Aspect Statement Loss of vegetation & fauna and fragmentation of habitat The infrastructure sites were selected with the objective to have the least possible impact on sensitive biodiversity and riparian areas. Site preparation and vegetation removal will be minimal to ensure that the natural character of the sites is retained. It is not anticipated that the natural ecology and biodiversity will be significantly affected and the present status of important biodiversity and ecosystems will be maintained. The biodiversity assessment found no important taxa or habitats on the proposed development footprint area. The recommended development site's sensitivity with regard to the surrounding ecology and biodiversity is rated as low - medium. Management principles must formulated along the following measures: ecology Select the development area according to specialist recommendation during the planning phase. Construction activities must be respectful of the environment. Damage and disturbance to vegetation must be limited to the necessary minimum only. Alien invasive vegetation, weeds and bush encroachment must be monitored and managed. ळ Loss of important biota **Biodiversity** The biodiversity assessment found no important taxa on the proposed development footprint areas. The site footprints must be investigated by a specialist prior to construction in order to identify and to relocate important biota and to recommend on vegetation that must remain on site. Impact on critical biodiversity areas; ecological support areas and protected area The infrastructure sites were selected with the objective to have the least possible impact on these areas. Site preparation and vegetation removal will be minimal to ensure that the natural character of the sites is retained. It is not anticipated that the status of the critical biodiversity area and ecological support areas will be negatively affected and the present status of important biodiversity and ecosystems will be maintained. The biodiversity assessment found no important taxa or habitats on the proposed development areas. Impact on riparian areas and wetlands Riparian areas and wetlands will be affected. The management objective is to minimize negative consequence on these habitats. This will be achieved by selecting activity sites close to existing roads and infrastructure in order to minimize the loss of vegetation and the need for constructing access roads. Specific mitigation measures are given in the EMPr. Pollution of soil, water quality and loss of these resources The method and design ensure that site preparation, disturbance to topsoil and excavations will be minimal. Any topsoil that is removed will be stockpiled for use in rehabilitation or landscaping. Erosion of soil will be prevented and the occurrence thereof will be rectified. Surface water will not be used during any phase – water abstracted from a borehole will be used for construction and operational phases. It is not anticipated the proposed activities will significantly affect the natural flow or quality of water on site or in the local area. Strict precautions must be taken to prevent possibilities of pollution and the generated waste and refuse will require efficient waste management. Management principles must formulated along the following measures: and water resources Proper management principals and procedures must be followed for storage and handling of hazardous substances, lubricants, fuel and refueling. Proper management principals and procedures must be followed for the preparation of concrete and cement based material. The occurrence of erosion and siltation must be constantly monitored and corrective or preventive action must be taken to address the occurrence the thereof. The natural drainage lines and areas susceptible to erosion must be protected and are not to be disturbed. The storm water management measures (attenuation ponds and drainage channel) to the north of the main development area is effective in reducing the effect of storm water originating from the road and will be formalized and maintained. Waste must be correctly managed and disposed. Waste may not be buried or burned. Soil Adequate sanitation facilities must be available. Water must be sparingly used and storing and reticulation infrastructure must be maintained to prevent leaks. Air and noise pollution Atmosphere and sound It is not anticipated that the proposed activities will create significant levels of dust, air or noise pollution during any phase. However, the following measures must be followed: Activities that create dust and noise must be monitored and must not be conducted on windy days. Strict waste management must be enforced and the burning of waste will not be allowed. Visual impact During construction phase poor site management and waste disposal will result in untidy and littered sites that will be an eyesore for visitors, tourists and neighbours. The construction sites and stockpiles must be kept tidy and litter free. Visual The construction camps must be well managed and organized. Waste must be stored at a central collection area and must be regularly disposed. The infrastructure must be maintained in a good functional and visual condition.

S	Cultural, heritage and palaeontological risks
Heritage Resource	No high potential palaeontological areas, heritage sites or cultural activities have been identified by the specialist investigations. Any "chance" finds or potential sites will be investigated by a specialist. • Archeological finds and artefacts of heritage importance that are found must be reported to the ECO and verified by a specialist.
	Negative social impacts
legal	Contractors and personnel that are not familiar with the legal requirements of the authorization may result in non-compliance. Personnel that are not trained properly or are poorly disciplined may lead to negative environmental and social impacts. • Personnel must be initiated on the legal requirements and conditions of the environmental authorization prior to commencement of construction.
<u>a</u> ,	Contractors and personnel must be managed in an orderly fashion in order to avoid disturbing the local residents.
Social &	Positive social impacts
	It is not anticipated that the proposed activity will have negative social consequences. Positive impacts related to the completion of the total pipeline project will be the long term improvement of living conditions of mainly the poorer section of the public in the region.
	Increased employment and business opportunity
Economic Development	 Employment opportunities will be created for the local population and local businesses will benefit if building materials and consumables are sourced locally. The applicant and contractors must support local labour and businesses whenever possible.
Rehabilitation	Inadequate rehabilitation will have negative environmental consequences
	Inadequate rehabilitation of disturbed areas will result in soil erosion and negative visual impacts. Incomplete or no cleanup of spoil material, construction waste, spillages will lead to environmental pollution and negative visual impacts. The ECO will have to oversee that rehabilitation is conducted according to the EMPr and any other conditions as included with the Environmental Authorization.