

## CHAPTER 6 CONTENTS

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## 6 CONSEQUENCES

### 6.1 Defining the Implications of the Impacts for Decision-Making

In the specialist studies, impacts were defined as a potential change to the environment as a result of the construction or operation of the proposed project. From twenty-nine specialist studies, as well as the identification of impacts by the EAP during the Basic Assessment process, a myriad of potential impacts were identified and significance ascribed to each of those impacts, as the EIA regulations require.

In order to provide simplification, it is necessary to recognise that many of the impacts presented in the preceding chapter, are in fact a series of changes that result in one overarching consequence. For example increased alien vegetation, increased soil erosion and pollution of watercourses are all presented as separate impacts but the consequence of all the impacts is to potentially result in a material reduction of the environmental quality. It is this consequence that is central to the decision making process.

As such, the approach has been to interrogate the specialist studies and identify and describe the collective implications of all the impacts presented. In the process a distinction is then made between the collective implication of the various impacts (e.g. material reduction of environmental quality) and the causes of the implication (e.g. increased alien vegetation, increased soil erosion and pollution of watercourses etc.). These implications have then been presented as either potential environmental costs (where the implications are negative) or as potential environmental benefits (where the implications are positive). Please refer to the figure below for an illustration of consequences derived from various impacts as will be discussed in the sections to follow.

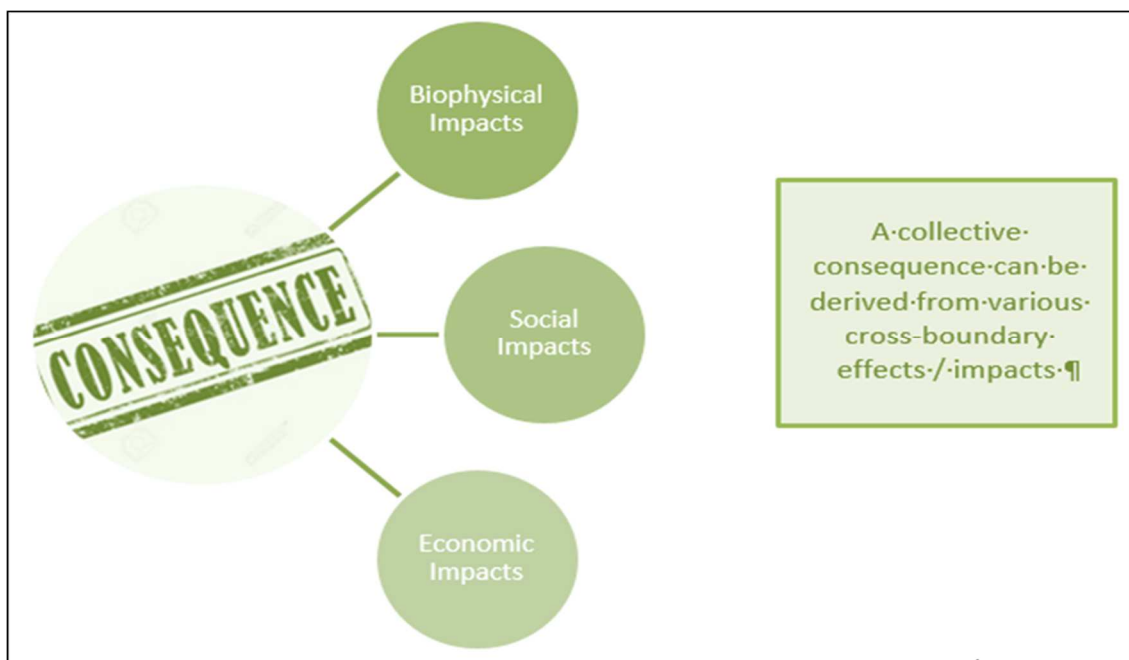


Figure 6-1: Illustration of Consequences Derived from Various Impacts

### 6.1.1 Environmental Costs

The following potential environmental costs have been identified from the specialist studies that were conducted for the Basic Assessment on the proposed development:

- Social Reductions / Deteriorations
  - Nuisance (Noise, Aesthetics, Traffic, Dust, Landowner Disturbance etc.)
  - Loss of Heritage Features
  - Reduction of Livelihoods
  - Social Ills and Diseases (Increased Morbidity)
  - Traffic Congestion
  
- Biophysical Reductions / Deteriorations
  - Material Reductions in Environmental Quality resulting from the following:
    - Destruction of Indigenous Vegetation and Protected Plant Species
    - Spread of Alien invasive Plant Species
    - Erosion / Sedimentation / Turbidity
    - Reduced Water Quality of Wetlands, Watercourses and Water Resources including the iLovu and uMsimbazi Estuaries and Groundwater Resources.

### 6.1.2 Potential Environmental Benefits

The following potential benefits have been identified from the specialist studies that were conducted for the proposed development:

- Socio-Economic Benefits:
  - Improved human Welfare and Opportunities to Create Livelihoods
  - Investment and Upskilling of the Local Community
  - Skills transfer and capacity building in local community
  
- Biophysical Benefits:
  - Ecological Linkages
  - Wetland Offsetting
  - Decommissioning of the P491 Road
  - Ecosystem Enhancement and a Decrease in Alien Plant Infestations
  - Increased Protection of Critical Biodiversity Areas.

### 6.1.3 Nuisance

Nuisance was determined to be a **MODERATE LOW** inherent risk. The most significant causes of irritation and nuisance to surrounding residents is listed as follows:

- Noise Generation
- Change in Aesthetics/Sense of Place
- Unacceptable Social Behaviour
- Dust/deterioration of air quality
- Traffic congestion

(a) Noise Generation

Noise will result from the movement of vehicles, trucks and other associated machinery used during the construction phase. However, the noise associated with construction activities will be of short term, localised and will only last during the construction phase of the project.

The noise impacts will have very low significance, provided the recommended mitigation measures are implemented.

(b) Dust/deterioration of air quality

Construction related environmental pollution impacts due to possible dust pollution and increased vehicle exhaust emissions may arise. The appointed Contractors will be responsible for ensuring the health and safety of their employees, in line with the requirements of the Occupational Health and Safety Act. Such compliance will, by extension, protect / limit exposure of the surrounding residents to environmental pollution impacts.

(c) Change in Aesthetics/Sense of Place

The presence of construction vehicles, equipment and construction rubble / stockpiles may be unsightly if no proper mitigation measures are in place. However, this impact will be of a short-term duration and will only take place during the construction phase.

(d) Unacceptable Social Behaviour

This impact is defined as types of behaviour that may be considered deviant or antisocial, such as excessive alcohol consumption, illegal drug use, prostitution, petty crime and vandalism. It is expected that this potential impact would only occur to a certain degree during the construction phase. There is a risk that the presence of “incoming” workers and or the influx of jobseekers can exacerbate deviant social behaviour in the communities they occupy.

(e) Traffic Congestion

It is anticipated that the project may have a short-term negative impacts on the local road network, as a result of the closure of lanes where construction will take place during development. However, this will be a short-term impact as it will only take place during construction. This may lead to traffic congestion and delays, as well as inconvenience and frustration for road users, especially the residents.

***Based on all of the causes above, the likelihood of Nuisances occurring was determined to be Likely to Highly Likely resulting in a Low to Moderate residual risk.***

**Table 6-1: The Residual Risk of Nuisance**

Environmental Cost	NUISANCE							
Inherent risk	MODERATE – LOW							
Causes of risk	Likelihood of causes							
	Powerline Option 1	Powerline Option 2	Powerline Option 3	Site Access Option 0	Site Access Option 1	Site Access Option 1c	Site Access Option 1d	Site Access Option 3b
Noise	Likely	Likely	Likely	Definite	Likely	Highly Likely	Highly Likely	Highly Likely
Aesthetics/Sense of Place	Unlikely but possible	Likely	Likely	Unlikely	Likely	Highly Likely	Highly Likely	Definite
Unacceptable Social Behaviour	Highly Likely	Highly Likely	Highly Likely	Likely	Likely	Highly Likely	Highly Likely	Highly Likely
Traffic congestion	Unlikely but possible	Unlikely but possible	Unlikely but possible	Highly Likely	Unlikely but possible	Highly Likely	Likely	Unlikely but possible
Dust generation/air quality	Likely	Likely	Likely	High Likely	Likely	Likely	Likely	Highly Likely
Likelihood of consequence	Likely	Likely	Likely	Highly Likely	Likely	Highly Likely	Highly Likely	Highly Likely
Residual risk	Low	Low	Low	High	Low	Moderate	Moderate	Moderate

#### 6.1.4 Heritage Resources

The environmental cost of a loss of Heritage Resources is a **MODERATE** inherent risk.

Heritage sites have special attributes which contribute to the cultural identify of a local population and of humanity as a whole. Heritage sites may be related to religious and cosmological beliefs, constitute a source of aesthetic inspiration, can provide wildlife sanctuaries and form the basis of important local traditions.

The proposed development site comprises a hugely modified landscape in terms of heritage significance due to extensive sugar cane cultivation and existing infrastructure such as roads and services infrastructure.

If any items or artefacts deemed to have any significant importance are uncovered during the construction phase of the project, the necessary actions as outlined within this report must be implemented.

Therefore the likelihood of this consequence was considered to be **unlikely but possible** resulting in a **Moderate Residual Risk**.

***Therefore, the likelihood of the Loss of Heritage Resources was considered to be Unlikely but possible, resulting in a Moderate residual risk.***

**Table 6-2: The Residual Risk of Heritage Resources**

Environmental Cost	<b>HERITAGE RESOURCES</b>							
Inherent risk	<b>MODERATE</b>							
Causes of risk	Likelihood of causes							
	Powerline Option 1	Powerline Option 2	Powerline Option 3	Site Access Option 0	Site Access Option 1	Site Access Option 1c	Site Access Option 1d	Site Access Option 3b
Degradation of Heritage and Archaeological Resources	Unlikely but possible	Highly Likely	Unlikely but possible	Highly Unlikely	Unlikely	Unlikely	Unlikely	Unlikely
Likelihood of consequence	Unlikely but possible	Highly Likely	Unlikely but possible	Highly Unlikely	Unlikely	Unlikely	Unlikely	Unlikely
Residual risk	Moderate	Moderate	Moderate	Low	Moderate	Moderate	Moderate	Moderate

### 6.1.5 Temporary Reduction in the Creation of Livelihoods during the Construction Phase

At its simplest, livelihood is defined as a 'means of securing the necessities of life' and there is concern that the proposed project will have the effect of reducing people's livelihood. Reduction in livelihoods was therefore determined to be **MODERATE** inherent risk.

The most significant causes of a potential reduction in livelihoods in the surrounding community were grouped as follows:

- Influx of temporary workers and their impact on the local community
- Social ills and diseases (increased morbidity)
- Concerns about governance, transparency and equal benefit

#### (a) Influx of temporary workers, Social Ills and Diseases

Construction projects often attract optimistic work seekers from near and far that are looking for opportunities to improve their living standard through employment. Rumour of a proposed development is often enough to make people decide to move to the area.

Construction companies often have a core skill of labourers with specialised skills that travel with them from site to site. The in-migration of people to an area is often associated with a number of social ills, such as drug and alcohol abuse, unwanted pregnancies, increase in crime, increase in sexually transmitted diseases and HIV/AIDS, cultural changes and additional pressure on infrastructure. Given that there are several vulnerable groups in the area, the potential impact of social ills on these groups is an additional concern.

The Client will need to make a concerted effort to make preferential use of local labour for low / unskilled positions as well as create awareness regarding the potential concerns that may arise in local communities should an influx for temporary workers be experienced in the area.

Furthermore, there could be a rise in informal settlements. The local authorities must be vigilant of the potential for this to take place and plan accordingly. Criminal activities may also rise with the influx of people to the area. From the outset, there should be sustained stakeholder engagement sessions with the surrounding communities, tribal authorities, councillors and any other relevant stakeholders to make clear the availability of employment opportunities that may or may not arise as a result of the development of the KZN ASP so as to ensure there are no unrealistic expectations regarding employment opportunities.

#### (b) Concerns about Governance, Transparency and Equal Benefit

Proposed projects and developments often generate uncertainty, anxiety or fear and sometimes, the impacts perceived in anticipation of the planned intervention, can be greater than the impacts that ultimately result from the intervention. The risk is likely for this project.

These impacts include uncertainty, annoyance, dissatisfaction due to a failure of the project to deliver promised benefits and an experience of moral outrage.



***Based on all of the causes above, the likelihood of Reduction in Livelihoods occurring was determined to be Likely resulting in a Moderate residual risk.***

**Table 6-3: The Likelihood of Reduction in Livelihoods**

Environmental Cost	<b>REDUCTION IN LIVELIHOODS</b>							
Inherent risk	<b>MODERATE</b>							
Causes of risk	Likelihood of causes							
	Powerline Option 1	Powerline Option 2	Powerline Option 3	Site Access Option 0	Site Access Option 1	Site Access Option 1c	Site Access Option 1d	Site Access Option 3b
Influx of temporary workers and job seekers	Highly Likely	Highly Likely	Highly Likely	Highly Likely	Highly Likely	Highly Likely	Highly Likely	Highly Likely
Social ills and diseases (increased morbidity)	Likely	Likely	Likely	Likely	Likely	Likely	Likely	Likely
Likelihood of consequence	Likely	Likely	Likely	Likely	Likely	Likely	Likely	Likely
Residual risk	<b>Moderate</b>	<b>Moderate</b>	<b>Moderate</b>	<b>Moderate</b>	<b>Moderate</b>	<b>Moderate</b>	<b>Moderate</b>	<b>Moderate</b>

### 6.1.6 Material Reductions in Terrestrial Ecology

Material reductions in biophysical environmental attributes constitutes a **MODERATE-HIGH** inherent risk. The potential material reductions in terrestrial ecology will be brought about by the combination of disturbance to the critically endangered vegetation types, the loss of indigenous vegetation during vegetation clearance activities as well as the degradation of sensitive watercourse features situated throughout the study area.

The most significant causes of a potential reduction in material reductions in biophysical environmental attributes were as follows:

- Destruction of indigenous vegetation and faunal habitat
- Spread of alien invasive plant species
- Changes to ecological linkages and overall biodiversity of terrestrial ecosystems, freshwater ecosystems and estuaries
- Destruction of plant species of conservation concern and/ protected plant species
- Loss of ecosystem services and ecological corridors
- Permanent loss of wetland
- Pollution of drainage lines, wetlands, downstream watercourses and estuaries
- Altered hydrological processes, water quantity changes, erosion / sedimentation regimes
- Loss of ecosystem services and ecological corridors
- Change in quality and quantity of hydrological attributes of the estuaries

The detailed impact assessment indicates that the overall significance of the impact significance associated with the above impacts can be mitigated to moderate to low negative significance.

***Based on all of the causes above, the likelihood of Material Reductions in Biophysical Environmental Attributes was determined to be Unlikely but Possible for the powerline options resulting in a Low residual risk, and Highly Likely to Unlikely but Possible for the ASP and site access options resulting in a High to Moderate residual risk.***

**Table 6-4: The Likelihood of Biophysical Reductions / Deteriorations**

Environmental Cost	<b>BIOPHYSICAL REDUCTIONS / DETERIORATIONS</b>							
Inherent risk	<b>MODERATE-HIGH</b>							
Causes of risk	Likelihood of causes							
	Powerline Option 1	Powerline Option 2	Powerline Option 3	Site Access Option 0	Site Access Option 1	Site Access Option 1c	Site Access Option 1d	Site Access Option 3b
Disturbance of species constituting conservation value	Unlikely but possible	Unlikely but possible	Unlikely but possible	n/a	Unlikely but possible	Definite	Definite	Unlikely but possible
Loss and disturbance of indigenous vegetation	n/a	Unlikely but possible	Unlikely but possible	n/a	Definite	Definite	Definite	Unlikely but possible
Degradation of sensitive watercourse features	Unlikely but possible	Unlikely but possible	Unlikely but possible	n/a	Highly likely	Highly likely	Highly likely	Unlikely but possible
Spread of alien invasive plant species	Unlikely but possible	Unlikely but possible	Unlikely but possible	Likely	Highly likely	Highly likely	Highly likely	Likely
Erosion / sedimentation / turbidity	Unlikely but possible	Unlikely but possible	Unlikely but possible	Likely	Highly likely	Highly likely	Highly likely	Highly likely
Loss of ecosystem services and ecological corridors	Unlikely but possible	Unlikely but possible	Unlikely but possible	n/a	Likely	Highly likely	Unlikely but possible	Highly unlikely
<b>Likelihood of consequence</b>	Unlikely but possible	Unlikely but possible	Unlikely but possible	n/a	Highly likely	Highly likely	Highly likely	Unlikely but possible
<b>Residual risk</b>	<b>Low</b>	<b>Low</b>	<b>Low</b>	n/a	<b>High</b>	<b>High</b>	<b>High</b>	<b>Moderate</b>

### 6.1.7 Improved Environmental Quality

Improved environmental quality associated with the proposed development has been determined to constitute a **MODERATE** inherent benefit, involving the following main activities.

(a) Ecological linkages/corridors between the two estuaries

The proposed development layout avoids construction of platforms in the steep valleys and other areas supporting natural vegetation. However, should the construction footprint extend beyond the current development footprint, there could be destruction and degradation of the natural vegetation. In addition, edge effects from construction activities are expected. These natural areas comprise high species richness and support populations of plant species of conservation concern as well as provincially protected plant species. These habitats also perform important functions as ecological corridors and habitat filtration mechanisms as wooded drainage lines upstream of the uMsimbazi and iLovu Estuaries. The uMsimbazi Estuary is a biodiversity hotspot and the iLovu Estuary is also a significant ecological asset. With the ecological linkages proposed between the two estuaries i.e. construction of culverts within the central boulevard on site, the impact will be moderate positive as it will facilitate the improvement in stream and wetland function and linkages with the estuary habitat, carrying capacity and aquatic migration routes.

(b) Wetland offsetting compensates for the direct loss of wetland habitat and ecosystem services provided by the wetlands on the development property

The offset process will seek to rehabilitate and enhance the degraded wetlands on the iLovu and uMsimbazi floodplains. Impacts will be positive and lead to gains in wetland habitat condition and wetland functioning.

Final offset requirements for the ASP development were quantified as **20.2** functional equivalents and **13.9** habitat equivalents, which was based on an assessment of wetland condition and functionality that factored an estimated 'Best Practical Rehabilitated State' for the various wetland habitats to be transformed. These were adopted as the wetland offset 'targets' for the ASP development and the extent of 'gains' that need to be achieved through the rehabilitation and management of appropriate offset sites.

The split of wetland loss between the iLovu and uMsimbazi catchment areas was also evaluated and showed a higher level of habitat and functional loss (~60%) likely to be associated with wetlands located within the catchment area of the uMsimbazi Estuary when compared with the iLovu catchment (~40%).

A process of identifying, screening and prioritizing suitable offset receiving areas was undertaken as part of the wetland offset planning process and resulted in two wetland areas being selected in consultation with regulatory authorities:

- Site A: iLovu - The targeted wetland is roughly 56 hectares in extent and includes a large, naturally unchannelled valley bottom wetland, which transitions into a channelled section that forms part of the floodplain of the iLovu River.
- Site B: uMsimbazi - The targeted wetland area is approximately 20 hectares in extent and includes a naturally channelled valley bottom wetland that enters from the north (Draining the ASP site) and a broader floodplain area that extends along the uMsimbazi Estuary.

Both offset sites are located within the estuarine functional zone and as such, would seek to support natural estuarine processes. Therefore, there are significant wins that are proposed as part of the wetland offset plan and improvement of estuarine biodiversity.

(c) Decommissioning of the P491 Road

The provincial road P491, which is in a state of disrepair, is situated within the Estuarine Functional Zone of the uMsimbazi Estuary and is currently responsible for a number of negative impacts on the estuary and biophysical environment surrounding it. Negative impacts include the spread of invasive alien plant species, illegal dumping of solid waste, pollution associated with the disintegrating road surface, and interference with the natural flows of the estuary due to the physical barrier. In order to help compensate for negative impacts, and as part of the offset strategy, this road should be decommissioned and the area rehabilitated and restored to estuarine habitat.

As this road currently serves as a direct link, mainly for pedestrian traffic, between the P197 and the R102, a strategy would need to be discussed with the relevant authorities to find a solution for maintaining the link for people and still achieving the decommissioning required for ecosystem enhancement. A suggestion would be to construct an elevated boardwalk for pedestrian traffic only.

The extreme eastern end of the P491 is currently used by a private landowner for access to the R102. This portion of the road would need to be maintained to allow the landowner access to the land parcel.

Similarly, the extreme western end of the P491 will serve as a link from the proposed sewer pump station to the P197. This portion of the road would need to remain intact and converted to a municipal service road.

(d) Ecosystem enhancement and decrease in alien plant infestations

In order to enhance ecological infrastructure and strengthen ecosystem services in the landscape, the natural areas that fall within the development site can be rehabilitated and habitat restored to structurally sound forest and wetland. This restoration process must include the removal of all existing alien plant infestations from the wooded drainage lines, coastal thicket, and wetland areas, and include planting of appropriate indigenous species. This

can become a positive impact, should the proposed development be authorised, and could help compensate for negative impacts.

(e) Increased protection for Critical Biodiversity Areas

The areas that support natural vegetation and habitat in the study area are all classified as CBA: Irreplaceable according to the KZN BSP (Escott et al., 2016<sup>1</sup>). This includes the coastal thicket/scrub within the steep valleys and drainage lines on site. As part of the restoration process on site, there would be removal of all existing alien plant infestations as required by NEMBA, as well as planting of appropriate indigenous species within these CBA's. In addition, this CBA along with the other rehabilitated areas in the study area (including wetlands) could then be proclaimed as formally protected conservation servitudes through D'MOSS. This can become a positive impact, should the proposed development be authorised, and could help compensate for negative impacts.

***Based on all of the improvements above, the likelihood of Improved Environmental Quality occurring was determined to be Definite resulting in a Moderate residual benefit.***

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<sup>1</sup> Escott, B.J., Elliott, F. and Livingstone, T-C. (eds)(2016): KwaZulu-Natal Biodiversity Spatial Planning Terms and Processes, Version 3.3, Unpublished Report, Biodiversity Spatial Planning and Information Division, Ezemvelo KZN Wildlife.

**Table 6-5: The Likelihood of Improved Environmental Quality**

Environmental Benefit	<b>IMPROVED ENVIRONMENTAL QUALITY</b>							
Inherent benefit	<b>MODERATE</b>							
Causes of benefit	Likelihood of causes							
	Powerline Option 1	Powerline Option 2	Powerline Option 3	Site Access Option 0	Site Access Option 1	Site Access Option 1c	Site Access Option 1d	Site Access Option 3b
Ecosystem enhancement and decrease in alien plant infestations	n/a	n/a	n/a	n/a	Definite	Definite	Definite	Definite
Increased protection for CBAs	n/a	n/a	n/a	n/a	Definite	Definite	Definite	Definite
Likelihood of consequence	n/a	n/a	n/a	n/a	Definite	Definite	Definite	Definite
Residual benefit	n/a	n/a	n/a	n/a	Moderate	Moderate	Moderate	Moderate

### 6.1.8 Improved Human Welfare

As with all projects, we can't ignore the benefits to society. Improved human welfare has therefore been determined to be **MODERATE-HIGH** inherent benefit. Through this impact assessment, the following will result in an overall improved human welfare:'

- Employment creation and decrease in unemployment
- Labour opportunities for vulnerable groups such as youth and women
- Associated project expenditure and investment
- Skills transfer and capacity building

***Overall there would be positive benefits to the surrounding local communities and Municipality resulting in a High residual benefit.***



**Table 6-6: The Likelihood of Improved Human Welfare**

Environmental Benefit	<b>IMPROVED HUMAN WELFARE</b>							
Inherent Benefit	<b>MODERATE - HIGH</b>							
Causes of benefit	Likelihood of causes							
	Powerline Option 1	Powerline Option 2	Powerline Option 3	Site Access Option 0	Site Access Option 1	Site Access Option 1c	Site Access Option 1d	Site Access Option 3b
Employment creation and decrease in unemployment	Likely	Likely	Likely	Highly Likely	Highly Likely	Highly Likely	Highly Likely	Highly Likely
Opportunities for vulnerable groups such as youth and women	Likely	Likely	Likely	Likely	Likely	Likely	Likely	Likely
Skills transfer and capacity building	Definite	Definite	Definite	Likely	Likely	Likely	Likely	Likely
Associated project expenditure and investment – expanded manufacturing base	Highly Likely	Highly Likely	Highly Likely	Highly Likely	Highly Likely	Highly Likely	Highly Likely	Highly Likely
Likelihood of consequence	Highly Likely	Highly Likely	Highly Likely	Highly Likely	Highly Likely	Highly Likely	Highly Likely	Highly Likely
Residual benefit	High	High	High	High	High	High	High	High

## 6.2 Conclusion and EAPs Recommendations

All key issues associated with the alternatives for this project, as identified during the Basic Assessment, have been investigated by the specialist team and categorised in terms of their biophysical and socio-economic parameters (please refer to **Appendix D** for the specialist reports). Following the assessment of the implications of the impacts for decision-making, the consequences and residual risk and benefits associated with the development of the proposed KZN ASP and associated sewer pipeline and 132kV powerline were summarised as follows:

- The likelihood of Nuisances occurring was determined to be Likely to Highly Likely resulting in a Low to Moderate residual risk. Such nuisances can be mitigated and are included in the EMPr.
- The likelihood of the Loss of Heritage Resources was considered to be Unlikely but Possible, resulting in a Moderate residual risk. Although the possibility of encountering previously unidentified heritage resources such as burial sites is low, should such sites be exposed during subsurface construction work, the chance finds process must be implemented where necessary. From a heritage and archaeological perspective, the proposed ASP site and access points are feasible.
- The likelihood of Reduction in Livelihoods occurring was determined to be Likely resulting in a Moderate residual risk. A concerted effort must be made to make preferential use of local labour for low / unskilled positions. Furthermore, the local authorities must be vigilant of the potential for informal settlements and an increase in criminal activities to take place and plan accordingly.
- The likelihood of Material Reductions in Biophysical Environmental Attributes was determined to be Unlikely but Possible for the sewer line and powerline options resulting in a Low to Moderate residual risk. All impacts can be mitigated and are included in the EMPr. The powerline Option 1 is the most feasible alternative and can be authorised with the condition that the entire route is fitted with anti-collision devices such as bird flight diverters / flappers.
- The likelihood of Material Reductions in Biophysical Environmental Attributes for the ASP and site access options was determined to be Highly Likely to Unlikely but Possible resulting in a High to Moderate residual risk. This implies that if the project is authorised, strict conditions and high levels of compliance and enforcement must be applied.
- Based on all of the improvements above, the likelihood of Improved Environmental Quality occurring was determined to be Definite resulting in a Moderate residual benefit.
- Overall there would be positive benefits to the surrounding local communities and Municipality resulting in a High residual benefit.
- According to the detailed impact assessment road access Option 1 is the preferred alternative, although Option 3b is also feasible. Option 1 maybe authorised with strict conditions (see below) and high levels of compliance and enforcement.

### 6.2.1 Conditions for the Authorisation

The authorisation of the development must include the following conditions, as per the specialist studies in Appendix D:

- 1) All environmental enhancements described in section 6.1.7 of this chapter must be realised;
- 2) An Advisory Committee comprised of conservation authorities including the EPCPD, EKZNW, EDTEA, DWS, DEA and DAFF must be established to guide the requirements of the project from an environmental perspective;
- 3) In order for habitat and landscape degradation to be prevented, the current development footprint and features of the layout designed to minimise impacts on the surrounding natural areas must not be altered;
- 4) For the potential impacts on water quality and quantity changes in the estuaries to be mitigated, storm water must be managed as per the Storm Water Management Plan (SWMP) compiled by SRK (October 2019<sup>2</sup>);
- 5) On-site rehabilitation of wetlands must be undertaken and guided by the on-site wetland rehabilitation plan compiled by Eco-Pulse and GroundTruth (September 2019<sup>3</sup>);
- 6) Wetland offsets must be implemented according to the Wetland Offset Management Plan compiled by Eco-Pulse (Macfarlane and Teixeira-Leite, 2019<sup>4</sup>);
- 7) The formal process for the decommissioning of the road P491, led by the KZN Department of Transport (KZN DoT), must begin as soon as notification of the authorisation and subsequent appeals process is complete;
- 8) In order to help compensate for negative impacts resulting from the proposed development, a rehabilitation and restoration plan must be written by a suitably qualified restoration ecologist and implemented by a suitably qualified rehabilitation specialist with experience in working with forest habitats, for the natural areas that fall within the development site, and immediately adjacent. This restoration process must include the removal of all existing alien plant infestations from the wooded drainage lines, coastal thicket, and wetland areas, and include planting of appropriate indigenous species to restore the habitat to structurally intact forest and wetland. This rehabilitation and restoration plan must include long-term follow-up, monitoring and evaluation.
- 9) For the entire operational phase of the development, the natural areas in the development site must be monitored for invasive alien plant species, and immediately controlled by ecologically accepted techniques. The use of herbicides must be strictly prohibited to avoid impacting on sensitive habitats downstream;

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<sup>2</sup> SRK Consulting (South Africa) (Pty) Ltd. (2019) Stormwater Management Plan for an Automotive Supplier Park – Illovo, KwaZulu-Natal, SRK Project Number 541640\_SWMP, 16 October 2019.

<sup>3</sup> Eco-Pulse & GroundTruth. 2019. Dube TradePort Automotive Supply Precinct in the eThekweni Municipality, KwaZulu-Natal: Wetland & Riparian Zone Rehabilitation Plan. Specialist Report prepared by Eco-Pulse Consulting and GroundTruth Engineering for Dube TradePort Corporation. Revision No.: 3.0. September 2019.

<sup>4</sup> Macfarlane, D. M., and Teixeira-Leite, A., 2019. DTPC Automotive Supplier Park: Wetland Offset Plan. Version 1.0. Specialist Report prepared by Eco-Pulse Environmental Consulting Services, for the Dube TradePort Corporation (DTPC). 27 September 2019.

- 10) All natural areas in the development area that are designated as CBAs, as well as areas proposed for rehabilitation such as wetlands currently under sugar cane, should be proclaimed as formally protected conservation servitudes through D'MOSS, with guidance from eThekweni Municipality's EPCPD;
- 11) If site access Option 1 is authorised for development, then the applicant must acquire the remaining available land on the affected land parcel and rehabilitate and restore the remaining vegetation to healthy wetland and forest habitat. This CBA should then be proclaimed as a formally protected conservation servitude through D'MOSS; and
- 12) The applicant must ensure financial provision is planned for and secured for all rehabilitation and restoration activities.

### **6.2.2 Assumptions and Limitations**

- 1) Please note that this report was informed by the information provided by the Applicant, project engineers, town planners, engagement with the state departments and findings of various specialist studies and site investigations undertaken at the time of compilation of this report;
- 2) The specialist studies conducted meet the minimum requirements, and as such, no additional studies were undertaken;
- 3) All spatial data available to the EAP was utilised in the assessment of the proposed development. It was not deemed necessary for additional spatial data to be obtained;
- 4) All preferred alternatives are assumed to be feasible and reasonable; and
- 5) It is assumed that the geometric design of the preferred access to site Option 1 is a feasible alternative.