencement of the activity has in fact removed the alien infestation from the site. The remaining natural vegetation is characterised</p>	<p>Distinctive soil conditions (e.g. Sand over shale, quartz patches, limestone, alluvial deposits, termitaria etc.) – describe</p> <p>NONE</p>

	as being highly impacted remnant Garden Route Shale Fynbos communities.	
Bare soil The area cleared for the airstrip is a mixture of bare soil and pioneer grasses and perennials.	Building or other structure As noted above the site contains an old derelict building that has now been renovated for staff accommodation. Other structures to the east of the site include a pump station for a bulk water supply line and a small reservoir.	Sport field NONE
Other (describe below) NONE	Cultivated land NONE	Paved surface NONE

(a) Highlight and describe the post-construction habitat condition on site.

Habitat Condition	Percentage of habitat condition class (adding up to 100%)	Description and additional Comments and Observations (including additional insight into condition, e.g. poor land management practises, presence of quarries, grazing/harvesting regimes etc).
Natural	0%	
Near Natural (includes areas with low to moderate level of alien invasive plants)	0%	
Degraded (includes areas heavily invaded by alien plants)	0%	
Transformed (includes cultivation, dams, urban, plantation, roads, etc)	100%	The site and adjacent land is fully transformed and invaded by alien invasive plants, trees, grasses and herbaceous perennials. Additionally the site has some indigenous species associated with highly disturbed sites in Garden Route Shale Fynbos.

(b) How have the vegetation and/or aquatic ecosystem(s) present on site (including any important biodiversity features identified on site (e.g. threatened species and special habitats)) been affected by the commencement of the listed activity(ies)?

No significant biodiversity features (terrestrial and aquatic) or high value ecosystems of special biodiversity features are identified for the site. As the site has been fully transformed historically one would not expect that the site contained species of conservation concern. The site was fully invaded with invasive alien species and these have now been cleared off a significant portion of the site with the associated ecological benefit and fire risk benefit through reduced fuel loads per unit area.

5.3 VEGETATION / GROUNDCOVER MANAGEMENT

(a) Describe any mitigation/management measures that were adopted and the adequacy of these:

The site is flat to nearly flat as such erosion mitigation should only be associated with the concentration of water in the storm water furrows from surface flows off the compacted surfaces of the runway and taxiways. The specialist botanist noted that the vegetation community in some areas of the site does indicate that it is seasonally wet, these areas must be drained in a manner that prevents erosion. Mitigation of storm water impacts have been instituted with the development of storm water furrows to lead water away from the site. The mitigation provided by these furrows is

functional but could be improved through better design and diversion of the furrows to encourage better flow of water away from the proposed airstrip. These design features must become part of the final plans submitted to the Local Authority if the development is authorised. The clearing of invasive alien species from the site is not only required for the preparation and safe use of the airstrip but makes a small contribution to the removal of these declared weeds from the site and the mitigation of their impacts. The choice of the site may be regarded as a migratory factor i.e. the choice of a flat to nearly flat site which would minimise the significance of the impacts associated with the development of an airstrip. As above the design of this system can be improved to increase the potential mitigation impacts.

6. LAND USE OF THE SITE (PRE-COMMENCEMENT)

Please note: The Department may request specialist input/studies depending on the nature of the land use character of the area and potential impact(s) of the activity/ies.

Untransformed area	Low density residential	Medium density residential	High density residential	Informal residential
Retail	Commercial & warehousing	Light industrial	Medium industrial	Heavy industrial
Power station	Office/consulting room	Military or police base/station/compound	Casino/entertainment complex	Tourism & Hospitality facility
Open cast mine	Underground mine	Spoil heap or slimes dam	Quarry, sand or borrow pit	Dam or reservoir
Hospital/medical center	School	Tertiary education facility	Church	Old age home
Sewage treatment plant	Train station or shunting yard	Railway line	Major road (4 lanes or more)	Airport
Harbour	Sport facilities	Golf course	Polo fields	Filling station
Landfill or waste treatment site	Plantation	Agriculture	River, stream or wetland	Nature conservation area
Mountain, koppie or ridge	Museum	Historical building	Graveyard	Archeological site
Other land uses (describe):				

(a) Please provide a description.

The property was used historically as a forestry plantation (afforested to Pine & Eucalyptus) with all natural vegetation communities being transformed for the establishment of the plantation.

7. LAND USE CHARACTER OF SURROUNDING AREA (PRE-COMMENCEMENT)

Cross out ("☒") the block that reflects the past land uses and/or prominent features that occur/red within +/- 500m radius of the site and neighbouring properties if these are located beyond 500m of the site. **Please note:** The Department may request specialist input/studies depending on the nature of the land use character of the area and impact(s) of the activity/ies.

Untransformed area	Low density residential	Medium density residential	High density residential	Informal residential
Retail	Commercial & warehousing	Light industrial	Medium industrial	Heavy industrial
Power station	Office/consulting room	Military or police base/station/compound	Casino/entertainment complex	Tourism & Hospitality facility
Open cast mine	Underground mine	Spoil heap or slimes dam	Quarry, sand or borrow pit	Dam or reservoir
Hospital/medical center	School	Tertiary education facility	Church	Old age home
Sewage treatment plant	Train station or shunting yard	Railway line	Major road (4 lanes or more)	Airport
Harbour	Sport facilities	Golf course	Polo fields	Filling station
Landfill or waste treatment site	Plantation	Agriculture	River, stream or wetland	Nature conservation area
Mountain, koppie or ridge	Museum	Historical building	Graveyard	Archeological site

Other land uses (describe):	
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8. LAND USE CHARACTER OF SURROUNDING AREA (POST-COMMENCEMENT)

Cross out ("X") the block that reflects the current land uses and/or prominent features that occur(s) within +/- 500m radius of the site and neighbouring properties if these are located beyond 500m of the site. **Please note:** The Department may request specialist input/studies depending on the nature of the land use character of the area and impact(s) of the activity/ies.

Untransformed area	Low density residential	Medium density residential	High density residential	Informal residential
Retail	Commercial & warehousing	Light industrial	Medium industrial	Heavy industrial
Power station	Office/consulting room	Military or police base/station/compound	Casino/entertainment complex	Tourism & Hospitality facility
Open cast mine	Underground mine	Spoil heap or slimes dam	Quarry, sand or borrow pit	Dam or reservoir
Hospital/medical center	School	Tertiary education facility	Church	Old age home
Sewage treatment plant	Train station or shunting yard	Railway line	Major road (4 lanes or more)	Airport
Harbour	Sport facilities	Golf course	Polo fields	Filling station
Landfill or waste treatment site	Plantation	Agriculture	River, stream or wetland	Nature conservation area
Mountain, koppie or ridge	Museum	Historical building	Graveyard	Archaeological site
Other land uses (describe):				

SECTION C: PUBLIC PARTICIPATION

Please highlight the appropriate box to indicate whether the specific requirement will be undertaken or whether deviation from such a requirement has been requested.

1. Public participation undertaken prior to 24G application (to be completed only if relevant)

Has any public participation been done prior to this application, which the Applicant/EAP feels can be considered to have fulfilled the requirements outlined in the NEMA EIA Regulations, 2014?		YES	NO
Please provide a description.			
The intention to develop the proposed airstrip was discussed and approved by the George Municipal Council and advertised in the local newspaper see also Appendix F – Public Participation Report .			
Which State Departments were consulted?			
List of State Depts.	Comment obtained (YES/NO)	If not, provide reasons	
George Municipality	Yes	N/A	
Civil Aviation Authority	Yes	Confirmation of support but the administrative system of the CAA can only process the authorisation once the Environmental Authorisation has been obtained.	
Department of Agriculture Forestry and Fisheries	The public participation process is currently underway	The public participation process is currently underway	

2. Public Participation for the application in accordance with NEMA EIA Regulations 2014

DETAILS OF THE PUBLIC PARTICIPATION CONDUCTED IN TERMS OF THE NEMA EIA REGULATIONS, 2014		
Will all I&APs be notified of the application by:		
(a) fixing a notice board at a place conspicuous to and accessible by the public at the boundary, on the fence or along the corridor of -		
(i) the site where the activity to which the application relates is or is to be undertaken; and	YES	DEVIATION
(ii) any alternative site	YES	DEVIATION
(b) giving written notice, in any manner provided for in section 47D of the NEMA, to -		

(i) the occupiers of the site and, if the applicant is not the owner or person in control of the site on which the activity is to be undertaken, the owner or person in control of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;	YES	DEVIATION	N/A
(ii) owners, persons in control of, 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;	YES	DEVIATION	
(iii) 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;	YES	DEVIATION	
(iv) the municipality (Local and District Municipality) which has jurisdiction in the area;	YES	DEVIATION	
(v) any organ of state having jurisdiction in respect of any aspect of the activity; and	YES	DEVIATION	
(vi) any other party as required by the Department;	YES	DEVIATION	N/A
(c) placing an advertisement in -			
(i) one local newspaper; or	YES	DEVIATION	
(ii) any official <i>Gazette</i> that is published specifically for the purpose of providing public notice of applications or other submissions made in terms of these Regulations;	YES	DEVIATION	N/A
(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 district municipality in which it is or will be undertaken	YES	DEVIATION	N/A
(e) using reasonable alternative methods, as agreed to by the Department, in those instances where a person is desirous of but unable to participate in the process due to— (i) illiteracy; (ii) disability; or (iii) any other disadvantage.	YES	DEVIATION	N/A
If you have indicated that "DEVIATION" applies to any of the above, then Section 2. below must be completed.			
NOTE: 2. The NEM: AQA and NEM:WA requires that a notice must be placed in at least two newspapers.			
If applicable, have/will an advertisement be placed in at least two newspapers?	YES	N/A	
If "NO", then an application for exemption from the requirement must be applied for.			

2. What other Public Participation has been or will be undertaken?
A public meeting will be convened at the Town Hall in George on the 15 August 2016 to invite oral and written submission from the public in particular the owners of houses in the suburbs adjacent to the proposed airstrip.

3. Provide a list of all the state departments that has been / will be consulted:		
List of State Depts.	Comment obtained (YES/NO)	If not, provide reasons
Eden District Municipality	NO	The DM did not attend the public meeting nor did it respond to the submission of the Draft EIR.
George Municipality	YES	A municipal representative attended the public meeting and proof of the support of the municipality is available in terms of the resolution passed by council to proceed with the development of the site.
Department of Water and Sanitation	NO	DWS requested comment from the Catchment Management Agency which comment is included in the PPP Report.
CapeNature	YES	Comment was received from CapeNature Landuse in George.
Heritage Western Cape	YES	An NID was submitted and no heritage impacts are expected.
Department of Agriculture	YES	Department of Agriculture support the establishment of the airstrip.
Civil Aviation Authority	NO	Correspondence with CAA shows that they will only provide inputs should the development be authorized.
Catchment Management Agency	YES	Comments were received and are contained in the PPP Report

Please note:

- A list of all the potential interested and affected parties, including the organs of State must be opened, maintained and made available to any person requesting access to the register, in writing.
- All comments of interested and affected parties on the Application Form and Additional Information must be recorded, responded to and included in the Comments and Responses Report attached as **Appendix F** to the report. The Comments and Responses Report must also include a description of the Public Participation Process followed.

- The minutes of any meetings held by the EAP with interested and affected parties and other role players which record the views of the participants must also be submitted as part of the public participation information to be attached to the additional information/Environmental Impact Report as **Appendix F**.
- Proof of all the notices given as indicated, as well as of notice to the interested and affected parties of the availability of the draft Environmental Impact Report/Additional Information must be submitted as part of the public participation information to be attached to the report as **Appendix F**.
- Please be advised that the draft Environmental Impact Report/Additional Information must **first** be submitted to the Department where after it must be made available to the public and all State Departments that administer laws relating to a matter affecting the environment for comment for a period of **30 days**. The applicant/EAP is required to inform this Department in writing upon submission of the draft Environmental Impact Report/Additional Information to the relevant State Departments. Upon receipt of this confirmation, this Department will in accordance with Section 24 O (2) & (3) of the NEMA inform the relevant State Departments of the commencement date of the 30 day commenting period. Please be further advised that a commenting period of **21 days** will apply to all requests for comment on any information, documentation or reports (including the final Environmental Impact Report/Additional Information) other than the draft report, unless an alternative commenting period is specified by this Department.

SECTION D: NEED AND DESIRABILITY

Please Note: Before completing this section, first consult this Department's *Guideline on Need and Desirability* (March 2013) available on the Department's website (<http://www.capegateway.gov.za/eadp>).

1. Was the activity permitted in terms of the property's land use rights at the time of commencement?	YES	NO	Please explain
The development of an emergency airstrip of this nature does not require a rezoning application and can be undertaken within the current Agriculture 1 zoning designation.			

2. Was the activity in line with the following?			
(a) Provincial Spatial Development Framework (PSDF)	YES	NO	Please explain
A community facility / amenity such as this would be aligned with numerous visions, aims, strategies and policy statements articulated in the PSDF.			
<p>It would be aligned to the stated requirement for spatial justice in that it is a development that promotes access to and use of land by communities. It would further support the planning aim for the area to achieve spatial efficiency through the promotion of mixed use of the land. Located, as it is, close to a major residential settlement which has established road infrastructure and access routes the proposed development facilitates improved access to services and facilities for the community. Having a facility such as this align with the stated the aim of having a quality environment and improved liveability of the urban area.</p> <p>The proposed development would additionally contribute to the aims articulated in the PSDF of "providing households with access to basic services in an environment that is healthy and safe by improving on the quality of the urban living environment".</p> <p>In Section 3.2.4. of the PSDF (2014) the Urban Space Economy finds that there is a strong correlation between the space economy and where people live, most people living in the urban centres with the bulk of the remainder of the provincial population in towns along the coast. In terms of dealing with the space economy a key spatial challenge is transforming human settlements to facilitate</p>			

access to services, amenities and facilities without compromising the provincial environmental assets.

Urban centres are a destination for people from declining rural economies of arid interior towns which will place greater demands on community services such as these. To meet these challenges the proposed development would be aligned with the stated provincial spatial policy of building the national competitive advantage (3.2.4.3 - 1) through appropriate public infrastructure, facility, amenity and social investment and the requirement that these are clearly delineated and defined (3.2.4.3 – 2). It would contribute to inter and intra-regional accessibility (3.3.3.3) as it is an investment in a public facility close to a major public transport route and within easy access of the settlement areas.

It would further contribute to the stated need for compact, mixed use and integrated settlements (3.3.4.3) by delivering public investment to meet the basic needs of a settlement. It is aligned with the need for facilities and social services by providing equitable easy access (3.3.5)

(b) Urban edge / Edge of Built environment for the area	YES	NO	Please explain
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NOT APPLICABLE - The proposed facility is located outside the urban edge

(c) Integrated Development Plan and Spatial Development Framework of the Local Municipality (e.g. would the approval of this application have compromised the integrity of the existing approved and credible municipal IDP and SDF?).	YES	NO	Please explain
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Integrated Development Plan – George Municipality

The proposed development would be aligned with the stated Goal 1 : Delivering a quality service in George and the Goal Priorities under this heading of “Plan infrastructure within the context of climate change challenges and increased disaster frequencies”. This is a clearly apparent alignment as the facility has the function as an infrastructural development to respond to disastrous uncontrolled fires. Additionally under this goal is the stated priority to “ensure the development of a desirable and quality living environment that fosters the safety and welfare of the community concerned, preserves the natural and cultural environment and does not impact negatively on existing rights”. In particular the fire fighting services would deliver on ensuring the safety and preserving of the natural and cultural environment that may be lost to wildfire in the absence of this service. It could also be motivated that the facility and its function as a fuel load reducing organisation through the Working of Fire Programme directly assists with catchment management and the delivery of measures to preserve and manage natural resources as articulated in the priority under his heading to “explore and implement measures to preserve resources and ensure sustainable development”.

The proposed development is directly aligned to the stated priority of “improving disaster management hotlines for all wards” Under Goal 3 : Keep George Safe & Clean the proposed facility is aligned with the priority of “providing an effective and efficient law enforcement and emergency service to all communities of George in our quest to protect and promote the fundamental rights of life” Very importantly it is fully aligned with the stated management action to decentralise specific functions i.e. Fire Brigade Services.

Spatial Development Framework – George Municipality

One of the stated challenges for the municipality in the SDF on the social front is the delivery of basic services to communities within the urban and rural areas of the Local Authority. Clearly this facility goes some way to addressing this challenge as it houses fire fighting services that are available to all within the region. It is directly aligned with another municipal challenge that of safeguarding the Environmental Integrity, maintaining the functionality of Critical Biodiversity Areas and mitigating impacts of climate change. The proposed facility is further aligned with the SDF Strategy in the following ways:

Strategy 1 : Grow George – “To promote investment in the service economy” this would be a public private partnership with the community based Southern Cape FPA delivering a fire fighting service to the population of the George Municipality and further afield.

Strategy 3 : Deliver Quality Services – “the delivery of services to all households” and the “protection of the municipal areas natural and cultural heritage”

In terms of addressing environmental weaknesses articulated in the SDF the proposed facility will have the capacity to directly address the stated increased risk of wild fire resulting from a changing climate, it has direct functions of reducing fire fuel loads through alien clearing, It directly responds to the need for improved disaster management.

(d) Approved Structure Plan of the Municipality	YES	NO	Please explain
NOT APPLICABLE - The proposed facility is located outside the urban edge			

(e) An Environmental Management Framework (EMF) adopted by the Department (e.g. Would the approval of this application have compromised the integrity of the existing environmental management priorities for the area and if so, can it be justified in terms of sustainability considerations?)	YES	NO	Please explain
NOT APPLICABLE			

(f) Any other Plans (e.g. Guide Plan)	YES	NO	Please explain
NOT APPLICABLE			

3. Was the land use (associated with the activity for which rectification is sought) considered within the timeframe intended by the existing approved Spatial Development Framework (SDF) agreed to by the relevant environmental authority (i.e. was the development in line with the projects and programmes identified as priorities within the relevant IDP)?	YES	NO	Please explain
The development of the proposed airstrip was not an identified project either in the Spatial Development Framework or the Integrated Development Plan of the George Municipality. It should however be noted that the site is preferable as it has existing water services available.			

4. Should development, or if applicable, expansion of the town/area concerned in terms of this land use (associated with the activity being applied for) have occurred here when activities commenced?	YES	NO	Please explain
The commencement of the development of the proposed airstrip was initiated after a council resolution taken by the George Municipal Council see Appendix F – Public Participation Report. The			

development was therefore endorsed by the local authority prior to commencement.

<p>5. Did the community/area need the activity and the associated land use concerned (was it a societal priority)? (This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate.)</p>	<p>YES</p>	<p>NO</p>	<p>Please explain</p>
<p>The commencement of the development of the airstrip for emergency aerial fire-fighting services related directly to the potential threat of runaway wild fires posed to social, economic and environmental assets. Wild fire is an ever present threat due to the fire driven nature of natural fynbos and the increased fuel loads resulting from invasion of natural vegetation by fire adapted alien invasive plants and the increase of the urban interface. Furthermore with large numbers of people present in and around an urban centre like George, the risk of accidental or intended ignition (i.e. arson) of an uncontrolled fire is high and fast response for aerial firefighting resources is much needed. At present there is no suitable airstrip that can be used as a base for aerial fire fighting services and to respond to wild fire that may threaten the urban and suburban areas in George in the future. As such it is our opinion that the proposed development was responding directly to a societal priority. The intention of developing a base and staging area to respond to the next wild fire that threatens George is therefore considered appropriate.</p>			

<p>6. Were the necessary services with adequate capacity available (at the time of commencement), or was additional capacity created to cater for the development? (Confirmation by the relevant Municipality in this regard must be attached to the Application Form / additional information as an appendix, where applicable.)</p>	<p>YES</p>	<p>NO</p>	<p>Please explain</p>
<p>The site is fully connected to the bulk services system of the George Municipality, see Appendix E – Permits & Licenses, letters of services capacity George Municipality. No increased service capacity is required to service the proposed airstrip. Importantly the site has sufficient water at the required pressure to fill the aircraft available making the site highly suitable for the establishment of a fire fighting base.</p>			

<p>7. Is/was this development provided for in the infrastructure planning of the municipality, and if not what was/will the implication be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)? (Comment by the relevant Municipality in this regard must be attached to the Application Form / additional information as an appendix, where applicable.)</p>	<p>YES</p>	<p>NO</p>	<p>Please explain</p>
<p>The municipality has resolved in a council meeting that the proposed development of an emergency airstrip is required and fully supported. See Appendix I - Other</p>			

<p>8. Was this project part of a national programme to address an issue of national concern or importance?</p>	<p>YES</p>	<p>NO</p>	<p>Please explain</p>
<p>NOT APPLICABLE</p>			

<p>9. Did location factors favour this land use (associated with the activity applied for) at this place? (This relates to the contextualisation of the land use on this site within its broader context.)</p>	<p>YES</p>	<p>NO</p>	<p>Please explain</p>
<p>Yes in terms of its locality in relation to the other airstrips within the SCFPA. It is the only centrally located site that can accommodate an airstrip able to service the specialised fire fighting aircraft which are able to respond within the critical response time for effective deployment of an aerial fire fighting resource at a wild fire. Currently these aircraft cannot be deployed from existing airstrips within this time. For an indication of the spatial distribution of these airstrips within the domain of the SCFPA please refer to the figure below. Additionally the site has high pressure water available making it highly suitable for use as a base for aerial support to fires.</p>			



10. How did/does the activity or the land use associated with the activity applied for, impact on sensitive natural and cultural areas (built and rural/natural environment)?	YES	NO	Please explain
<p>Cultural & Heritage Areas</p> <p>No important cultural or heritage resources were identified for the property, thus no impacts are apparent. See Appendix G – Specialist Reports - NID and Appendix F – Public Participation Report</p>			
<p>Sensitive Natural Habitats and Ecosystems</p> <p>No important or sensitive species, habitats or ecosystems are identified for the property, thus no impacts are apparent for the site, see Appendix G – Specialist Reports - Botanist Report.</p>			

11. How did/does the development impact on people's health and wellbeing (e.g. in terms of noise, odours, visual character and sense of place, etc)?	YES	NO	Please explain
<p>In our opinion, the site, if fully developed will not alter the visual character even though it is an additive development. The opinion is held due to the fact that there is existing and similar building infrastructure already on site and as can be seen from Appendix B – Site Plan, the proposed new buildings will be located in close proximity to these buildings. Furthermore the site is well screened by high trees and is only partially visible from some points within the adjacent residential area.</p> <p>The primary impact posed by this development would relate to an altered sense of place due to the noise created by aircraft departing and landing at the airstrip. To this end consultation with the Southern Cape Fire Protection Association was undertaken to determine the number of flying hours logged by emergency air support over the last year fighting wildfires. This was undertaken to gain an understanding of the potential number of flights to and from the proposed airstrip. The findings of this consultation were that a total of five hours of noise was created between June 2015 and July 2016 half of which would relate to aircraft on the ground, thus only 2.5 hours of flights from the airstrip over the period of a year.</p> <p>This consultation revealed the following. Firstly the proposed airstrip will only be used as a staging area. Thus if any fires are burning in areas other than the direct surrounds of the town of George or within an effective distance from the airstrip then the air support will leave the airstrip and use outlying or better placed airstrips for the period of time that it takes to bring the fire under control. Only in an instance where a fire directly threatens the town of George or one that is within the</p>			

effective response area for air support from the airstrip will the aircraft take off and land from this airstrip. Finally air support is only deployed in the SCFPA during the high risk fire season which comprises approximately five months of the year. In other words the potential for disturbing the sense of place must be seen in the light of eight months of the year where the airstrip will not be utilised.

12. Did/does the proposed activity or the land use associated with the activity applied for, result in unacceptable opportunity costs?	YES	NO	Please explain
<p>In this instance the opportunity would be defined by the availability of an emergency airstrip for combatting wildfire within an effective distance for effective air support to ground based fire fighting resources fighting fires that could threaten infrastructure and livelihoods in areas within and surrounding the town of George and up to 30 minutes flight time from the airstrip. The cost in this instance would relate to the altered sense of place for residents of George in particular those in the adjacent residential area. The cost would be dependent on the significance of the altered sense of place and thus aligned with the number of hours of disturbance caused by aircraft leaving and returning to the airstrip. The amount of flights in turn depend on the locality of the fire i.e. fires outside the effective response time from this airstrip will use more strategically placed airstrips, the size of the fire and the hours required to bring the fire under control. Finally as above one should consider that air support will only be used during approximately five months of the year. Considering the estimates generated from flight time data over the last five years by the SCFPA, as described above we consider the opportunity for effective fire fighting for the broader community to outweigh the cost in terms of an altered sense of place. Very importantly it must be noted that this airstrip will only be used for fire fighting services and no commercial or civil aircraft will be allowed to use the facility.</p>			

13. What were the cumulative impacts (positive and negative) of the land use associated with the activity applied for?	YES	NO	Please explain
<p>There are a number of positive cumulative impacts. First and most obviously would be the cumulative impact of protecting valuable and important infrastructure over time and the prevention of the loss of life, livelihood or injury to people. Additionally as a well-placed airstrip within the effective response time from a potential wildfire a cumulative decrease in the risk posed by fires would result due to the fact that newly ignited fires could be suppressed well before they reached a size able to pose the threats mentioned above. Fires will remain as a threat as fynbos is a fire driven ecosystem evolved to exist and require fire for its perpetuation. As such the nature of the ecosystem will provide for a requirement for fire fighting services thus sustainable employment for all staff associated with the combatting of fire, both administrative, management, ground and air support staff. Furthermore from an ecological perspective purposefully or accidentally ignited wildfire has been shown to be a threat to biodiversity if these wildfires burn through vegetation to regularly. The effective combatting and reduction in fire size (spatial extent) will cumulatively result in a landscape with a mosaic of different veld ages which on one hand does decrease the potential for mega fires (as young veld will not burn as readily as old veld) and for the preservation of the diversity of the natural ecosystems as fire driven species will have the opportunity to complete life cycles. Finally fire frequency increases are an expected consequence of global climate change. The effective cumulative response over</p>			

time for the aspects mentioned above will therefore become increasingly important. Finally cumulatively the activity would provide sustainable employment for people involved in the combatting of wildfire thus the provision of sustainable livelihoods to people over time.

Negative cumulative impacts would relate to increased loss of life and increased levels of damage to infrastructure and livelihoods over time. Additionally with more frequent fires there is a cumulative result of loss of biodiversity. Additionally at site scales there is the potential for loss of fertile soils due to erosion from denuded areas and hydrology associated with the operation of an airstrip and additional cumulative impacts on sediment loads within drainage lines and river tributaries. At scales directly adjacent to the site cumulative impacts resulting from the use of the airstrip, in particular if the airstrip is used continuously, would relate to a loss of sense of place resulting from elevated noise levels being experienced by the residents of the adjacent residential areas.

14. Is/was the development the best practicable environmental option for this land/site?	YES	NO	Please explain
<p>The site has been lying fallow for a number of years after discontinuation of the forestry operation. Primarily this is the only site that is strategically well placed that is able to accommodate an airstrip of this nature, within the effective response time for aerial support when combatting wildfires. The site is situated outside the urban edge as thus not earmarked for development in terms of the expansion of the city of George at this time. As mentioned above the site has high pressure water available making it highly suitable for the proposed activity.</p>			

15. What are/were the benefits to society in general and to the local communities?	Please explain
<p>Wildfire is a persistent and ever present threat to human life and infrastructure within the Fynbos Biome, this because the ecosystems and the plant communities have evolved to become fire adapted. As a general rule with Fynbos there is a correlation between age and fire risk. The older it gets the higher the standing biomass per unit area and the greater the risk of an uncontrolled fire. This is borne out by the extensive, costly and damaging fires that have burned thousands of hectares of natural vegetation in the biome, with resulting loss of human life, livelihoods and valuable infrastructure.</p> <p>The rapid response by aerial firefighting resources after the accidental or intended ignition of a fire greatly reduces the cost of fighting a fire and curtails the potential damage caused by a fire.</p> <p>Response times in turn require well planned and well placed staging areas or bases with the required specialist equipment to combat the spread of an uncontrolled fire. Air support has been instrumental as a quick time response strategy to control a newly ignited wildfire and as to support ground based fire fighting efforts when wildfires threaten valuable infrastructure or human life.</p> <p>The proposed site is deemed to be a well-placed site for the establishment of such a base and would be of benefit to local communities and the public in general wherever they are located in the</p>	

Southern Cape should their lives, homes or businesses be threatened by fire. Additionally it must be noted that natural vegetation while being fire adapted should not burn too frequently as this results in the loss of biodiversity over time.

Fire fighting services are of direct benefit to society in general through reducing impacts of too frequent fire with the consequent maintenance of biodiversity and through that ecosystem function and the services that those diverse ecosystems provide to humanity.

16. Any other need and desirability considerations related to the activity?	Please explain
NONE at present	

17. Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA were taken into account:

1. to promote the application of appropriate environmental management tools in order to ensure the integrated environmental management of activities.

This is addressed through the provision of an Environmental Management Programme (EMPr) with this Basic Assessment Report where the roles and responsibilities of the applicant and the Environmental Control Officer (ECO) are articulated in detail to ensure that the development of the graveyard happens in an integrated and well managed fashion.

2 (a) promote the integration of the principles of environmental management set out in section 2 into the making of all decisions which may have a significant effect on the environment;

Ensuring that the recommendations for mitigation of environmental impact contained within this report under Section F adhere to the principles of a precautionary approach that aims first to avoid environmental impact and secondly where impacts are unavoidable to mitigate environmental impact for an activity that will have significant impact on the environment. To consider the opportunity cost in proceeding with the development above. Furthermore that these mitigatory measures are made practicably implementable in the EMPr and monitored to ensure compliance. Finally to recognise in the recommendations supplied that the environment is interlinked and to give adequate consideration to these linkages and how they proposed development may impact over the short term but also cumulatively over the long term.

(b) identify, predict and evaluate the actual and potential impact on the environment, socioeconomic conditions and cultural heritage, the risks and consequences and alternatives and options for mitigation of activities, with a view to minimising negative impacts, maximising benefits, and promoting compliance with the principles of environmental management set out in section 2;

The identification of potential impacts is contained under Section F of this report. The evaluation of the identified impact follows a process of predicting the actual or potential impact in terms of sustainability criteria for each of the alternatives being considered. Thereafter the impact is quantified in terms of its severity in the absence of any mitigatory measures to avoid an impact, mitigation measures are then proposed that would or could reduce the impacts to within acceptable levels, in instances where environmental impacts cannot be suitably mitigated to weigh the opportunity costs of proceeding against those of the potential benefit to people and the economy, to evaluate the linkages that exist between identified impact and determine if these linkages have the potential to amplify impact through synergies that may exist between them and after this process always follow the option that delivers the best possible benefit for the least possible impact. In instances where the cost significantly outweighs the opportunity to consider a recommendation for not proceeding with the proposed development.

(c) ensure that the effects of activities on the environment receive adequate consideration before actions are taken in connection with them;

This is addressed through the process of identifying and evaluating environmental impacts either individually or through complimentary associations that may amplify the severity of impacts. Proposing mitigatory measures and translating those mitigatory measures into practically implementable actions within an EMPr and incorporating potential offsets that may contribute dealing with the loss of biodiversity attendant to the proposed development.

(d) ensure adequate and appropriate opportunity for public participation in decisions that may affect the environment;

To follow the guidelines for public participation in accordance with the requirements of NEMA legislation, to honour and reflect all reasonable objections raised by key stakeholders and other interested and affected parties, to propose solutions to address those concerns and present them for further comment in the BAR. To resolve all reasonable objections as a matter of process.

(e) ensure the consideration of environmental attributes in management and decision-making which may have a significant effect on the environment; and

This is addressed through the provision of an EMPr that must be implemented as part of the operational and maintenance phase of the development.

(f) identify and employ the modes of environmental management best suited to ensuring that a particular activity is pursued in accordance with the principles of environmental management set out in section 2.

This is addressed through the provision of an EMPr that must be implemented as part of the operational and maintenance phase of the development.

18. Please describe how the principles of environmental management as set out in section 2 of NEMA were taken into account:

Section 2 of NEMA is addressed through the involvement of all key government stakeholders in the public participation process to allow time and opportunity for them to adequately comment on a proposal and act on their mandate to respect, promote and protect people's social, developmental, physical, cultural and economic rights. The requirement is further addressed through the engagement with I&AP's as part of the public participation process, and the provision of an opportunity for all I&AP's the provide input into the assessment process and respond to all reasonable comments on an individual basis. Responses and decisions made must and do take cognisance of the individual concerns of I&AP's. Adherence to these principles are addressed through the execution of the Guidelines on Public Participation circulated by DEA&DP in August 2010. Consultation and consideration of the planning documentation of the DEA&DP, CapeNature, SANBI and the Local Authorities are also included to address this principle.

As this assessment rests on the three tenets of sustainability adequate consideration is given to the interaction between the environment that forms the basis for the delivery of goods and services to the economic sector which in turn delivers social benefit and livelihoods to people. In particular that the process of assessment attempts first to avoid negative environmental impact (including pollution, disturbance to the landscape, impacts on cultural heritage, the generation of waste and its disposal) and if impacts are unavoidable to mitigate these impacts or remedied. Here the assessment would make use of the guideline on needs and desirability of the proposed development to assess the cost/benefit equation for the proposed development and through the evaluation of the different alternatives available to the proponent and through this process the determination of the best possible practically implementable alternative.

The assessment will also address the type of resources being used whether renewable or non-renewable and assess the resource availability in terms of equitable distribution of resource allocation or to ensure that every effort is made to ensure that the demand on the resource does not exceed its ability to regenerate, as is the case with ecologically based environmental goods and services. Here too consideration will be given to the improvement of resource use efficiencies. In particular investigate the conservation status of the particular ecosystem or special habitat that may be impacted by the development by investigating the National Spatial Biodiversity Assessment, Biodiversity Sector Plan for the local authority, Fine-scale Conservation Plans and the listed ecosystems in Government Notice 1477 of 2009. Here also consideration is given to the DEA&DP Guideline on Alternatives for Aug 2010. To ensure that a precautionary approach is followed at all times with due consideration to knowledge gaps and assumptions that are made in relation to the proposed development. In instances where impacts are anticipated to ensure that these are mitigated or remedied to a point that they do not infringe on basic human rights.

Furthermore this section of NEMA is addressed through the provision of an EMPr that aims to provide an integrated environmental management programme that recognises the linkages between environmental elements and puts forward the most applicable and practically reasonable means to achieve the objectives of the EMPr. In particular the EMPr must ensure environmental health and safety, not only to the broader community but also to workers involved in the execution of the activity to ensure that their rights are not ignored. As and where necessary include environmental education to skill those responsible for the implementation of the EMPr to undertake the required training to fully dispense with their responsibility in terms of requirements of the EMPr. The assessment addresses issues that extend well beyond the borders of the property concerned to ensure that environmental impacts resulting from a development are not disproportionately felt by a person while always ensuring that equitable access to environmental resources to meet basic human needs is ensured for all persons

8. SOCIO-ECONOMIC CONTEXT

8.1 SOCIO-ECONOMIC CONTEXT (PRE-COMMENCEMENT)

Describe the pre-commencement social and economic characteristics of the community in order to provide baseline information.

The population size of George is estimated at 199 064 (2013) individuals which is 33.9% of the District population. The population age distribution is as follows – Children (Aged between 0-14 years) comprise 25.9 %, working age (15-64 years) 67.2 % and the aged (>65 years) 6.8 %. The annual population growth is estimated at 3.3 % thus the current population is estimated at 206 999 in 2016. The 2013 estimate of Regional Gross Domestic Product was R 6.149 Billion which is 30.2 % of the Districts Economy. The unemployment rate of 29.8% is well below the South African figure of 41.6 in 2011. The services industry is the largest job sector in the municipality. Indicators of development for the George Municipality are: Literacy Rate (83.4%), Poverty Rate (20.4%), Human Development Index (0.71) and Gini Coefficient (0.56). Twenty health care facilities are located in George including nine fixed clinics, two community day centres, two satellite and four mobile clinics. The uptake of Antiretroviral treatment has increased to 2386 of which 648 are in George. The full immunisation rate for preventable diseases is estimated at 87.6% for the George Municipality. Malnourished children numbered 39 in the George Municipality. The maternal mortality rate is extremely high with 214 deaths per 100 000 of the population. There were 266 births to teenage mothers. There were 1800 terminations / 100 000 of the population. The percentage of people living below the poverty line was estimated at 20.4% of the population in 2010. Per capita income for George is at R 30 157.00 per annum well below the provincial average of R 43 557.00 per annum. In 2011 the largest portion of households in George earned between 9 601 and R 307 600 per annum. Drug related crime and residential burglaries are on the increase while driving under the influence of alcohol and drugs has shown a steady decrease over time. Murder and sexual crimes have remained relatively unchanged. Access to potable water is at 95.2 % (2013) and an estimated 85.1 % of households in George had access to basic sanitation services and 86.5% of households have their refuse removed. Access to electricity is estimated at 91 % in George Municipality and an estimated 84.3 % of the population is accommodated in formal housing.

8.2 SOCIO-ECONOMIC CONTEXT (POST-COMMENCEMENT)

Describe the post commencement social and economic characteristics of the community in order to determine any change. Where differences between pre- and post-commencement exist, state which are as a result of the activity(ies) for which rectification is being applied for.

The activity is at such a small scale and would impact so few people that significant socio economic impacts from the proposed development of the emergency services airstrip would not be significant. The real social benefit for the establishment of the facility would be the protection of important environmental / biodiversity, infrastructural and human lives. This has been addressed under the motivation for the needs and desirability of the proposed activity above.

9. HISTORICAL AND CULTURAL ASPECTS

Please note that every application for Environmental Authorisation including an application for a Waste Management activities, must include, where applicable the investigation, assessment and evaluation of the impact of any proposed listed or specified activity on any national estate referred to in section 3(2) of the National Heritage Resources Act, 1999 (Act No. 25 of 1999), excluding the national estate contemplated in section 3(2)(i)(vi) and (vii) of that Act.

1. Please be advised that if section 38 of the National Heritage Resources Act, 1999 (Act No. 25 of 1999), is applicable to your development, then you are requested to furnish this Department with written comment from Heritage Western Cape as part of your public participation process.
2. Section 38 of the Act states as follows: "38. (1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorised as-
 - (a) the construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;
 - (b) the construction of a bridge or similar structure exceeding 50m in length;
 - (c) any development or other activity which will change the character of a site-
 - (i) exceeding 5 000 m² in extent; or
 - (ii) involving three or more existing erven or subdivisions thereof; or
 - (iii) involving three or more erven or divisions thereof which have been consolidated within the past five years;
 or
 - (iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;
 - (d) the re-zoning of a site exceeding 10 000 m² in extent; or
 - (e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority,
 must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development."
3. The impact on any national estate referred to in section 3(2), excluding the national estate contemplated in section 3(2)(i)(vi) and (vii), of the National Heritage Resources Act, 1999 (Act No. 25 of 1999), must also be investigated, assessed and evaluated. Section 3(2) states as follows: "3(2) Without limiting the generality of subsection (1), the national estate may include—
 - (a) places, buildings, structures and equipment of cultural significance;
 - (b) places to which oral traditions are attached or which are associated with living heritage;
 - (c) historical settlements and townscapes;
 - (d) landscapes and natural features of cultural significance;
 - (e) geological sites of scientific or cultural importance;
 - (f) archaeological and palaeontological sites;
 - (g) graves and burial grounds, including—
 - (i) ancestral graves;
 - (ii) royal graves and graves of traditional leaders;
 - (iii) graves of victims of conflict;
 - (iv) graves of individuals designated by the Minister by notice in the Gazette;
 - (v) historical graves and cemeteries; and
 - (vi) other human remains which are not covered in terms of the Human Tissue Act, 1983 (Act No. 65 of 1983);
 - (h) sites of significance relating to the history of slavery in South Africa;
 - (i) movable objects, including—
 - (i) objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects and material, meteorites and rare geological specimens;
 - (ii) objects to which oral traditions are attached or which are associated with living heritage;
 - (iii) ethnographic art and objects;
 - (iv) military objects;
 - (v) objects of decorative or fine art;
 - (vi) objects of scientific or technological interest; and
 - (vii) books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in section 1(xiv) of the National Archives of South Africa Act, 1996 (Act No. 43 of 1996)."

Does the activity constitute the undertaking of any of the categories of development set out in section 38(1) of the National Heritage Resources Act?		YES	NO
		UNCERTAIN	
If YES, explain:	S38(1)(a) Construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier over 300m in length.		
	S38(1)(d) Rezoning of a site exceeding 10 000m ² in extent.		
	S38(1)(c) Any development or activity that will change the character of a site – (i) exceeding 5 000m ² in extent;		
Did/does the development impact on any national estate referred to in section 3(2) of the National Heritage Resources Act, 1999?		YES	NO
		UNCERTAIN	
If YES, explain:			
Was any building or structure older than 60 years affected in any way?		YES	NO
			UNCERTAIN

If YES, explain:	

***** PLEASE NOTE THE NID SUBMISSION TO HERITAGE WESTERN CAPE WAS CONCLUDED AND THE RoD FOUND THAT NO HERITAGE IMPACTS ARE EXPECTED OR RESULTED FROM THE DEVELOPMENT – see Appendix XXXX – RoD from Heritage Western Cape.**

Please Note: If uncertain, the Department may request that specialist input be provided.

SECTION E: ALTERNATIVES

Please Note: Before completing this section, first consult this Department's *Guideline on Alternatives* (March 2013) available on the Department's website (<http://www.capegateway.gov.za/eadp>).

"Alternatives", in relation to a activity, means different means of meeting the general purposes and requirements of the activity, which may include alternatives to –

- (a) the property on which, or location where, it is to undertake the activity/the activity was undertaken;
- (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.

The NEMA prescribes that the procedures for the investigation, assessment and communication of the (potential) consequences or impacts of activities on the environment must, *inter alia*, with respect to every application for environmental authorisation –

- ensure that the general objectives of integrated environmental management laid down in NEMA and the National Environmental Management Principles set out in NEMA are taken into account; and (where applicable)
- include an investigation of the potential consequences or impacts of the alternatives to the activity on the environment and assessment of the significance of those potential consequences or impacts, including the option of not implementing the activity.

The general objective of integrated environmental management is, *inter alia*, to "identify, predict and evaluate the actual and potential impact on the environment, socio-economic conditions and cultural heritage, the risks and consequences and alternatives and options for mitigation of activities, with a view to minimising negative impacts, maximising benefits, and promoting compliance with the principles of environmental management" set out in NEMA.

1. In the sections below, please provide a description of any considered alternatives and alternatives that were found to be feasible and reasonable.

Please note:

- Detailed written proof of the investigation of alternatives must be provided. If no reasonable or feasible alternative exists, a motivation must be provided.
- Alternatives considered for a Section 24G application are used to determine if the development was the best practicable alternative (environmentally, socially, economically) for the property.

(a) Property and location/site alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts, or detailed motivation if no reasonable or feasible alternatives exist:

No property alternatives are available as this site is the only one with the correct strategic placement and the correct topography owned by the George Municipality that is able to accommodate an emergency airstrip for the combatting of accidentally or purposefully ignited wild fires. The site is additionally the only site that has existing water delivered at high pressure making the site highly suitable for the proposed activity.

(b) Activity alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts, or detailed motivation if no reasonable or feasible alternatives exist:

As effective combatting of wildfire requires support from aerial resources no alternative activity is available. The aircraft and associated technologies are particularly designed and developed to fulfil this purpose.

(c) Design or layout alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts, or detailed motivation if no reasonable or feasible alternatives exist:

The layout of the proposed runway is limited by the availability of flat ground over a sufficient enough distance to provide for the safe take off and landing of emergency fire fighting aircraft. The direction of the runway is optimal in terms of safely for taking off and landing of the specialised aircraft used for this activity. The ground to the south, west and east are not suitable due to becoming incised by drainage lines. The fact that existing infrastructure and services are already laid on to the top section of the proposed runway would mean that locating this infrastructure at any other position on the property would result in greater impacts as access and associated services would need to be extended to that point. Additionally building infrastructure would be located away from the existing building node on the property thus increasing the additive impact from a visual perspective. For these reasons we consider the current site layout to be the preferred and most practical one for the proposed development.

(d) Technology alternatives (e.g. to reduce resource demand and resource use efficiency) to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts or detailed motivation if no reasonable or feasible alternatives exist:

As noted above aerial fire fighting requires highly specialised aircraft and associated technology together with highly skilled and trained pilots. The resources that would be deployed for this activity constitute the most suitable technology available to the SCFPA at this juncture. There are well established protocols for the deployment of these expensive resources to ensure that these resources are used only when required and deployed with maximum efficiency.

(e) Operational alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts, or detailed motivation if no reasonable or feasible alternatives exist:

There are well established operational protocols for the deployment of these expensive resources to ensure that they are used only when required and deployed with maximum efficiency. The sighting of the proposed airstrip is such that it can respond in the most effective operational way to an incidence of wildfire within the effective deployment area around the airstrip. Other operational protocols in this instance would require that the airstrip only be used for the purpose for which it was developed i.e. that it is not used for any other aircraft other than those for emergency fire fighting, that aircraft are deployed to other airstrips more strategically placed to combat fires outside the area that is effectively served by this proposed airstrip. That operations are restricted to daylight hours only. That no unnecessary flights are undertaken other than those for maintenance and operations, that the flight paths for taking off and landing take cognisance of the residential areas and as far as practically possible avoid flying over these areas. That refuelling and filling aircraft with water is undertaken in the shortest time possible when fighting a fire from this site.

(f) The option of ceasing the activity (the refusal of the activity(ies) and/or rehabilitation of the site):

As the site is required for the effective combatting of wildfire in this portion of the SCFPA domain ceasing the activity and/or closing the airstrip would have the result of more costly and ineffective combatting of wildfire. This would result in higher risk to lives, livelihood and expensive and essential infrastructure. Additionally it would result in higher risk of larger fires as suppression initiatives would be slower to get to the scene of the fire. Ecologically this would translate into more uniform vegetation types over larger areas i.e. the loss of age diversity in the ecosystem, this would synergistically increase the risk of larger fires (i.e. fires burning over greater areas) and would be an increasing risk factor for more frequent fires and the loss of biodiversity (fire adapted species unable to complete their lifecycles) due to a short fire return frequency. This in turn would alter the effectiveness of mitigation measures for predicted impacts on biodiversity resulting from climate change as noted above. On the positive side would be the retention of the sense of place for residents adjacent to the proposed airstrip as the impacts associated with the noise of departing and arriving aircraft would no longer be there. At this juncture the opportunity cost would appear to favour the development.

(g) Other alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts, or detailed motivation if no reasonable or feasible alternatives exist:

NONE

(h) Please provide a summary of the alternatives investigated and the outcomes of such investigation:

Please note: If no feasible and reasonable alternatives exist, the description and proof of the investigation of alternatives, together with motivation of why no feasible or reasonable alternatives exist, must be provided.

In our consultation with the SCFPA it appears that no other property alternatives are available as this is the only strategically placed property suitable for the proposed activity. There are no viable and current alternatives to aerial fire fighting that are available to the applicant. Design and layout alternatives are limited by the availability of level ground over a required distance on which aircraft can safely take off and land, the compass direction of the runway is aligned with the availability of level land, the additional built infrastructure is located close to a developed node and any other layout would inevitably result in greater impact from the buildings and access and services infrastructure. The current layout therefore appears to be the most viable and practical option. The proponent is using the best available technology (in the form of specialised aircraft) for combatting fires, technology alternatives are therefore not available. Operational alternatives are available and possible to mitigate significant impact on the sense of place of the adjacent land users. Ceasing or rehabilitating the site carries an unfavourable opportunity cost in our opinion

SECTION F: PRELIMINARY IMPACT ASSESSMENT, MANAGEMENT, MITIGATION AND MONITORING MEASURES

Please note, the impacts identified below refer to general impacts commonly associated with development activities. The list below is not exhaustive and may need to be supplemented. Where required, please append the information on any additional impacts to this application.

Please note: The information in this section must be duplicated for all the feasible and reasonable alternatives (where relevant).

1. PLEASE DESCRIBE THE MANNER IN WHICH THE DEVELOPMENT HAS IMPACTED ON THE FOLLOWING ASPECTS:

(a) Geographical and physical aspects:

The activity has had an impact on the geophysical environment. During the undertaking of the activity the site required landscaping, levelling and compaction of the airstrip surface these activities would have impacted on the upper soil layers on the site. Equally trenching for storm water control has had a similar impact. The disturbance in terms of the airstrip however is limited to the top 4- cm of soil and those along the linear disturbance of the storm water trenches to an approximate depth of 0.5 metres.

(b) Biological aspects:

Has the development impacted on critical biodiversity areas (CBAs) or ecological support areas (CSAs)?	YES	NO
If yes, please describe:		
NO CBA's are indicated for this site.		
Has the development impacted on terrestrial vegetation, or aquatic ecosystems (wetlands, estuaries or the coastline)?	YES	NO
If yes, please describe:		
<p>The activity has impacted on terrestrial vegetation. The site was covered with a dense stand of invasive alien trees, primarily Black Wattle and Pines. These have been cleared and removed. Indigenous vegetation that remained in this totally transformed site which was used for forestry production is at best characterised by a highly disturbed ecosystems as reported in the specialist botanist report. The opinion of the specialist was that no impacts on biodiversity pattern or process resulted from or will result from the development of the site as an airstrip. Although there are areas that are seasonally wet, no sites for important aquatic ecosystems have been identified for the site. The airstrip is located along the top of a plain with the ground falling away to the east and west of the site i.e. the site topography is not conducive for the formation of permanent wetlands or other aquatic habitat with standing water.</p> <p>On the positive side the airstrip has resulted in the clearance of alien invasive vegetation and the establishment of a firebreak between the adjacent urban areas of George and potential future fires that may cause damage to residential properties.</p>		
Has the development impacted on any populations of threatened plant or animal species, and/or on any habitat that may contain a unique signature of plant or animal species?	YES	NO
If yes, please describe:		
As a site that has been completely transformed and historically heavily impacted and the findings of the specialist botanist conclude that no threatened plant or animal species should be impacted by the further development of the airstrip.		
Please describe the manner in which any other biological aspects were impacted:		

The biological impacts are primarily related to the destruction of the structure of the soil profile, micro habitats in the disturbed soils profile on site and on a positive note the clearance of vegetation cover, in this instance as stated primarily declared alien invasive plants.

(c) Socio-Economic aspects:

What was the capital value of the activity on completion?	The municipality will be appointing a private contractor for the development of the site formal quotations will need to be sought should the proposed development be accepted.
What is the (expected) yearly income or contribution to the economy that is/will be generated by or as a result of the activity?	NONE
Has/will the activity contributed to service infrastructure?	YES NO
How many new employment opportunities were/will be created in the construction phase of the activity?	NONE The facility has already completed the appointment of the staff who will be using it should it be approved.
What was the value of the employment opportunities during the construction phase?	The municipality will be appointing a private contractor for the development of the site formal quotations and work plans will need to be sought should the proposed development be accepted.
What percentage of this accrued to previously disadvantaged individuals?	The municipality will be appointing a private contractor for the development of the site formal quotations and work plans will need to be sought should the proposed development be accepted.
How was this ensured and monitored (please explain):	
How many permanent new employment opportunities were/will be created during the operational phase of the activity?	
What is the current/expected value of the employment opportunities during the first 10 years?	R
What percentage of this accrued/will accrue to previously disadvantaged individuals?	%
How was/will this be ensured and monitored (please explain):	
Any other information related to the manner in which the socio-economic aspects was/will be impacted:	
The facility will be used as a base one of many airstrips throughout the Southern Cape to house aircraft and other fire fighting services including pilots and ground personnel. Much of the funding for these staff come directly from National Government through the Working on Fire Programme. The site itself will therefore be municipally owned service infrastructure to house services funded through national government.	

(d) Cultural and historic aspects:

There was the potential for impacts on cultural and historical resources, a heritage specialist was appointed to assess the impacts of the proposed facility on these resources and an NID was submitted to Heritage Western Cape for a decision as part of the assessment process. This decision reflects that no impacts resulted from the development and no further impacts are expected should the development proceed, see also **Appendix E – RoD from Heritage Western Cape**

2. WASTE AND EMISSIONS

(a) Waste (including effluent) management

Did the activity produce waste (including rubble) during the construction phase?	YES	NO
If yes, indicate the types of waste (actual type of waste, e.g. oil, and whether hazardous or not) and estimated quantity per type?	M ³	
N/A		

Does the activity produce waste during its operational phase?	YES	NO
If yes, indicate the types of waste (actual type of waste, e.g. oil, and whether hazardous or not) and estimated quantity per type?	When the site is being used as a base then some general domestic waste will be generated on a daily basis approx. 0.5 m ³	

Where and how was/will the waste be treated / disposed of (describe)?		
This is a municipal property as such all waste will feed into the established municipal waste treatment system for general waste.		
Has the municipality or relevant authority confirmed that sufficient capacity exist for treating / disposing of the waste (to be) generated by this activity(ies)? If yes, provide written confirmation from Municipality or relevant authority	YES	NO
Does/will the activity produce waste that is/will be treated and/or disposed of at another facility other than into a municipal waste stream?	YES	NO
If yes, has this facility confirmed that sufficient capacity exist for treating / disposing of the waste (to be) generated by this activity(ies)? Provide written confirmation from the facility and provide the following particulars of the facility:	N/A	N/A
Does the facility have an operating license? (If yes, please attach a copy of the license.)	N/A	N/A
Facility name: George Municipal Waste Treatment Facility		
Contact person: Trevor Botha - George Municipal Manager		
Postal address: PO Box 19, George		
	Postal code: 6530	
Telephone: 044 801 9433	Cell: 076 777 6655	
E-mail: trevor@george.org.za	Fax: 044 801 9105	

Describe the measures that were/will be taken to reduce, reuse or recycle waste:
As a municipal property the site would be serviced by the municipality of George as such it would conform to the municipal measures taken to reduce, re-use and recycle waste.

(b) Emissions into the atmosphere

Does/will the activity produce emissions that will be disposed of into the atmosphere?	YES	NO
If yes, does it require approval in terms of relevant legislation?	YES	NO
Describe the emissions in terms of type and concentration and how it is/will be treated/mitigated:		

N/A

3. WATER USE

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

<input checked="" type="checkbox"/> Municipal	<input type="checkbox"/> Water board	<input type="checkbox"/> Groundwater	<input type="checkbox"/> River, Stream, Dam or Lake	<input type="checkbox"/> Other	<input type="checkbox"/> The activity did/does/will not use water
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If water was extracted from a groundwater source, river, stream, dam, lake or any other natural feature, please indicate the volume that was extracted per month: N/A

Please provide proof of assurance of water supply (eg. Letter of confirmation from municipality / water user associations, yield of borehole)

Did/does the activity require a water use permit / license from DWA? YES NO

If yes, please submit a certified copy of the water use permit/license or submit the necessary application to Department of Water Affairs and attach proof thereof to this application, whichever is applicable.

Describe the measures that were/ will be taken to reduce water demand, and measures to reuse or recycle water:

As a municipal property the site would be serviced by the municipality of George as such it would conform to the municipal measures taken to reduce water demand and to, re-use and recycle water.

4. POWER SUPPLY

Please indicate the source of power supply eg. Municipality / Eskom / Renewable energy source

The site is connected to the municipal electrical services

If power supply is not available, where will power be sourced from?
N/A

5. ENERGY EFFICIENCY

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

In a situation such as this energy efficiency can be promoted by the use of low energy light bulbs, turning off electrical equipment and lights when not in use and the use of solar heating for new geysers. The facility will only be operational during the day or in an instance where the urban areas of George and surrounds are threatened by wild fire.

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

As above the opportunity with expansion may provide for reduced energy demand through the installation of solar geysers for hot water on the site.

6. DESCRIPTION AND ASSESSMENT OF THE SIGNIFICANCE OF IMPACTS PRIOR TO AND AFTER MITIGATION

Please note:

- While sections are provided for impacts on certain aspects of the environment and certain impacts, the sections should also be copied and completed for all other impacts.
- Mitigation measures that were implemented and mitigation measures that are to be implemented should be clearly distinguished.

(a) Impacts that resulted from the planning, design and construction phases (briefly describe and compare the impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that occurred as a result of the planning, design and construction phases.

Impacts on geographical and physical aspects:	
Nature of impact:	Negative - If poorly managed cumulative impacts could result in the increase of sheet and gully erosion which over time could conceivably extend over a greater area and cause more significant impacts. This is concomitant with the loss of topsoil and the loss of soils fertility which will hamper rehabilitation if not mitigated. No impacts are associated with the underlying geology of the area.
Extent and duration of impact:	The extent of the erosion would be local in nature and if no effort is made to mitigate would continue for many years to come.
Probability of occurrence:	If mitigation measures are implemented then the probability of impacts would be low.
Degree to which the impact can be reversed:	There are established corrective management interventions of halting sheet and gully erosion and rehabilitating the site. The reversal of impacts is possible but would take a long time to achieve.
Degree to which the impact may cause irreplaceable loss of resources:	This area is characterised by a temperate climate with medium to high precipitation at the regional perspective. While soil building processes function over very long time scales they would be relatively faster in this climatic zone than in more arid areas. The topsoil could therefore conceivably be rebuilt over time and the resource replaced but this would require a very extended period of time to achieve. A general rule of thumb is that 1.5 cm of topsoil takes anywhere from 500-1000 years to form. For this soil to become fertile can take an additional 3000 years. Soil loss is therefore irreplaceable, once lost it is lost forever.
Cumulative impact prior to mitigation:	Cumulative impact would result in sheet erosion of topsoil and in areas where the soil profile is not protected in gully erosion and the loss of this soil as sediment in rivers with the soil being washed out to sea. The sediment carried in rivers would increase turbidity of the river and impact on aquatic life not adapted to live in turbid environments and potentially to local extinctions of those more sensitive species.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium

Degree to which the impact can be mitigated:	There are well established engineering solutions to control storm water run-off which can be implemented to ensure that potential impacts are well mitigated. Additionally areas prone to seasonal waterlogging should be identified and method statements developed to deal with the site scale variability of the proposed mitigation measures.
Proposed mitigation:	Ensure clear demarcation of the development footprint and areas that are more sensitive to this impact at the site scale. Ensure that access roads are continually maintained during the construction phase and that any instability in the access roads is immediately stabilised. Ensure that the final plans submitted to the Local Authority have detailed descriptions and plans for run-off control off hardened or denuded areas where storm water flows are expected. Throughout monitor the site for any gully or sheet erosion. In instances where these sites are identified institute mitigation measures such as the use of geotextiles or basket gabions. Ensure that denuded and rehabilitating areas are marked as no go areas until they support a well-established vegetative cover. Ensure adequate storm water management and the efficient and safe routing of this storm water into the natural drainage of the adjacent river systems.
Cumulative impact post mitigation:	If these mitigation measures are fully implemented no cumulative impact is expected.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

Impact on biological aspects - Drainage lines:	
Nature of impact:	Negative - The nature of impacts could include loss of aquatic diversity due to increased sediment loads in drainage rivers and cumulatively the loss of ecological functioning along the drainage line. If storm water management systems were not effective then increased volumes of water would flood down the river system causing banks erosion, increased opportunity for colonisation by invasive plant species and loss of riparian function along the river.
Extent and duration of impact:	The extent would be local and would persist as long as the loss of topsoil from the site continued.

Probability of occurrence:	If mitigation measures are implemented then the probability of impacts would be low.
Degree to which the impact can be reversed:	High with the stabilisation of the loss of topsoil and the implementation of a functional storm water management system for increased runoff from denuded or hardened surfaces. Additionally the invasion by alien invasive plants and the destabilisation of the river banks caused by these invasions would have to be addressed. The reversal is considered possible as rivers are highly dynamic systems and the species occurring along them have life strategies to persist in this dynamic and ever changing system. They would therefore colonise disturbed areas along the bank and riparian function could re-establish over time.
Degree to which the impact may cause irreplaceable loss of resources:	Without mitigation impacts would persist. With mitigation impacts would be low resulting from efficient storm water attenuation, stabilisation of soil erosion to background levels, stabilisation of surface flows and the persistence of ecological functioning of the riparian areas.
Cumulative impact prior to mitigation:	The sediment carried in rivers would increase turbidity of the river and impact on aquatic life not adapted to live in turbid environments and potentially to local extinctions of those more sensitive species. This would be aggravated by higher volumes of water draining off denuded and hard surfaces further impacting by undercutting and destabilising river banks.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be mitigated:	There are well established engineering solutions to control storm water runoff and sheet and gully erosion. There are well established methods for the control of alien invasive plants.
Proposed mitigation:	Ensure clear demarcation of all drainage lines and ensure that these are managed as no-go areas. Monitor storm water diversion measures to assess the impact of the increased flow of water into the drainage lines. Institute management interventions if gully erosion and damage to the riparian area occurs – identify the flaws in the storm water management system and rehabilitate impacted areas.
Cumulative impact post mitigation:	If these mitigation measures are fully implemented no

	cumulative impacts are expected.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Impact on biological aspects - Vegetation:	
Nature of impact:	Negative - The nature of this impact would relate to the loss of vegetation and the faunal and floral species communities they harbour due to construction activities and associated impacts on soil micro-fauna and flora communities.
Extent and duration of impact:	Permanent for the lifespan of the airstrip
Probability of occurrence:	Definite
Degree to which the impact can be reversed:	High as the site is characterised by pioneer species associated with highly disturbed sites. If the topsoil is retained these species should colonise the area and restore it to its current status.
Degree to which the impact may cause irreplaceable loss of resources:	To a low degree as the adjacent areas are extensive and harbour species able to colonise disturbed areas. The current status of these areas are already highly impacted and characterised by a species community able to exist on highly disturbed areas.
Cumulative impact prior to mitigation:	In an instance where no mitigation measures were implemented the site and adjacent areas could degenerate into a situation where there is a loss of vegetative cover over large areas. Cumulative impacts however are not expected as the plants presently on site are hardy and able to thrive in disturbed environments.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be mitigated:	High
Proposed mitigation:	Clearly demarcate the development footprint, access roads and any other areas that will require the denuding of the vegetation cover (e.g. cement batch mixing sites). Undertake continual monitoring of the sites for signs of accelerated denuding of the vegetative cover and resulting accelerated erosion of the topsoil. Ensure that all denuded areas are immediately cordoned off and if needed covered with geotextiles to allow for the conservation of the topsoil in these areas and colonisation by pioneer plant species. Control declared alien invasive plants colonising these areas over time.
Cumulative impact post mitigation:	Once identified problem areas have been stabilised

	cumulative impacts should in turn stabilise at normal background levels.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

Impacts on biological aspects – eradication of alien invasive plants :	
Nature of impact:	Positive - Change in the status of the invasive alien species on site if the site is cleared of alien invasive plants. The creation of a fire break which would protect adjacent residential areas from the destructive impacts of uncontrolled fire.
Extent and duration of impact:	Local and for as long as the eradication interventions remained active
Probability of occurrence:	Definitely considering the prevalence of invasive plants in the surrounding landscape
Degree to which the impact can be reversed:	Fully through halting eradication programme – the site would revert to a site infested by alien invasive plants.
Degree to which the impact may cause irreplaceable loss of resources:	Low – as the site currently is fully transformed, resources to be lost would be the topsoil through elevated levels of erosion. The ecosystem has been totally transformed.
Cumulative impact prior to mitigation:	Potentially High – The site would no longer support populations of alien invasive species. The site would remain clear of alien invasive species and over time would prove its worth as a firebreak and through that the preservation of valuable infrastructure and human life that could be lost to destructive wildfires burning through the area.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be mitigated:	Positive Impact no mitigation required
Proposed mitigation:	None.
Cumulative impact post mitigation:	Low –The site would remain free of invasive alien plants and the adjacent residential areas would remain protected by a firebreak.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

Impacts on socio-economic aspects –job creation :	
Nature of impact:	Local and temporary during the construction phase of the development
Extent and duration of impact:	Definite – the successful service provider would require employees to complete the establishment of the airstrip.

Probability of occurrence:	Low – If the development proceeds these temporary job opportunities would remain relevant.
Degree to which the impact can be reversed:	As a positive impact it is additive and thus should not result in the loss of the resource.
Degree to which the impact may cause irreplaceable loss of resources:	
Cumulative impact prior to mitigation:	Cumulatively employment opportunities would see temporary increase of income into local households and the economy.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be mitigated:	High
Proposed mitigation:	Ensure that local labour and contractors are preferentially appointed over those from further afield. Ensure the preferential appointment of women.
Cumulative impact post mitigation:	Low – The nature of the development is such that only a handful of temporary jobs will be created and thus the real impact cumulatively will remain low.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

Impacts on cultural-historical aspects:	
Nature of impact:	NONE
Extent and duration of impact:	NONE
Probability of occurrence:	NONE
Degree to which the impact can be reversed:	NONE
Degree to which the impact may cause irreplaceable loss of resources:	NONE
Cumulative impact prior to mitigation:	NONE
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	NONE
Degree to which the impact can be mitigated:	NONE
Proposed mitigation:	NONE
Cumulative impact post mitigation:	NONE
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	NONE

Impacts from increased noise and dust Levels:	
Nature of impact:	Construction noise from vehicles and other machinery working on the site and from increased traffic using the roads through the residential area.
Extent and duration of impact:	Local and only for the time that it takes to complete the development.
Probability of occurrence:	Definite – access is only possible through the adjacent residential area and the levelling and preparation of the airstrip surface will require large construction vehicles. Additionally with the construction of the proposed ancillary infrastructure this building noise would include the use of construction tools.
Degree to which the impact can be reversed:	High – Impacts would be fully reversed on completion

	of the construction
Degree to which the impact may cause irreplaceable loss of resources:	None – the impact is temporary.
Cumulative impact prior to mitigation:	Cumulatively all vehicles and other construction activities could result in unacceptable levels of noise in hours outside normal office hours.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be mitigated:	High
Proposed mitigation:	Ensure that the active construction of the site remain within normal business day hours. Complete the construction within the shortest time period possible.
Cumulative impact post mitigation:	Low – Construction crews would be working during normal office hours and the construction would be completed quickly limiting the amount of time that noise would impact on surrounding communities.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

Increased levels of traffic cause changes in the living environment	
Nature of impact:	Most of the construction vehicles will stay on site and their impact will be minimal as the site is fully transformed and has low sensitivity. Vehicles use roads within the urban road network transporting goods and materials and equipment should be able to handle vehicular traffic of this nature. The amount of building material which will need to be delivered to the site is equivalent to a couple of residential homes therefore trip frequency would be low. While the trip frequency is low the condition of the access road will have to be monitored to ensure that its condition doesn't deteriorate. The contractor should be liable for repairs to the access roads. It should however be noted that these roads were constructed to service general urban traffic and as such have been used for the transport of construction cargoes to the newly developed residential areas adjacent to the airstrip. Additionally slow moving delivery vehicles may impact on road safety and must be addressed through adequate signage and signalling
Extent and duration of impact:	Local and for as long as the construction period lasts.
Probability of occurrence:	Definite
Degree to which the impact can be reversed:	For the road surfaces the impact could be reversed through the resurfacing of the road and through the

	redesign and or manning of the intersections. If the mitigation measures were implemented then roads would remain well maintained and safe for use. Intersection would be safe. Pedestrians would have safe crossings over roads and the cumulative accident and potentially lethal accidents would be reduced.
Degree to which the impact may cause irreplaceable loss of resources:	Low – The loss of human life would be tragic and irreplaceable at a personal level. The construction phase is a short period of time therefore a change in the sense of place will be transitory.
Cumulative impact prior to mitigation:	Cumulative Impacts in this regard would relate to the deterioration of the roads to levels where they could be life threatening to people, unsafe intersections for oncoming traffic on access routes, unsafe pedestrian crossings and increased pedestrian traffic which all may lead to increased accidents some of which may prove lethal.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be mitigated:	High
Proposed mitigation:	Maintain all access roads throughout the project cycle to at least the current standard. Upgrade road signs to address the increased traffic at intersections. Erect road signs and create pedestrian crossings. Where practical provide transport to reduce pedestrian traffic. Restrict heavy vehicles on access roads to specific hours of the day. Erect road signs and signals when heavy vehicles are working on site or travelling to the site
Cumulative impact post mitigation:	If the mitigation measures were implemented then roads would remain well maintained and safe for use. Intersection would be safe. Pedestrians would have safe crossings over roads and the cumulative accident and potentially lethal accidents would be reduced.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

Visual impacts / Sense of Place:	
Nature of impact:	This impact would relate to the visual landscape changing as a result of the development of the airstrip.
Extent and duration of impact:	Permanent as long as the airstrip remains operational.
Probability of occurrence:	Low due to the low profile of an airstrip and the location of the associated infrastructure in close association with existing buildings and finally the

	screening of the area by trees.
Degree to which the impact can be reversed:	High - The site could be fully deconstructed and the airstrip rehabilitated to a vegetative cover which is currently characterised by an ecosystem that has been significantly impacted by agroforestry.
Degree to which the impact may cause irreplaceable loss of resources:	Low as the site could be returned to its current state thus returning it to the current visual view shed.
Cumulative impact prior to mitigation:	There are not cumulative impacts identified as this is the only proposed development in the area.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be mitigated:	Disturbed areas should be kept to a minimum. The development footprint should be clearly demarcated and no development outside of the footprint should be allowed. Retain all existing mature indigenous trees where practically possible. Buildings on site should keep within the planning policy in particular the principles of critical regionalism, namely sense of place, sense of history, sense of nature, sense of craft and sense of limits. Finally existing tracks and roads should be used in preference wherever possible.
Proposed mitigation:	NONE
Cumulative impact post mitigation:	With the development footprint located within a clearly demarcated zone, the rigorous planting regime implemented and the airstrip conforming to the principles of critical regionalism and finally using all existing access roads should result in a situation where cumulative impact should be low. The project site is not pristine and several infrastructural improvements have also been introduced. The proposed development adds to the existing complexity of the landscape and would be indirect and neutralising and additive in areas where no development is currently present
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

Visual impacts / Artificial Lighting	
Nature of impact:	This impact would relate to the visual landscape changing as a result of artificial lighting at night. It should be noted that the airstrip will never be used after dark.
Extent and duration of impact:	Permanent as long as the airstrip remains operational.
Probability of occurrence:	Low due to the low profile of an airstrip and the

	location of the associated infrastructure in close association with existing buildings where there is already lighting and finally the screening of the area by trees.
Degree to which the impact can be reversed:	High - The site could be fully deconstructed and the airstrip rehabilitated to a vegetative cover which is currently characterised by an ecosystem that has been significantly impacted by agroforestry.
Degree to which the impact may cause irreplaceable loss of resources:	Low as the site could be returned to its current state thus returning it to the current visual view shed.
Cumulative impact prior to mitigation:	Cumulatively the light signature of the site may be increased as a result of additional lights being placed around the buildings.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be mitigated:	High.
Proposed mitigation:	Ensure that all lighting around the buildings are directed downward and use the lowest wattage practicably possible.
Cumulative impact post mitigation:	Low as the area already has lights around the existing buildings, the airstrip will never be used after dark, the site is well screened by existing trees, and directing lights downwards would mitigate impacts.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

(b) **Impacts that result from the operational phase (briefly describe and compare impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the operational phase.**

Impacts on the geographical and physical aspects:	
Nature of impact:	Loss of topsoil from denuded surfaces through sheet and gully erosion.
Extent and duration of impact:	The potential for topsoil loss remains relevant for as long as there are denuded surfaces which are required by the airstrip and access roads.
Probability of occurrence:	High if the mitigation measures for storm water control etc. addressed above. Low if these mitigation measures are fully implemented.
Degree to which the impact can be reversed:	Low – Loss of topsoil is considered to be an irreversible impact.
Degree to which the impact may cause irreplaceable loss of resources:	High – once lost topsoil cannot be replaced.
Cumulative impact prior to mitigation:	Cumulative impact would relate to the gradual loss of topsoil over the years until very little or none remains with consequent loss of fertility which in turn would

	result in difficulty in rehabilitation of the site should it be decommissioned.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium-High
Degree to which the impact can be mitigated:	High – there are well established mitigation measures that are practically implementable as indicated above.
Proposed mitigation:	Ensure ongoing monitoring and implement mitigation measures as soon as degradation from erosion is noted. These include the stabilisation of the area using geotextiles, demarcating them as no go areas to remove any additional disturbance and if gully erosion has occurred the placement of stone filled basket gabions to arrest further incision into the soil profile.
Cumulative impact post mitigation:	If monitoring and mitigation measures are fully implemented the erosion levels should stabilise at normal background levels.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

Impact on biological aspects - Drainage lines:	
Nature of impact:	Negative - The nature of impacts could include loss of aquatic diversity due to increased sediment loads in drainage rivers and cumulatively the loss of ecological functioning along the drainage line. If storm water management systems were not effective then increased volumes of water would flood down the river system causing banks erosion, increased opportunity for colonisation by invasive plant species and loss of riparian function along the river.
Extent and duration of impact:	The extent would be local and would persist as long as the loss of topsoil from the site continued.
Probability of occurrence:	If mitigation measures are implemented then the probability of impacts would be low.
Degree to which the impact can be reversed:	High with the stabilisation of the loss of topsoil and the implementation of a functional storm water management system for increased runoff from denuded or hardened surfaces. Additionally the invasion by alien invasive plants and the destabilisation of the river banks caused by these invasions would have to be addressed. The reversal is considered possible as rivers are highly dynamic systems and the

	species occurring along them have life strategies to persist in this dynamic and ever changing system. They would therefore colonise disturbed areas along the bank and riparian function could re-establish over time.
Degree to which the impact may cause irreplaceable loss of resources:	Without mitigation impacts would persist. With mitigation impacts would be low resulting from efficient storm water attenuation, stabilisation of soil erosion to background levels, stabilisation of surface flows and the persistence of ecological functioning of the riparian areas.
Cumulative impact prior to mitigation:	The sediment carried in rivers would increase turbidity of the river and impact on aquatic life not adapted to live in turbid environments and potentially to local extinctions of those more sensitive species. This would be aggravated by higher volumes of water draining off denuded and hard surfaces further impacting by undercutting and destabilising river banks.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be mitigated:	There are well established engineering solutions to control storm water runoff and sheet and gully erosion. There are well established methods for the control of alien invasive plants.
Proposed mitigation:	Ensure clear demarcation of all drainage lines and ensure that these are managed as no-go areas. Monitor storm water diversion measures to assess the impact of the increased flow of water into the drainage lines. Institute management interventions if gully erosion and damage to the riparian area occurs – identify the flaws in the storm water management system and rehabilitate impacted areas.
Cumulative impact post mitigation:	If these mitigation measures are fully implemented no cumulative impacts are expected.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

Impact on biological aspects - Vegetation:	
Nature of impact:	Negative – loss of vegetative cover due to direct physical impacts or indirectly through poor management practice.
Extent and duration of impact:	Limited to a local scale of the site itself and would be relevant for the full period of time that the airstrip remained as an operational facility.

Probability of occurrence:	Probable if mitigation measures are not implemented or adhered to.
Degree to which the impact can be reversed:	The vegetative cover / current resource is currently one of pioneer species which would re-establish themselves. Thus the impacts are reversible as there are numerous areas from which plants could be sourced.
Degree to which the impact may cause irreplaceable loss of resources:	Low – the area is already highly impacted and colonised by remnant populations of plant species associated with the occurring vegetation type. The surrounds do have areas that are considered pristine and which therefore could act as future source areas which over many years could colonise the area and restore the ecosystem to near natural conditions.
Cumulative impact prior to mitigation:	Cumulative impact would relate to similar impacts in the surrounding landscape. The facility is located on an agricultural farm denuded of natural vegetation. The cumulative addition from the facility is negligible.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be mitigated:	High
Proposed mitigation:	Minimise physical impacts to rehabilitated areas planted with indigenous vegetation. Monitor the site for loss of vegetative cover and rehabilitate immediately if areas become denuded.
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

Impacts on biological aspects – invasion by alien invasive plants :	
Nature of impact:	Negative - Change in the status of the invasive alien species on site if the site was to become infested with other species which are more invasive.
Extent and duration of impact:	Local and for as long as the specific species remained on site.
Probability of occurrence:	Definitely considering the prevalence of invasive plants in the surrounding landscape.
Degree to which the impact can be reversed:	Fully through an eradication programme to control the colonisation of the site by these species.
Degree to which the impact may cause irreplaceable loss of resources:	Low – the sites adjacent are source areas for species common to highly disturbed areas and would recolonize the area if the topsoil and fertility of the soil is maintained.
Cumulative impact prior to mitigation:	Potentially High - If left uncontrolled cumulatively these

	alien invasive plant species may be able to invade ever larger areas on the site, the potential for more invasive species colonising the site would result in significant impacts on indigenous species complexes and populations through physical replacement
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	Eradicate all alien invasive plant species as soon as they are detected on site. All planting must be with indigenous species. Monitor re-growth of invasive species.
Cumulative impact post mitigation:	Low –control would avoid the cumulative impacts stemming from alien invasive species.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

Impacts on biological aspects – eradication of alien invasive plants :	
Nature of impact:	Positive - Change in the status of the invasive alien species on site if the site is cleared of alien invasive plants. The creation of a fire break which would protect adjacent residential areas from the destructive impacts of uncontrolled fire.
Extent and duration of impact:	Local and for as long as the eradication interventions remained active
Probability of occurrence:	Definitely considering the prevalence of invasive plants in the surrounding landscape
Degree to which the impact can be reversed:	Fully through halting eradication programme – the site would revert to a site infested by alien invasive plants.
Degree to which the impact may cause irreplaceable loss of resources:	Low – as the site currently is fully transformed, resources to be lost would be the topsoil through elevated levels of erosion. The ecosystem has been totally transformed.
Cumulative impact prior to mitigation:	Potentially High – The site would no longer support populations of alien invasive species. The site would remain clear of alien invasive species and over time would prove its worth as a firebreak and through that the preservation of valuable infrastructure and human life that could be lost to destructive wildfires burning through the area.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be mitigated:	Positive Impact no mitigation required
Proposed mitigation:	None.
Cumulative impact post mitigation:	Low –The site would remain free of invasive alien plants

	and the adjacent residential areas would remain protected by a firebreak.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

Impacts on the socio-economic aspects:	
Nature of impact:	Positive during the operational phase the site would be used to combat wildfire and as such would benefit the economy by preventing large scale damage to built infrastructure, human, crops and animal life (stock losses). Additionally as a key response to wildfire suppression the facility would be acting to mitigate impacts on biodiversity by preventing the too regular burning of the ecosystem with consequent loss of diversity over time and potentially the local extinction of fire dependent species unable to complete their life cycles before the advent of the next fire.
Extent and duration of impact:	The impact would be felt at local to regional scales and for as long as the airstrip remained as an operational facility.
Probability of occurrence:	Definite for a facility such as this, these vegetation types will burn the only unknown is when the next fire will burn through them.
Degree to which the impact can be reversed:	N/A as this is a positive impact that should not be reversed.
Degree to which the impact may cause irreplaceable loss of resources:	N/A
Cumulative impact prior to mitigation:	Cumulative impacts would be the significant value of protecting important infrastructure, livelihoods and life over time.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be mitigated:	N/A
Proposed mitigation:	N/A
Cumulative impact post mitigation:	High - Cumulative impacts would be the significant value of protecting important infrastructure, livelihoods and life over time
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	High

Impacts on socio-economic aspects –job creation :	
Nature of impact:	Local permanent employment through the government funded Working on Fire Programme. This includes the employment of ground based firefighting teams, crew leaders, base managers and the pilots that are flying the aircraft.
Extent and duration of impact:	Definite – these positions will be filled for the full time that the facility is operational and functions as an

	emergency response base to wildfire suppression.
Probability of occurrence:	High – If the development proceeds these permanent job opportunities would remain relevant.
Degree to which the impact can be reversed:	As a positive impact it is additive and thus should not result in the loss of the resource.
Degree to which the impact may cause irreplaceable loss of resources:	N/A
Cumulative impact prior to mitigation:	Cumulatively employment opportunities would see permanent increase of income into local households and the economy.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be mitigated:	High
Proposed mitigation:	Ensure that local labour and contractors are preferentially appointed over those from further afield. Ensure the preferential appointment of women.
Cumulative impact post mitigation:	High – The nature of the development is such that permanent jobs will be created and thus the real impact cumulatively will be felt for as long as the facility remains operational.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium

Impacts on the cultural-historical aspects:	
Nature of impact:	NONE
Extent and duration of impact:	NONE
Probability of occurrence:	NONE
Degree to which the impact can be reversed:	NONE
Degree to which the impact may cause irreplaceable loss of resources:	NONE
Cumulative impact prior to mitigation:	NONE
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	NONE
Degree to which the impact can be mitigated:	NONE
Proposed mitigation:	NONE
Cumulative impact post mitigation:	NONE
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	NONE

Noise impacts:	
Nature of impact:	Impacts would relate to noise generated from the use of air support in the form of fixed wing aircraft and helicopters taking off from the airstrip to fight fires within the operational domain of the Southern Cape FPA. Additionally noise may be generated by vehicles leaving the base via the access roads with fire fighting teams.
Extent and duration of impact:	The impact would be localised to the areas adjacent to the residential areas of George. The duration of the impact would be The primary impact posed by this

	development would relate to an altered sense of place due to the noise created by aircraft departing and landing at the airstrip. To this end consultation with the Southern Cape Fire Protection Association was undertaken to determine the number of flying hours logged by emergency air support over the last year fighting wildfires. This was undertaken to gain an understanding of the potential number of flights to and from the proposed airstrip. The findings of this consultation were that a total of five hours of noise was created between June 2015 and July 2016 half of which would relate to aircraft on the ground, thus only 2.5 hours of flights from the airstrip over the period of a year. It must be noted though that this airstrip is a base and aircraft would only use it as a staging area to fight fires threatening the residential or other urban areas in and around George. Other outlying airstrips would be used when fighting fires further afield.
Probability of occurrence:	Definite
Degree to which the impact can be reversed:	It is possible to fully reverse this impact through closure of the airstrip.
Degree to which the impact may cause irreplaceable loss of resources:	As the impacts can be fully reversed no irreplaceable loss of resources
Cumulative impact prior to mitigation:	Cumulative impacts would relate to increased traffic at the airstrip over time - the use of the airstrip by air traffic not associated with emergency fire fighting services in the future. i.e. increased civilian traffic and use of the airstrip as a civilian landing strip. Additionally the strip could become more active if used as a staging area to respond to fires further afield.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium to High
Degree to which the impact can be mitigated:	Medium to High
Proposed mitigation:	Ensure that the strip is only used for emergency firefighting aircraft. Ensure that no flights are allowed after sunset. Ensure that the strip is never used by civilian aircraft. Use well placed alternative airstrips to fight fires further afield. Ensure that flights undertaken from the airstrip are only done so for emergency services and for regular maintenance flights.
Cumulative impact post mitigation:	While impacts are unavoidable if mitigation measures are implemented fully we do not expect this impact to

	be significant.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Visual impacts / Sense of Place:	
Nature of impact:	Visual impacts related to the airstrip have been dealt with under the construction phase and would remain unchanged during the operational phase i.e. the airstrip would not alter its visual appearance after construction. The altered sense of place would relate very much to noise disturbance when aircraft and helicopters take off and land.
Extent and duration of impact:	<p>The impact would be localised to the areas adjacent to the residential areas of George. The primary impact posed by this development would relate to an altered sense of place due to the noise created by aircraft departing and landing at the airstrip. To this end consultation with the Southern Cape Fire Protection Association was undertaken to determine the number of flying hours logged by emergency air support over the last year fighting wildfires. This was undertaken to gain an understanding of the potential number of flights to and from the proposed airstrip. The findings of this consultation were that a total of five hours of noise was created between June 2015 and July 2016 half of which would relate to aircraft on the ground, thus only 2.5 hours of flights from the airstrip over the period of a year.</p> <p>. It must be noted though that this airstrip is a base and aircraft would only use it as a staging area to fight fires threatening the residential or other urban areas in and around George. Other outlying airstrips would be used when fighting fires further afield.</p>
Probability of occurrence:	Definite
Degree to which the impact can be reversed:	It is possible to fully reverse this impact through closure of the airstrip.
Degree to which the impact may cause irreplaceable loss of resources:	As the impacts can be fully reversed no irreplaceable loss of resources
Cumulative impact prior to mitigation:	Cumulative impacts would relate to increased traffic at the airstrip over time - the use of the airstrip by air traffic not associated with emergency fire fighting services in the future. i.e. increased civilian traffic and use of the airstrip as a civilian landing strip. Additionally the strip

	could become more active if used as a staging area to respond to fires further afield.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium to High
Degree to which the impact can be mitigated:	Medium to High
Proposed mitigation:	Ensure that the strip is only used for emergency fire fighting. Ensure that no flights are allowed after sunset. Ensure that the strip is never used by civilian aircraft. Use well placed alternative airstrips to fight fires further afield. Ensure that flights undertaken from the airstrip are only done so for emergency services and for regular maintenance flights. Ensure that the flight path for departing and returning aircraft avoid flying over the residential areas adjacent to the airstrip.
Cumulative impact post mitigation:	While impacts are unavoidable if mitigation measures are implemented fully we do not expect this impact to be significant.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

(c) **Impacts that may result from the decommissioning and closure phase (briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the decommissioning and closure phase.**

Impacts on geographical and physical aspects:	
Nature of impact:	Negative loss of topsoil from denuded areas - If poorly managed cumulative impacts could result in the increase of sheet and gully erosion which over time could conceivably extend over a greater area and cause more significant impacts. This is concomitant with the loss of topsoil and the loss of soils fertility which will hamper rehabilitation if not mitigated. No impacts are associated with the underlying geology of the area.
Extent and duration of impact:	The extent of the erosion would be local in nature and if no effort is made to mitigate would continue for many years to come.
Probability of occurrence:	If mitigation measures are implemented then the probability of impacts would be low.
Degree to which the impact can be reversed:	There are established corrective management interventions of halting sheet and gully erosion and rehabilitating the site. The reversal of impacts is possible but would take a long time to achieve.
Degree to which the impact may cause irreplaceable loss of resources:	This area is characterised by a temperate climate with

	<p>medium to high precipitation at the regional perspective. While soil building processes function over very long time scales they would be relatively faster in this climatic zone than in more arid areas. The topsoil could therefore conceivably be rebuilt over time and the resource replaced but this would require a very extended period of time to achieve. A general rule of thumb is that 1.5 cm of topsoil takes anywhere from 500-1000 years to form. For this soil to become fertile can take an additional 3000 years. Soil loss is therefore irreplaceable, once lost it is lost forever.</p>
<p>Cumulative impact prior to mitigation:</p>	<p>Cumulative impact would result in sheet erosion of topsoil and in areas where the soil profile is not protected in gully erosion and the loss of this soil as sediment in rivers with the soil being washed out to sea. The sediment carried in rivers would increase turbidity of the river and impact on aquatic life not adapted to live in turbid environments and potentially to local extinctions of those more sensitive species.</p>
<p>Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)</p>	<p>Medium</p>
<p>Degree to which the impact can be mitigated:</p>	<p>There are well established engineering solutions to control storm water run-off which can be implemented to ensure that potential impacts are well mitigated. Additionally areas prone to seasonal waterlogging should be identified and method statements developed to deal with the site scale variability of the proposed mitigation measures.</p>
<p>Proposed mitigation:</p>	<p>Ensure clear demarcation of the decommissioning footprint and areas that are more sensitive to this impact at the site scale. Ensure that access roads are continually maintained during the construction phase and that any instability in the access roads is immediately stabilised. Ensure that the final plans submitted to the Local Authority have detailed descriptions and plans for run-off control off hardened or denuded areas where storm water flows are expected. Throughout monitor the site for any gully or sheet erosion. In instances where these sites are identified institute mitigation measures such as the use of geotextiles or basket gabions. Ensure that denuded and rehabilitating areas are marked as no go areas</p>

	until they support a well-established vegetative cover. Ensure adequate storm water management and the efficient and safe routing of this storm water into the natural drainage of the adjacent river systems.
Cumulative impact post mitigation:	If these mitigation measures are fully implemented no cumulative impact is expected.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

Impact on biological aspects - Drainage lines:	
Nature of impact:	Negative - The nature of impacts could include loss of aquatic diversity due to increased sediment loads in drainage rivers and cumulatively the loss of ecological functioning along the drainage line. If storm water management systems were not effective then increased volumes of water would flood down the river system causing banks erosion, increased opportunity for colonisation by invasive plant species and loss of riparian function along the river.
Extent and duration of impact:	The extent would be local and would persist as long as the loss of topsoil from the site continued.
Probability of occurrence:	If mitigation measures are implemented then the probability of impacts would be low.
Degree to which the impact can be reversed:	High with the stabilisation of the loss of topsoil and the implementation of a functional storm water management system for increased runoff from denuded or hardened surfaces. Additionally the invasion by alien invasive plants and the destabilisation of the river banks caused by these invasions would have to be addressed. The reversal is considered possible as rivers are highly dynamic systems and the species occurring along them have life strategies to persist in this dynamic and ever changing system. They would therefore colonise disturbed areas along the bank and riparian function could re-establish over time.
Degree to which the impact may cause irreplaceable loss of resources:	Without mitigation impacts would persist. With mitigation impacts would be low resulting from efficient storm water attenuation, stabilisation of soil erosion to background levels, stabilisation of surface flows and the persistence of ecological functioning of the riparian areas.
Cumulative impact prior to mitigation:	The sediment carried in rivers would increase turbidity

	of the river and impact on aquatic life not adapted to live in turbid environments and potentially to local extinctions of those more sensitive species. This would be aggravated by higher volumes of water draining off denuded and hard surfaces further impacting by undercutting and destabilising river banks.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be mitigated:	There are well established engineering solutions to control storm water runoff and sheet and gully erosion. There are well established methods for the control of alien invasive plants.
Proposed mitigation:	Ensure clear demarcation of all drainage lines and ensure that these are managed as no-go areas. Monitor storm water diversion measures to assess the impact of the increased flow of water into the drainage lines. Institute management interventions if gully erosion and damage to the riparian area occurs – identify the flaws in the storm water management system and rehabilitate impacted areas.
Cumulative impact post mitigation:	If these mitigation measures are fully implemented no cumulative impacts are expected.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

Impact on biological aspects – Vegetation:	
Nature of impact:	Positive - The nature of this impact would relate to the return of vegetation and the faunal and floral species communities they harbour due to rehabilitation activities and associated impacts on soil micro-fauna and flora communities.
Extent and duration of impact:	Permanent if the site was allowed to return to a near natural state.
Probability of occurrence:	Definite
Degree to which the impact can be reversed:	High as the site is characterised by pioneer species associated with highly disturbed sites. If the topsoil is retained these species should colonise the area and restore it to its current status. Furthermore the site is surrounded by pristine areas that could serve as source areas for colonising species and if retained in a connected system would allow for the colonisation of this area to proceed.
Degree to which the impact may cause irreplaceable loss of resources:	To a low degree as the adjacent areas are extensive

	and harbour species able to colonise disturbed areas. The status of the site would be highly impacted and characterised by a species community able to exist on highly disturbed areas.
Cumulative impact prior to mitigation:	In an instance where no mitigation measures were implemented the site and adjacent areas could degenerate into a situation where there is a loss of vegetative cover over large areas with resultant elevated levels of erosion and inability of vegetation to find a foothold on the site and thus an inability for the site to be effectively rehabilitated. The cumulative impact would be that the site degenerated into an ever worsening condition and impacts on associated aquatic ecosystems would increase and worsen as discussed under impacts on drainage lines and alien invasive plant species.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be mitigated:	High
Proposed mitigation:	Clearly demarcate the decommissioning footprint, access roads and any other areas that were denuded of vegetation (e.g. the airstrip and access roads and the footprint of any buildings). Undertake continual monitoring of the sites for signs of accelerated denuding of the vegetative cover and resulting accelerated erosion of the topsoil. Ensure that all denuded areas are immediately cordoned off and if needed covered with geotextiles to allow for the conservation of the topsoil in these areas and colonisation by pioneer plant species. Control declared alien invasive plants colonising these areas over time.
Cumulative impact post mitigation:	Once identified problem areas have been stabilised cumulative impacts should in turn stabilise at normal background levels.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

Impacts on biological aspects – eradication of alien invasive plants :	
Nature of impact:	Positive - Change in the status of the invasive alien species on site if the site is cleared of alien invasive plants.
Extent and duration of impact:	Local and for as long as the eradication interventions

	remained active.
Probability of occurrence:	Definitely considering the prevalence of invasive plants in the surrounding landscape.
Degree to which the impact can be reversed:	Fully through halting eradication programme – the site would revert to a site infested by alien invasive plants.
Degree to which the impact may cause irreplaceable loss of resources:	Low – as the site would be fully transformed, resources to be lost would be the topsoil through elevated levels of erosion.
Cumulative impact prior to mitigation:	Potentially High – The site would no longer support populations of alien invasive species.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low.
Degree to which the impact can be mitigated:	Positive Impact no mitigation required.
Proposed mitigation:	None.
Cumulative impact post mitigation:	Low –The site would remain free of invasive alien plants and the adjacent residential areas would remain protected by a firebreak.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

Impacts on socio-economic aspects –job creation :	
Nature of impact:	Local and temporary during the deconstruction phase of the development.
Extent and duration of impact:	Definite – the successful service provider would require employees to complete the decommissioning of the airstrip.
Probability of occurrence:	Low – If the development proceeds these temporary job opportunities would remain relevant.
Degree to which the impact can be reversed:	As a positive impact it is additive and thus should not result in the loss of the resource.
Degree to which the impact may cause irreplaceable loss of resources:	Not Applicable
Cumulative impact prior to mitigation:	Cumulatively employment opportunities would see temporary increase of income into local households and the economy.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be mitigated:	High
Proposed mitigation:	Ensure that local labour and contractors are preferentially appointed over those from further afield. Ensure the preferential appointment of women.
Cumulative impact post mitigation:	Low – The nature of the development is such that only a handful of temporary jobs will be created and thus the real impact cumulatively will remain low.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

Impacts on cultural-historical aspects:	
Nature of impact:	NONE
Extent and duration of impact:	NONE
Probability of occurrence:	NONE
Degree to which the impact can be reversed:	NONE
Degree to which the impact may cause irreplaceable loss of resources:	NONE
Cumulative impact prior to mitigation:	NONE
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	NONE
Degree to which the impact can be mitigated:	NONE
Proposed mitigation:	NONE
Cumulative impact post mitigation:	NONE
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	NONE

Impacts from increased noise and dust Levels:	
Nature of impact:	Construction noise from vehicles and other machinery working on the site and from increased traffic using the roads through the residential area.
Extent and duration of impact:	Local and only for the time that it takes to complete the development.
Probability of occurrence:	Definite – access is only possible through the adjacent residential area and the levelling and preparation of the airstrip surface will require large construction vehicles. Additionally with the construction of the proposed ancillary infrastructure this building noise would include the use of construction tools.
Degree to which the impact can be reversed:	High – Impacts would be fully reversed on completion of the decommissioning phase.
Degree to which the impact may cause irreplaceable loss of resources:	None – the impact is temporary.
Cumulative impact prior to mitigation:	Cumulatively all vehicles and other construction activities could result in unacceptable levels of noise in hours outside normal office hours.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be mitigated:	High
Proposed mitigation:	Ensure that the active decommissioning of the site remain within normal business day hours. Complete the decommissioning within the shortest time period possible.
Cumulative impact post mitigation:	Low – Decommissioning crews would be working during normal office hours and the decommissioning would be completed quickly limiting the amount of time that noise would impact on surrounding communities.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

Increased levels of traffic cause changes in the living environment	
Nature of impact:	Most of the construction vehicles will stay on site and their impact will be minimal as the site is fully transformed and has low sensitivity. Vehicles use roads within the urban road network transporting goods and materials and equipment should be able to handle vehicular traffic of this nature. The amount of building material which will need to be removed from the site is equivalent to a couple of residential homes therefore trip frequency would be low. While the trip frequency is low the condition of the access road will have to be monitored to ensure that its condition doesn't deteriorate. The contractor should be liable for repairs to the access roads. It should however be noted that these roads were constructed to service general urban traffic and as such have been used for the transport of construction cargoes to the newly developed residential areas adjacent to the airstrip. Additionally slow moving delivery vehicles may impact on road safety and must be addressed through adequate signage and signalling
Extent and duration of impact:	Local and for as long as the construction period lasts.
Probability of occurrence:	Definite
Degree to which the impact can be reversed:	For the road surfaces the impact could be reversed through the resurfacing of the road and through the redesign and or manning of the intersections. If the mitigation measures were implemented then roads would remain well maintained and safe for use. Intersection would be safe. Pedestrians would have safe crossings over roads and the cumulative accident and potentially lethal accidents would be reduced.
Degree to which the impact may cause irreplaceable loss of resources:	Low – The loss of human life would be tragic and irreplaceable at a personal level. The construction phase is a short period of time therefore a change in the sense of place will be transitory.
Cumulative impact prior to mitigation:	Cumulative Impacts in this regard would relate to the deterioration of the roads to levels where they could be life threatening to people, unsafe intersections for oncoming traffic on access routes, unsafe pedestrian crossings and increased pedestrian traffic which all may lead to increased accidents some of which may prove lethal.

Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be mitigated:	High
Proposed mitigation:	Maintain all access roads throughout the project cycle to at least the current standard. Upgrade road signs to address the increased traffic at intersections. Erect road signs and create pedestrian crossings. Where practical provide transport to reduce pedestrian traffic. Restrict heavy vehicles on access roads to specific hours of the day. Erect road signs and signals when heavy vehicles are working on site or travelling to the site
Cumulative impact post mitigation:	If the mitigation measures were implemented then roads would remain well maintained and safe for use. Intersection would be safe. Pedestrians would have safe crossings over roads and the cumulative accident and potentially lethal accidents would be reduced.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

Visual impacts / Sense of Place:	
Nature of impact:	Positive - This impact would relate to the visual landscape changing as a result of the deconstruction of the airstrip. Essentially it would return to its former state thus returning the site to its current view shed character
Extent and duration of impact:	Permanent as long as the airstrip remained decommissioned.
Probability of occurrence:	Low due to the real need for the airstrip as a staging area for fighting wildfire in the region.
Degree to which the impact can be reversed:	High - The site could be fully deconstructed and the airstrip rehabilitated to a vegetative cover which is currently characterised by an ecosystem that has been significantly impacted by agroforestry.
Degree to which the impact may cause irreplaceable loss of resources:	Low as the site could be returned to its current state thus returning it to the current visual view shed.
Cumulative impact prior to mitigation:	There are not cumulative impacts.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be mitigated:	High
Proposed mitigation:	Disturbed areas should be kept to a minimum. Retain all existing mature indigenous trees where practically possible. Institute an active replanting programme of all denuded areas with suitable indigenous species to initiate the process of rehabilitation.

Cumulative impact post mitigation:	The implementation of the rigorous planting regime on the airstrip and other denuded areas should result in a situation where cumulatively the site is rehabilitated over time to a near natural state
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium

(d) Any other impacts:

Potential impact:	NONE
Nature of impact:	NONE
Extent and duration of impact:	NONE
Probability of occurrence:	NONE
Degree to which the impact can be reversed:	NONE
Degree to which the impact may cause irreplaceable loss of resources:	NONE
Cumulative impact prior to mitigation:	NONE
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	NONE
Degree to which the impact can be mitigated:	NONE
Proposed mitigation:	NONE
Cumulative impact post mitigation:	NONE
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	NONE

Please note: If any of the above information is not available, specialist input may be requested.

7. SPECIALIST INPUTS/STUDIES AND RECOMMENDATIONS

Please note: Specialist inputs/studies that will be undertaken as part of this application. These specialist inputs/studies must take into account the Department's relevant Guidelines on the Involvement of Specialists in EIA Processes available on the Department's website (<http://www.capegateway.gov.za/eadp>). A summary of all the specialist inputs/studies must be provided with the additional information / Environmental Impact Report.

Specialist inputs/studies and recommendations:

<p>A Specialist Heritage Consultant was appointed to determine the potential impacts on important heritage and cultural resources. The findings of the NID were that no impacts had resulted from the development of the airstrip and that none were expected should the development proceed. The NID was submitted to Heritage Western Cape and the Record of Decision corroborated the findings of the appointed specialist. See also Appendix F – Public Participation Report and Appendix G – Specialist Reports – RoD HWC</p>
<p>A specialist botanist was appointed to assess the potential impact of the development on the ecosystem on site. Key findings of the assessment were that the site had been fully transformed and did not constitute a natural population of plant species associated with the Endangered vegetation type of Garden Route Shale Fynbos. The specialist could not discern any reason why the development should not proceed on the site based on the findings of the botanical assessment. See also Appendix G – Specialist Reports</p>

8. IMPACT ASSESSMENT

Briefly describe the impacts (as appropriate), significance rating of impacts, mitigation and significance rating of impacts of the activity. This must include an assessment of the significance of all impacts.

Please note: This is a preliminary impact statement. The Department may request specialist input/studies depending on the type and nature of the impact(s) of the activity/ies.

Impacts	Significance rating of impacts after mitigation (Low, Medium, Medium-High, High, Very High):
<u>Planning, Design and Construction Phase</u>	
Impacts on Geographical and Physical Aspects	Negative - Low
Impacts on Biological Aspects – Drainage Lines	Negative - Low
Impacts on Biological Aspects – Vegetation	Negative - Low
Impacts on Biological Aspects – Eradication of Alien Invasive Plants	Negative - Low
Impacts on Socio-economic Aspects – Job Creation	Positive - Low
Impacts from Increased levels of Dust and Noise	Negative - Low
Impacts from Increased Levels of Traffic	Negative - Low
Visual Impacts / Sense of Place	Negative - Low
Visual Impacts - Lighting	Negative - Low
Operational Phase	
Impacts on Geographical and Physical Aspects	Negative - Low
Impacts on Biological Aspects – Drainage Lines	Negative - Low
Impacts on Biological Aspects – Vegetation	Negative - Low
Impacts on Biological Aspects – Eradication of Alien Invasive Plants	Positive - Low
Impacts on Socio-economic Aspects	Positive - High
Impacts on Socio-economic Aspects – Job Creation	Positive - Medium
Impacts from Increased levels of Dust and Noise	Negative - Medium
Visual Impacts / Sense of Place	Negative - Low
Decommissioning Phase	
Impacts on Geographical and Physical Aspects	Negative - Low
Impacts on Biological Aspects – Drainage Lines	Negative - Low
Impacts on Biological Aspects – Vegetation	Positive - Low
Impacts on Biological Aspects – Eradication of Alien Invasive Plants	Positive - Low
Impacts on Socio-economic Aspects – Job Creation	Positive - Low
Impacts from Increased levels of Dust and Noise	Negative - Low
Impacts from Increased Levels of Traffic	Negative - Low
Visual Impacts / Sense of Place	Positive - Medium

9. IMPACT SUMMARY OF ACTIVITY/IES

Please complete the table below, by crossing out ("☒") the appropriate box(es) based on the assessment including any other specialist assessment or input that has been obtained and provide a summary of impacts of commencement of the activity/ies on the environment.

Summary:	
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9.1	Social Benefit Index	
(a)	The activity provides no social service / infrastructure to the affected community	☒
(b)	The activity provides indirect social service / infrastructure to the affected community	
(c)	The activity provides some social service / infrastructure to the affected community	
(d)	The activity provides an important social service / infrastructure to the affected community	
(e)	The activity provides an essential social service / infrastructure to the affected community	

Please provide motivation for the impact rating of the above impact index:		
9.2	Socio Economic Impact Index	<input checked="" type="checkbox"/>
(a)	The activity will not give rise to any negative socio-economic impacts	
(b)	The activity could give rise to negative socio-economic impacts, but highly localised	
(c)	The activity could give rise to significant negative socio-economic and regionalized impacts	
(d)	The activity could result in wide-scale socio-economic impacts.	
Please provide motivation for the impact rating of the above impact index:		
9.3	Biodiversity Impact Index	<input checked="" type="checkbox"/>
(a)	The activity will not give rise to any impacts on biodiversity	
(b)	The activity could give rise to localised biodiversity impacts	
(c)	The activity could give rise to significant biodiversity impacts	
(d)	The activity is likely to permanently / irreversibly transform/ destroy a recognised biodiversity 'hot-spot' or threaten the existence of a species or sub-species.	
Please provide motivation for the impact rating of the above impact index:		
9.4	Sense of Place & / or Heritage Impact Index	<input checked="" type="checkbox"/>
(a)	The activity is in keeping with the surrounding environment and / or does not negatively impact on the affected area's sense of place and /or heritage	
(b)	The activity is not in keeping with the surrounding environment and will have a localised impact on the affected area's sense of place and/or heritage	
(c)	The activity is not in keeping with the surrounding environment and will have a significant impact on the affected area's sense of place and/ or heritage	
(d)	The activity is completely out of keeping with the surrounding environment and will have a significant impact on the affected area's sense of place and/ or heritage	
Please provide motivation for the impact rating of the above impact index:		
9.5	Pollution Impact Index	<input checked="" type="checkbox"/>
(a)	The activity will not give rise to any pollution	
(b)	The activity could give rise to pollution with low impacts.	
(c)	The activity could give rise to pollution with moderate impacts.	
(d)	The activity could give rise to pollution with high impacts.	
(e)	The activity could give rise to pollution with major impacts.	
Please provide motivation for the impact rating of the above impact index:		

Please note: Section 9 is to be completed after all specialist studies and input from Interested and Affected Parties have been obtained.

10. OTHER MANAGEMENT, MITIGATION AND MONITORING MEASURES

(a) Over and above the mitigation measures described above, please indicate any additional management, mitigation and monitoring measures.

As the finding of the assessment would indicate that the development has had, at most, a low impact on the environment for all phases assessed we conclude that the mitigation measures recommended and those management interventions contained in the EMP will suffice to ensure that the impacts remain well below levels that may cause significant environmental impact. No further mitigation is therefore recommended.

(b) Describe the ability of the applicant to implement the management, mitigation and monitoring measures.

As this is a running concern and recommended practices are already in place for the management, mitigation and monitoring of the development. The mitigation measures recommended in this assessment are practical and simple to execute not requiring technical specialists. The site has a permanent management staff compliment that is on site throughout the fire season with additional oversight by the Local Authority. Thus management oversight is present at all times. Furthermore this is a essential community service which provides for the fire fighting means to combat wildfires for both human and ecological benefit. The recommendations contained in this assessment and the EMPr are not complex to implement and the SCFPA as an established entity is in place to ensure that these measures are implemented. For these reasons we are of the opinion that the applicant is well placed to implement the recommended measures.

Please note: A draft ENVIRONMENTAL MANAGEMENT PROGRAMME must be attached this report as Appendix H.

SECTION G: ASSESSMENT METHODOLOGIES AND CRITERIA, GAPS IN KNOWLEDGE, UNDERLYING ASSUMPTIONS AND UNCERTAINTIES

(a) Please describe adequacy of the assessment methods used.

The assessment identified and reported on the significance of impact for the design and layout, construction, operational and decommissioning phase with assistance and inputs from the mandated state departments and civil society. It is our opinion that this approach is adequate in relation to the scope of the potential impacts posed by this proposed development.

(b) Please describe the assessment criteria used.

In assessing the potential impacts from this development a hierarchical process was followed that began at national scales with the South African Vegetation Map to determine the ecosystem type that was being investigated, National Spatial Biodiversity Assessment to determine the national conservation status of the ecosystem type, consultation of the list of threatened ecosystems, at a provincial scale through planning documents such as the Provincial Spatial Development Framework and the Local Authority SDF and IDP documents to check alignment with national, provincial and local scale forward planning. At a more local scale the Biodiversity Fine Scale Plans were consulted to determine the localised finer resolution scale impacts on Critical Biodiversity Areas and Ecological Support Areas. Planning documentation and best practice within the industry was used as an informant to guide recommendation in particular of layout and design which constituted the most important impacts of this proposed development.

At a finer scale still the property was assessed for potential impacts on vegetation within a CBA, heritage and through that to discern the most suitable site for placement of the development. This site was then assessed in relation to a no-go option. At the smallest scale impacts stemming from the development itself were evaluated in terms of layout and design and mitigation recommended

for potential environmental impacts assessed and evaluated. In the event of closure the system as a whole was evaluated to determine its resilience in terms of being able to rehabilitate post closure.

As the site was identified as a CBA specialist input was sourced from a botanist. Additionally as the potential impacts from a heritage perspective were unknown a specialist archaeologist was appointed to provide input on the NID and make the submission to Heritage Western Cape.

(c) Please describe the gaps in knowledge.

The key gap in knowledge would be that of the potential for heritage resources to be uncovered during the construction and operational phases, mitigation recommendations are therefore included in the EMP. At this juncture it is impossible to know what lies beneath the soils surface and a full evaluation is not warranted based on the surface and historical evidence. The regular monitoring of the effects of the development and appropriate reactive responses where applicable guided by experts should provide the means to respond effectively to this knowledge gap. Furthermore all information used in the assessment was used as-is and it was accepted that it was robust enough to draw conclusions. The natural environment is highly complex and this makes it very difficult to assess all potential impacts as the system is very dynamic.

(d) Please describe the underlying assumptions.

It is assumed that the spatial planning for the SDF and Biodiversity Sector Plan and the supporting documentation and inputs that were included in compiling this assessment were robust. It is assumed that information provided by the specialists, officials in the departments and those in civil society are valid and correct.

(e) Please describe the uncertainties.

Other than the uncertainty of what heritage resources may be uncovered or impacted upon as described above and the unpredictability of natural systems, none.

SECTION H: RECOMMENDATIONS OF THE EAP

In my view (EAP), the information contained in the Application Form, EIA Report and the documentation attached hereto is sufficient to make a decision in respect of the activity applied for.	YES	NO
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If "NO", list the aspects that should be further assessed through additional specialist input/assessment:

If "YES", please indicate below whether in your opinion the applicant should be directed to cease the activity or if it should be authorised:

Applicant should be directed to cease the activity:	YES	NO
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Please provide reasons for your opinion

The assessment in our opinion makes a clear argument in favour of the benefit in terms of social and economic opportunity cost for no loss to current extant biodiversity as the site was previously a fully transformed site with little biodiversity value and the opportunity to avoid potentially significant impacts from wildfires. This borne out by the fact that all negative impacts found low potential

impact with mitigation and medium positive impact for the ongoing operation of the facility. Additionally the area is strategically suited and the only viable option for the development of an emergency airstrip. The costs in terms of a loss of sense of place can be mitigated through the recommended operational approach. It is also well aligned and supported by I&AP's and the Local Authority. The facility has the benefit of contributing to both regional and national goals as a means of combatting the loss of human life, loss of livelihoods and the protection of important and valuable built infrastructure, in particular in the Western Cape. Primarily the proposed development is responding directly to a community need both as a provider of employment and as a service to the broader society and for the preservation of biological resources at the ecosystem level.

The assessment shows that the negative impacts on the geo-physical environment can be avoided. Biological impacts are considered to be negligible due to the historical disturbance to the site. Traffic impact will not occur as the current road and intersection infrastructure is satisfactory and meets with regulated requirements. Noise impacts will have impacts but these are considered to be low due to the real number of hours that the disturbance will occur. Furthermore these impacts can be mitigated through an operational approach that is considerate to the needs of the adjacent land users. We consider noise impacts to have an acceptable impact. Visual impacts can be adequately avoided and mitigated through the site design and layout and the existing presence of screening vegetation and the topography of the site. Archaeological impacts should not occur and paleontological impacts are unlikely due to the geological nature of the site. These impacts can be mitigated and avoided through monitoring and management of uncovered resources during construction and operational phases.

If you are of the opinion that the activity should be authorised, then please provide any conditions, including mitigation measures that should in your view be considered for inclusion in an authorisation.

1. All reasonable recommendations be they mitigation interventions detailed in the impact assessment portions and appendices of this report or the management recommendations contained in the Environmental Management Programme should be adhered to and fully implemented.
2. Any other permitting or licenses required must be obtained prior to the initiation of the activity.
3. Adherence to conditions of any other South African Resource Use legislation applicable to this development should be mandatory.

Required mitigation measures for heritage resources include the following

- In the event that excavations and earthmoving activities expose significant archaeological or heritage resources, such activities must stop and Heritage Western Cape must be notified immediately.
- If significant archaeological or heritage resources are exposed during construction activities, then they must be dealt with in accordance with the National Heritage

Resources Act (No. 25 of 1999) and at the expense of the developer.

- In the event of exposing human remains during construction, the matter will fall into the domain of the South African Heritage Resources Agency and will require a professional archaeologist to undertake mitigation if needed. Such work will also be at the expense of the developer.
4. At all times avoidance of impact on areas outside of the development should be achieved through the adequate demarcations of no go areas and enforcement ensured through on site management action. At all times the aim should be to keep the developed area to the absolute minimum required.
 5. Early detection of environmental impact and deterioration is only possible through an ongoing monitoring effort and this should be instituted for the full duration from construction to decommissioning. This is particularly important in terms of altered hydrology from denuded areas and the spots of seasonally wet soil.
 6. The developer, contractors, sub-contractors and staff permanently employed on the site must be made aware of the provisions for the mitigation of impact and the conditions contained in the EMPr. The developer must collaborate with the appointed ECO to ensure that the required awareness raising and education is undertaken when and where appropriate.
 7. Clearly articulated method statements for some of the provisions within the EMPr must be developed these to include e.g. waste treatment and disposal, storm water management etc.
 8. In terms of the flow of socio economic benefit derived from the development – preferentially appoint or use local people or businesses and in particular women, youth and disabled persons.
 9. An appropriately qualified Environmental Control Officer must be appointed by the proponent to ensure that the conditions of the EMPr are fulfilled and that regular monitoring of the development is undertaken.
 10. That the appointed ECO provide a final report to DEA&DP on completion of the activity to report on adherence to the conditions of the Environmental Authorisation.

If any changes to the EMPr or any incident occurs that may impact on water resource the Department of Water and sanitation must be informed immediately.

SECTION I: MOTIVATION FOR RESPONSE TO AN INCIDENT OR EMERGENCY SITUATION

This section is only applicable to instances where Section 49 A(2) of NEMA applies. Please list all steps that were taken in response to the incident or emergency situation.

NOT APPLICABLE

Please note: Section 30 of NEMA deals with the procedures to be followed for the control of emergency incidents and Section 30A deals with procedures to be followed in the case of emergency situations.

SECTION J: QUANTUM OF THE ADMINISTRATIVE FINE

Section 24G(4) of NEMA makes it mandatory for an applicant to pay an administrative fine as determined by the competent authority before the competent authority may take a decision on whether or not to grant *ex post facto* environmental authorisation or a waste management licence, as the case may be. The quantum of this fine may not exceed R5 million.

According to the pre-determined calculator the following factors below will be considered in determining the quantum of the section 24G administrative fine.

1.	Social Benefit Index	<input checked="" type="checkbox"/>
(a)	The activity provides no social service / infrastructure to the affected community	
(b)	The activity provides indirect social service / infrastructure to the affected community	
(c)	The activity provides some social service / infrastructure to the affected community	
(d)	The activity provides an important social service / infrastructure to the affected community	
(e)	The activity provides an essential social service / infrastructure to the affected community	
Please provide motivation for the impact rating of the above impact index:		
2.	Socio-Economic Impact Index	<input checked="" type="checkbox"/>
(a)	The activity will not give rise to any negative socio-economic impacts	
(b)	The activity could give rise to negative socio-economic impacts, but highly localised	
(c)	The activity could give rise to significant negative socio-economic and regionalized impacts	
(d)	The activity could result in wide-scale socio-economic impacts.	
Please provide motivation for the impact rating of the above impact index:		
3.	Biodiversity Impact Index	<input checked="" type="checkbox"/>
(a)	The activity will not give rise to any impacts on biodiversity	
(b)	The activity could give rise to localised biodiversity impacts	
(c)	The activity could give rise to significant biodiversity impacts	
(d)	The activity is likely to permanently / irreversibly transform/ destroy a recognised biodiversity 'hot-spot' or threaten the existence of a species or sub-species.	
Please provide motivation for the impact rating of the above impact index:		
4.	Sense of Place & / or Heritage Impact Index	<input checked="" type="checkbox"/>
(a)	The activity is in keeping with the surrounding environment and / or does not negatively impact on the affected area's sense of place and /or heritage	
(b)	The activity is not in keeping with the surrounding environment and will have a localised impact on the affected area's sense of place and/or heritage	
(c)	The activity is not in keeping with the surrounding environment and will have a significant impact on the affected area's sense of place and/ or heritage	
(d)	The activity is completely out of keeping with the surrounding environment and will have a significant impact on the affected area's sense of place and/ or heritage	
Please provide motivation for the impact rating of the above impact index:		
5.	Pollution Impact Index	<input checked="" type="checkbox"/>
(a)	The activity will not give rise to any pollution	

(b)	The activity could give rise to pollution with low impacts.	
(c)	The activity could give rise to pollution with moderate impacts.	
(d)	The activity could give rise to pollution with high impacts.	
(e)	The activity could give rise to pollution with major impacts.	
Please provide motivation for the impact rating of the above impact index:		

Having regard to the factors listed above, you are hereby afforded with an opportunity to make representations in respect of the calculation of the quantum of the administrative fine and as to why the competent authority should not issue a maximum fine of R5 million.

To be completed after the Public participation process

SECTION K: APPENDICES

The following appendices must, where applicable, be attached to this report:

Appendix		Tick the box if Appendix is attached
Appendix A:	Locality map	
Appendix B:	Site plan(s)	
Appendix C:	Colour Photographs	
Appendix D:	Biodiversity overlay map	
Appendix E:	Permit(s) / license(s) from any other organ of state including service letters from the municipality	
Appendix F:	Public participation information: including a copy of the register of interested and affected parties, the comments and responses report, proof of notices, advertisements and any other public participation information as required in Section C above.	
Appendix G:	Specialist Report(s), if any	
Appendix H :	Environmental Management Programme	
Appendix I:	Any Other (if applicable) (describe)	
Appendix J:	Certified copy of Identity Document of Transgressor / Applicant and certified copy/ies of the Title Deed/s of the site/property on which the unlawful activity/ies commenced.	

DECLARATIONS

THE APPLICANT

Note: Duplicate this section where there is more than one applicant

I,, in my personal capacity or duly authorised as (state capacity) by thereto hereby declare/affirm that the information contained in this report to be true and correct that I:

- am fully aware of my responsibilities in terms of the Environment Conservation Act, 1989 (Act No. 73 of 1989) the National Environmental Management Act of 1998 ("NEMA") (Act No. 107 of 1998), the Environmental Impact Assessment Regulations ("EIA Regulations") in terms of NEMA, and the relevant specific environmental management Act(s), and that failure to comply with these requirements may constitute an offence in terms of the environmental legislation;
- appointed the environmental assessment practitioner as indicated above, which meet all the requirements in terms of Regulation 13 of GN No. R982,, to act as the independent Environmental Assessment Practitioner for this application;
- have provided the environmental assessment practitioner and the competent authority with access to all information at my disposal that is relevant to the application;
- am fully aware of the administrative fine to be paid before a decision, with respect to the continuation of the listed activity(ies), will be made;
- will be responsible for the costs incurred in complying with the environmental legislation including but not limited to –
 - o costs incurred in connection with the appointment of the environmental assessment practitioner or any person contracted by the environmental assessment practitioner;
 - o costs incurred in respect of the undertaking of any process required in terms of this application;
 - o costs in respect of any fee prescribed by the Minister or MEC in respect of the regulations;
 - o costs in respect of specialist reviews, if the competent authority decides to recover costs;
 - o the provision of security to ensure compliance with the applicable management and mitigation measures; and
 - o fine costs
- am responsible for complying with the conditions that might be attached to any decision(s) issued by the competent authority;
- am aware that I may be issued with a directive and that I must comply with such a directive;
- have the ability to implement the applicable management, mitigation and monitoring measures; and
- hereby indemnify, the government of the Republic of South Africa, the competent authority and all its officers, agents and employees, from any liability arising out of, inter alia, the content of any report, any procedure or any action for which the applicant or environmental assessment practitioner is responsible.

Please Note: If acting in a representative capacity, a certified copy of the resolution or power of attorney must be attached.

Signature of the applicant:

Name of company:

Date:

THE INDEPENDENT ENVIRONMENTAL ASSESSMENT PRACTITIONER (“EAP”)

I,, as the appointed independent environmental practitioner (“EAP”) hereby declare/affirm that I:

- act/ed as the independent EAP in this application;
- regard the information contained in this report to be true and correct, and
- do not have and will not have any financial interest in the undertaking of the activity, other than remuneration for work performed in terms of the ECA , the NEMA, the Environmental Impact Assessment Regulations, 2014 and any specific environmental management Act(s);
- have and will not have any vested interest in the proposed activity proceeding;
- have disclosed, to the applicant and competent authority, any material information that have or may have the potential to influence the decision of the competent authority or the objectivity of any report, plan or document required in terms of the NEMA, the Environmental Impact Assessment Regulations, 2014 and any specific environmental management Act(s);
- am able to meet the responsibilities in terms of NEMA, the Environmental Impact Assessment Regulations (specifically in terms of Regulation 13 of GN No. R982,) and any specific environmental management Act, and am fully aware that failure to comply with these requirements may constitute and result in disqualification;
- have ensured that information containing all relevant facts in respect of the application was distributed or made available to interested and affected parties and the public and that participation by interested and affected parties was facilitated in such a manner that all interested and affected parties were provided with a reasonable opportunity to participate and to provide comments;
- have ensured that the comments of all interested and affected parties were considered, recorded and submitted to the competent authority in respect of the application;
- have kept a register of all interested and affected parties that participated in the public participation process; and
- have provided the competent authority with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not.

Note: The terms of reference must be attached.

Signature of the environmental assessment practitioner:

Name of company:

Date:

THE INDEPENDENT PERSON WHO COMPILED A SPECIALIST REPORT OR UNDERTOOK A SPECIALIST PROCESS

I, as the appointed independent specialist hereby declare that I:

- act/ed as the independent specialist in this application;
- regard the information contained in this report as it relates to my specialist input/study to be true and correct, and
- do not have and will not have any financial interest in the undertaking of the activity, other than remuneration for work performed in terms of the ECA, the NEMA, the Environmental Impact Assessment Regulations., 2014 and any specific environmental management Act(s);
- have and will not have any vested interest in the proposed activity proceeding;
- have disclosed, to the applicant, EAP and competent authority, any material information that have or may have the potential to influence the decision of the competent authority or the objectivity of any report, plan or document required in terms of the NEMA, the Environmental Impact Assessment Regulations and any specific environmental management Act(s);
- am fully aware of and meet the responsibilities in terms of NEMA, the Environmental Impact Assessment Regulations, 2014 (specifically in terms of Regulation 13 of GN No. R982) and any specific environmental management Act, and that failure to comply with these requirements may constitute and result in disqualification;
- have ensured that information containing all relevant facts in respect of the specialist input/study was distributed or made available to interested and affected parties and the public and that participation by interested and affected parties was facilitated in such a manner that all interested and affected parties were provided with a reasonable opportunity to participate and to provide comments on the specialist input/study;
- have ensured that the comments of all interested and affected parties on the specialist input/study were considered, recorded and submitted to the competent authority in respect of the application;
- have ensured that the names of all interested and affected parties that participated in terms of the specialist input/study were recorded in the register of interested and affected parties who participated in the public participation process; and
- have provided the competent authority with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not.

Note: The terms of reference must be attached.

Signature of the specialist:

Name of company:

Date:

APPENDIX A – Locality Map