

APPENDIX F

Impact Assessment: Proposed Transnet Security Wall Construction

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INTRODUCTION

A number of potential environmental impacts associated with the development, were identified by the project team and specialists. These impacts were considered by the Environmental Assessment Practitioner and are rated in this chapter with and without mitigation.

If suggested mitigation measures are implemented, it is highly likely that most negative environmental impacts would be reduced to low significance, other than the impact on wetlands that are on the Transnet property. There are no mitigation measures to alleviate the impact of wetland fragmentation. This is the only impact of high significance.

The proposed activity nevertheless aims to eliminate and at the very least drastically reduce foot traffic through the Transnet property where the very nature of operations on site could lead to injury or death. In addition to this the wall is also designed to prevent easy access to Transnet facilities and equipment that is being vandalised and stolen. The activity has been highlighted as need for safety and maintenance reasons and will not be in conflict with surrounding land uses.

The following criteria and methodology was adopted to evaluate the significance of potential impacts of the proposed development activities on its environment.

Table 1 Criteria used to determine the significance ratings

Criteria	Description
Spatial extent	The extent of impact describes the region in which the impact will be experienced: <ul style="list-style-type: none"> • Site specific • Local (< 2km from site) • Regional (within 30km of the site) • National
Intensity or Magnitude of impact	The intensity describes the magnitude or size of the impact: <ul style="list-style-type: none"> • High: Natural and/or social functions and/or processes are severely altered • Medium: Natural and/or social functions and/or processes are notably altered • Low: Natural and/or social functions and/or processes are negligibly altered
Duration	The duration is the time frame in which the impact will be experienced: <ul style="list-style-type: none"> • Temporary (<1 year) • Short term (1 to 6 years) • Medium term (6 to 15 years) • Long term (15 - 30 years) • Permanent
Probability	The probability of the impact occurring: <ul style="list-style-type: none"> • Improbable (little or no chance of occurring) • Probable (< 50% chance of occurring) • Highly probable (50% - 90% chance of occurring) • Definite (>90% chance of occurring)

Method for Rating of Impacts

Class	Description
Significance	<ul style="list-style-type: none"> • High: impacts of high magnitude locally for longer than 6 years and/or regionally and beyond. The impact results in major alterations to the environment even if effective mitigation measures are implemented and will have an influence on decision-making. • Medium: impacts of moderate magnitude locally to regionally in the short term. The impact results in medium alterations to the environment and can be reduced or eliminated by the implementation of effective mitigation measures. • Low to very low: impacts will be localised and temporary. Impacts result in minor

Class	Description
	<p>alterations to the environment and can easily be alleviated by the implementation of effective mitigation measures.</p> <ul style="list-style-type: none"> No impact: a potential concern or impact, which, upon evaluation, is found to have no significant impact at all.
Status	<p>The status is the overall effect on the environment:</p> <ul style="list-style-type: none"> Positive - a 'benefit' Negative - a 'cost' Neutral
Confidence	<p>The degree of confidence in predictions based on available information and specialist knowledge:</p> <ul style="list-style-type: none"> Low Medium High

IMPACT ASSESSMENTS

PLANNING AND DESIGN PHASE

The planning and design phase would include all activities which were undertaken prior to the commencement of construction. On site activities may include site surveying and inspections relevant to the design and final layout of the structure. These will all be low intensity, temporary activities and as such no significant impacts have been identified for this phase.

No direct, indirect or cumulative impacts were identified.

CONSTRUCTION PHASE

DIRECT IMPACTS:

Dust generation

There is a possibility that dust will be generated during the construction phase, particularly during high wind conditions. Trenching for wall foundations, stockpiled material and transport of material may create dust if not properly managed.

Mitigation

All earthworks must stop during high wind conditions.

Trench excavations should not take place on extremely windy days.

Construction vehicles must adhere to speed limits.

If fine building materials/sands are to be transported at the back of trucks, they must be adequately covered.

All stockpiled material needs to be covered or wet down to avoid the creation of dust.

Impact	Extent	Duration	Intensity	Probability	Significance without mitigation	Significance with mitigation	Status
Dust	Site	Temporary	Medium	Probable	Moderate	Low	Negative

Noise pollution

It can be expected that there will be an increase in noise levels during the site preparation and construction phase. The increase in noise will be associated with the operation of construction vehicles and equipment.

Noise pollution could potentially be a nuisance to neighbouring businesses and residents.

Mitigation

All construction vehicles must be in sound working order and meet the necessary noise level requirements.
 Restrict construction times to working and daylight hours only to minimise noise pollution.
 The normal municipal by-laws with regards to noise control must apply.
 Machinery should be fitted with the required mufflers, and notice given to surrounding residents prior to the commencement of construction.

Impact	Extent	Duration	Intensity	Probability	Significance without mitigation	Significance with mitigation	Status
Noise	Site	Temporary	Low	Highly probable	Low	Negligible	-

Worker and public health and safety

Non-adherence to danger signs and construction activity limits by the construction team and the general public could lead to loss of property, injury or loss of life.

Mitigation

Workers shall comply with all regulations as stipulated in the Occupational Health and Safety Act.
 Warning signs must be put up to warn the public of the potential dangers of a construction site.
 All staff should be equipped with PPE

Impact	Extent	Duration	Intensity	Probability	Significance without mitigation	Significance with mitigation	Status
Worker and public health and safety	Site	Temporary	Medium	Highly probable	Moderate	Low	Negative

Waste management

It is anticipated that the proposed development will produce solid waste in the form of building rubble such as excavated soil, excess concrete, etc. and general waste such as litter during the construction phase.

Mitigation

Failure to provide adequate sanitation facilities for the workforce may result in runoff transferring contaminants into the surrounding environment and wetland areas.
 Prior to commencement of construction a comprehensive waste management plan must be developed by the contractor and its contents shall be communicated to all site staff.
 The waste management plan shall include specifications for the minimisation of the amount of waste produced and the re-use of as much of the material as possible before disposing of waste off-site.
 Litter must be controlled during construction – adequate bins must be made available on site at all times. These must be made scavenger proof and must be emptied on a regular basis.
 Adequate ablutions facilities must be provided for construction workers, which must be regularly serviced. The ablutions must not be placed near the wetlands, but shall be located at least 100 meters away to reduce the risk of surface or groundwater pollution.
 Contaminated wastewater must be managed by the contractor to ensure existing water resources on the site are not contaminated.
 All wastewater from general activities in the camp shall be collected and removed from the site for appropriate disposal at a licensed waste handling facility.
 Construction materials stored at the camp site must be secured – i.e. plastics must be covered to prevent being blown off site. Skips must be regularly emptied and must be covered.
 Any hazardous materials, such as hydrocarbons, paint and thinners that need to be stored on site must be done so under lock and key.

Contractors must provide copies of waste manifests to Transnet in order to prove the legal disposal of the waste.

Impact	Extent	Duration	Intensity	Probability	Significance without mitigation	Significance with mitigation	Status
Waste management	Site	Temporary	Medium	Highly probable	Moderate	Low	Negative

Terrestrial biodiversity impacts

The terrestrial vegetation is heavily transformed and consists of mostly non-indigenous species. The floristic value of the site is considered low.

Mitigation

Work areas must be clearly demarcated with danger tape so that construction workers limit their impact to these areas alone.

All construction vehicles must stay on single demarcated access tracks

Rehabilitation should be undertaken in a progressive manner. Re-vegetation of the disturbed areas with indigenous material should be undertaken as soon as construction activities at an individual site have been completed.

Safe cooking areas must be provided for staff and no open fires must be allowed on site. Gas can be provided for cooking.

All construction staff must receive training on environmentally safe work methods.

All alien vegetation within the development footprint should be cleared and removed from site.

Impact	Extent	Duration	Intensity	Probability	Significance without mitigation	Significance with mitigation	Status
Terrestrial biodiversity impacts	Local	Short term	Medium	Probable	Moderate	Low	Negative

Aquatic biodiversity impacts

The project footprint, with or without mitigation would result in the loss of some of the wetland areas within the study area

Mitigation:

Where possible wetland areas should be avoided by realigning the security wall in these areas.

Work areas must be clearly demarcated with danger tape so that construction workers limit their impact to these areas alone.

All construction vehicles must stay on single demarcated access tracks

Rehabilitation should be undertaken in a progressive manner. Re-vegetation of the disturbed areas with indigenous material should be undertaken as soon as construction activities at an individual site have been completed.

Impact	Extent	Duration	Intensity	Probability	Significance without mitigation	Significance with mitigation	Status
Aquatic biodiversity impacts	Local	Long term	Medium	Probable	High	Moderate	Negative

Traffic Impacts:

During the construction phase construction vehicles will be utilizing the existing road network; this may result in the impeding of traffic and damage to existing roads. Increased construction traffic volumes create a potential for an increase in collisions, particularly at intersections, between construction vehicles and public vehicles or pedestrians.

Mitigation

As far as possible, construction vehicles must not utilize public roads during peak hours

Apart from standard law enforcement measures such speed enforcement, road worthiness of construction vehicles should be checked and vehicles should be checked for overloading

Flag staff should also regularly patrol areas especially on site to prevent on-site incidents.

Impact	Extent	Duration	Intensity	Probability	Significance without mitigation	Significance with mitigation	Status
Traffic Impacts	Local	Short term	Low	Probable	Low	Negligible	-

Impacts on Archaeological sites:

While it is highly unlikely that objects or features of cultural or historical significance will be found in the area due to the disturbed nature of the site, a Phase 1 HIA will be conducted.

Mitigation

Should any archaeological or cultural sites or objects be located during the construction of the proposed development or any associated infrastructure, it should immediately be reported to the National Heritage Council. Failure to report a site or object of archaeological and/or cultural significance is a contravention of the National Heritage Act (Act No. 25 of 1999).

All construction site staff should be briefed to immediately report any sites or objects, which are located during the construction of the facility. In the event of finding what appears to be an archaeological site or a cultural and/or historic site or object, work should be terminated until a qualified archaeologist or historian can examine the item or find.

Impact	Extent	Duration	Intensity	Probability	Significance without mitigation	Significance with mitigation	Status
Archaeological impacts	Local	Short term	Low	Probable	Low	Negligible	-

INDIRECT IMPACTS:

No indirect Impact were identified

CUMULATIVE IMPACTS:

Social impacts: A risk to people safety as a result of crossing the Transnet property is already in existence. This risk may increase as a result of construction activities on site. However, this impact is considered to be in the short term and can be mitigated by ensuring that the construction site is fenced off and that adequate signage is in place at all times. This impact is considered to be of moderate significance before mitigation and moderate significance after mitigation.

OPERATIONAL PHASE

DIRECT IMPACTS:

Increased safety and security

The aim of the wall is to eliminate and at the very least drastically reduce foot traffic through the Transnet property where the very nature of operations on site could lead to injury or death. In addition to this the wall is also designed to prevent easy access to Transnet facilities and equipment that is being vandalised and stolen. The wall will address these issues and reflects a positive impact on the surrounding community and Transnet.

Mitigation:

No further mitigation is required as this is a positive impact.

Impact	Extent	Duration	Intensity	Probability	Significance	Status
Safety and security	Site	Permanent	Medium	Highly probable	High	Positive

INDIRECT IMPACTS:

No indirect impact were identified

CUMULATIVE IMPACTS:

No cumulative impacts have been identified.

DECOMMISSIONING AND CLOSURE PHASE

The proposed development can be considered permanent and no decommissioning will be undertaken in the foreseeable future. Potential impacts were therefore not assessed for the decommissioning or closure of the wall.

NO-GO OPTION

PLANNING AND DESIGN PHASE

No direct, indirect or cumulative impacts were identified.

CONSTRUCTION PHASE

No direct, indirect or cumulative impacts were identified.

OPERATIONAL PHASE

DIRECT IMPACTS

Safety and Security:

The safety of the surrounding community and the security of Transnet assets will continue to be compromised in the absence of a security wall.

Mitigation

Transnet shall increase their security detail to protect their assets on site.

In addition this construction of the security wall will significantly mitigate this impact.

Impact	Extent	Duration	Intensity	Probability	Significance without mitigation	Significance with mitigation	Status
Safety and Security	Local	Long term	Moderate	Probable	High	Low	Negative

DECOMMISSIONING AND CLOSURE

It is highly unlikely that the wall will be decommissioned. No direct, indirect or cumulative impacts were identified.