

9 ALTERNATIVE SENSITIVITY ANALYSIS

This section provides a short sensitivity matrix, which compares the three different alternatives and their associated environmental sensitivities. The “Lulamisa to Minerva” alternative is included in the matrix below as this portion of the line is representative of the portion of the line where all three alternatives merge into one route.

TABLE 38: ALTERNATIVE SENSITIVITY MATRIX

Sensitivity	Alternative 1	Alternative 2	Alternative 3	Lulamisa to Minerva
Geology	None	None	None	None
Climate	None	None	None	None
Topography	None	None	None	None
Land Use	Traverses short section of ridges land farmland	Traverses Bronkhorstspruit Dam and farmland	Traverses agricultural land and short section of residential area	Traverses short section of farmland and urban areas
Surface Water	Traverses over several rivers and small un-named tributaries on site	Traverses a large section of the Bronkhorstspruit Dam	Traverses over several rivers, small un-named tributaries and wetland areas on site	Traverses over one main river and vlei
Soils & Land Capability	Mainly agricultural, rocky soils and sensitive clay soils	Along sensitive wetland and clay soils	Along sensitive wetland and clay soils	Along disturbed soils
Flora	Sensitive vegetation units and plants present	Sensitive vegetation units and plants present	Sensitive vegetation units and plants present	Sensitive vegetation units and plants present in undisturbed areas
Fauna	None	None	None	None
Wetlands	Few sensitive wetlands	Traverses wetland	Traverses wetland	Transverse wetlands
Visual	Moderate Visibility	Moderate visibility	Moderate visibility	High visibility
Heritage	Low, mainly stone walls and graves	None	Low, limited graves visible.	None
Social	Low - Moderate	Low - Moderate	Low	Moderate
Total Sensitivities	3	4	4	5

On the basis of the matrix presented above, it is suggested that the Bravo 3 Alternative 1 be utilised as the preferred alternative for the proposed project, as it has the least sensitive features associated with the alignment. Due to the location of Alternative 1 on the ridges, the space available limits the land use in the area and in turn protects the indigenous fauna and flora.