

### Significance of Impacts: Construction

Described Impact	Nature	Intensity	Spatial Scale	Duration	Probability	Rating	Description	Rationale
Impact to air from construction	Neg D, I,	M 1	Local 3	Short term 2	Could happen 3	1.2	Low	Silty sands may provide some source of PM
Noise	Neg  D, I	VL  1	Local  3	Short term  2	Unlikely  2	  0.8	Very Low	Construction noise, low, local impact, little to no mitigation required
Traffic	Neg  D, I	VL  1	Local  3	Short term  2	Unlikely  2	  0.8	Very Low	potential impact at the intersection of R103 and Eddie Hagen, incidental
Impact to topsoils	Neg  D	VL  1	Isolated/Proposed Site 1	Permanent 5	Definite 5	  2.3	Moderate	Loss of soil quality. Soil re-use may be found to augment soil amelioration.
Impact to visual	Neg  I	L  2	Local  3	Short term  2	Could happen  3	  1.4	Low	short term visual impact of machinery, infrastructure, dust.
Impact to subsurface soils	Neg  D	VL  1	Study Area 2	Permanent 5	Very Likely 4	  2.1	Moderate	subsurface soils used as layering works, where possible
Impact to groundwater	Neg D	L 2	Study Area 2	Medium-term 3	Could happen 3	 1.4	Low	perched systems may be locally impacted by altering the perched system dynamics. This is likely to be limited to the site and impacts on construction techniques
Impact to surface water	Neg	VL	Local	Short term	Unlikely			construction impacts (contamination, disruption of flow), short term.

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	D, I	1	3	2	2	0.8	Very Low	
impact to water resources	Neg I, C	VL 1	Local 3	Short term 2	Unlikely 2	0.8	Very Low	water resources are distant (river and GW)
Impact to culture	Neg D, I	L 2	Local 3	Permanent 5	Unlikely 2	1.3	Low	Loss of grazing land to informal farmers
Impact to heritage	Neg D	NI 1	Isolated/Proposed Site 1	Incidental 1	Practically Impossible 1	0.2	Very Low	no heritage features on site
impact to biodiversity	Neg D, I, C	VL 1	Local 3	Medium-term 3	Could happen 3	1.4	Low	Loss of habitat, grassland through clearing
impact to economics	Pos I, C	L 2	Regional/Provincial 4	Long term 4	Could Happen 3	2.0	Moderate	employment of local contractors and community members will have a small economic and employment impact
impact to local economy	Pos D, I, C	M 3	Local 3	Long term 4	Could happen 3	2.0	Moderate	employment of local community members will have a medium term impact in construction phase.

Described Impact	Nature	Intensity	Spatial Scale	Duration	Probability	Rating	Description	Rationale
Impact to air from furnaces	Neg	Very Low 1	Local 3	Medium term 3	Very Likely 4	1.9	Low	AQIA indicates the impact to ambient air quality is negligible
Impact to air from reheating	Neg	Very Low 1	Local 3	Medium term 3	Very Likely 4	1.9	Low	AQIA indicates the impact to ambient air quality is negligible
Impact to Air, Materials Handling	Neg D	Low 2	Local 3	Medium term 3	Could Happen 3	1.6	Low	Inappropriate materials handling, conservative due to duration
Impact to Air Quality emergency situations	Neg D	High 4	Regional/ Provincial 4	Incidental 1	Could Happen 3	1.8	Low	Failure of pollution control, fires and other incidents
Impact to soils	Neg D	Low 2	Study Area 2	Medium term 3	Could Happen 3	1.4	Low	Impact to soils could occur through inappropriate materials handling, waste management, spills
Impact to groundwater	Neg D	High 4	Study Area 2	Long term 4	Unlikely 2	1.3	Low	Seepage to groundwater through incidents such as spills, inappropriate but a lack of water resources and limited aquifer results in a lower significance
Impact to surface water	Neg D	M 3	Local 3	Medium term 3	Could Happen 3	1.8	Low	Surface water impacts are limited to stormwater impacts through incorrect materials handling and entrainment of solids, oil spills.

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Impact to noise						0.0	Very Low	
Impact to visual	D Neg	High 4	Regional/ Provincial 4	Long term 4	Likely 4	3.2	High	The plant will be visible from a regional perspective with little in terms of mitigation
Impact to culture	Neg D, I	Low 2	Local 3	Permanent 5	Unlikely 2	1.3	Low	
Impact to traffic	Neg D	Low 2	Local 3	Medium Term 3	Likely 4	2.1	Moderate	The TIA indicates that there is little impact to traffic with minor road signalisation to mitigate impacts
Impact to heritage	Neg C	No Impact 0	Isolated/P roposed Site 1	Incidental 1	Practically impossible 1	0.1	Very Low	
impact to water resources	Neg D	Low 2	Local 3	Medium term 3	Could Happen 3	1.6	Low	Water resources comprise of surface water or groundwater which is utilised. No groundwater abstraction occurs and no surface abstraction occurs in the vicinity of the site. There is no direct discharge to any waters
impact to biodiversity	Neg	No Impact	Isolated/P roposed Site	Incidental	Practically impossible			No Impact Identified

Described Impact	Nature	Intensity	Spatial Scale	Duration	Probability	Rating	Description	Rationale
	D	0	1	1	1	0.1	Very Low	
impact to economics	Pos  D, I, C	Low  2	National/ Global  5	Medium term  3	Could Happen  3	  2.0	  Moderate	The reuse of steel offsets the production of primary steel and resource consumption with economic impacts associated with beneficiation, regional municipal income and export results in a positive impact for the area.
impact to local economy	Pos  D, I	Medium  3	Regional/ Provincial  4	Medium term  4	Likely  4	  2.9	  Moderate	Employment and training of local labour will provide for better local economic stimulus with additional informal and formal trading enterprises

Described Impact	Nature	Intensity	Spatial Scale	Duration	Probability	Rating	Description	Rationale
Impact to air from furnaces	Neg	Very Low  1	Local  3	Medium term  3	Could Happen  3	  1.4	  Low	AQIA indicates the impact to ambient air quality is negligible
Impact to air from reheating	Neg	Very Low  1	Local  3	Medium term  3	Could Happen  3	  1.4	  Low	AQIA indicates the impact to ambient air quality is negligible
Impact to Air, Materials Handling						  0.0	  Very Low	
Impact to Air							Very Low	

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Quality emergency situations						0.0	Very Low	
Impact to soils	Neg I	Low 2	Local 3	Medium Term 3	Could Happen 3	1.6	Very Low Low	
Impact to groundwater	Neg D	M 3	Local 3	Long term 4	Could Happen 3	2.0	Very Low Moderate	Indirect impacts associated with additional activities in the area may have an impact to water quality. The lack of a sustainable high yield aquifer suggests use of groundwater is limited and little impact can be realised.
Impact to surface water	Neg D	M 3	Regional/Provincial 4	Medium term 3	Could Happen 3	2.0	Very Low Moderate	Regional impacts from activities located on the plateau may have a deleterious effect on the stormwater if not managed appropriately
Impact to noise						0.0	Very Low Very Low	
Impact to visual	D Neg	Medium 3	Regional/Provincial 4	Long term 4	Likely 4	2.9	Very Low Moderate	The development of the area over the medium term will see a sense of place developed which will reduce the impact
Impact to culture	Neg D, I	L 2	Local 3	Permanent 5	Unlikely 2	1.3	Very Low Low	
Impact to traffic	Neg D	Low 2	Regional/Provincial 4	Medium Term 3	Likely 4	2.4	Moderate	The TIA does not quantify impacts outside of the local scale, however it is likely that indirect impacts may occur and national transport planning will account for this.
Impact to heritage	Neg	No Impact	Isolated/Proposed	Incidental	Practically impossible		Very Low	No Impact identified

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	C	0	Site 1	1	1	0.1	Very Low	
impact to water resources	Neg D	Low 2	Local 3	Medium term 3	Could Happen 3	1.6	Very Low Low	Water resources comprise of surface water or groundwater which is utilised. No groundwater abstraction occurs and no surface abstraction occurs in the vicinity of the site. There is no direct discharge to any waters.
impact to biodiversity	Neg C	Very Low 1	Isolated/Proposed Site 1	Incidental 1	Practically impossible 1	0.2	Very Low Very Low	No Impact Identified
impact to economics	Pos D, I, C	Low 2	National/Global 5	Medium term 3	Could Happen 3	2.0	Very Low Moderate	The reuse of steel offsets the production of primary steel and resource consumption with economic impacts associated with beneficiation, regional municipal income and export results in a positive impact for the area.
impact to local economy	Pos D, I	Medium 3	Regional/Provincial 4	Medium term 4	Likely 4	2.9	Very Low Moderate	Employment and training of local labour will provide for better local economic stimulus with additional informal and formal trading enterprises

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Impact to air from furnaces	Neg	Very Low 1	Regional/Provincial 4	Medium term 3	Could Happen 3	1.6	Low	AQIA indicates the impact to ambient air quality is negligible

Described Impact	Nature	Intensity	Spatial Scale	Duration	Probability	Rating	Description	Rationale
Impact to air from reheating	Neg	Very Low 1	Regional/Provincial 4	Medium term 3	Could Happen 3	1.6	Low	AQIA indicates the impact to ambient air quality is negligible
Impact to Air, Materials Handling						0.0	Very Low	
Impact to Air Quality emergency situations						0.0	Very Low	
Impact to soils						0.0	Very Low	
Impact to groundwater	Neg  D	M  3	Regional/Provincial  4	Long term  4	Unlikely  2	1.5	Very Low  Low	Indirect impacts associated with additional activities in the area may have an impact to water quality. The lack of a sustainable high yield aquifer suggests use of groundwater is limited and little impact can be realised.
Impact to surface water	Neg  D	M  3	Regional/Provincial  4	Medium term  3	Could Happen  3	2.0	Moderate	Regional impacts of deteriorated stormwater from activities on the plateau and the residential settlements in the area may have impacts to the water quality within the Mgeni Catchment with high treatment costs
Impact to noise								



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						0.0	Very Low	
Impact to visual	D Neg	L 2	Regional/P rovincial 4	Long term 4	Likely 4	2.7	Moderate	The development of the area over the long term will see a sense of place developed which will reduce the impact
Impact to culture	Neg D, I	L 2	Local 3	Permanent 5	Unlikely 2	1.3	Low	
Impact to traffic	Neg D	Low 2	Local 3	Medium Term 3	Likely 4	2.1	Moderate	The TIA does not quantify impacts outside of the local scale, however it is likely that indirect impacts may occur and national transport planning will account for this.
Impact to heritage	Neg C	No Impact 0	Isolated/Pr oposed Site 1	Incidental 1	Practically impossible 1	0.1	Very Low	No Impact identified
impact to water resources	Neg D	Low 2	Local 3	Medium term 3	Could Happen 3	1.6	Low	Water resources comprise of surface water or groundwater which is utilised. No groundwater abstraction occurs and no surface abstraction occurs in the vicinity of the site. There is no direct discharge to any waters. Cumulative discharge from regional land use may have a deleterious effect on water quality.

Described Impact	Nature	Intensity	Spatial Scale	Duration	Probability	Rating	Description	Rationale
impact to biodiversity	Neg C	No Impact 0	Isolated/Proposed Site 1	Incidental 1	Practically impossible 1	0.1	Very Low	No Impact Identified
impact to economics	Pos	Low	National/Global	Medium term	Could Happen	2.0	Moderate	The reuse of steel offsets the production of primary steel and resource consumption with economic impacts associated with beneficiation, regional municipal income and export results in a positive impact for the area.
	D, I, C	2	5	3	3			
impact to local economy	Pos D, I	Medium 3	Regional/Provincial 4	Medium term 4	Likely 4	2.9	Moderate	Employment and training of local labour will provide for better local economic stimulus with additional informal and formal trading enterprises