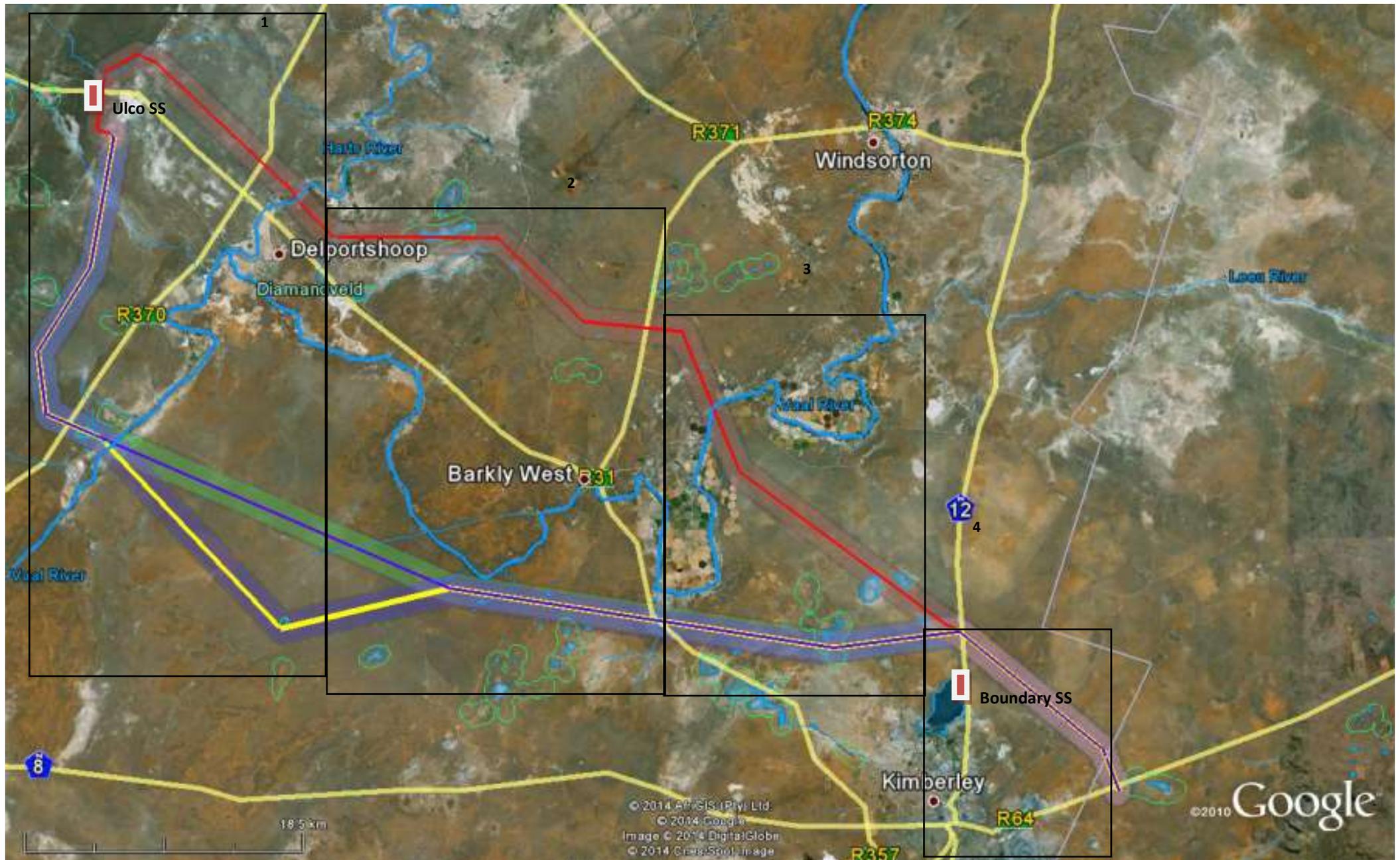


FRESHWATER CONSTRAINTS MAP: BOUNDARY SUBSTATION TO ULCO SUBSTATION



No.	Google Earth image	Comment
1		<p>Third Alternative (red line): The Harts River and a small tributary of the Harts River are crossed by this alternative route for this section. The Harts River is highly modified at the proposed river crossing and is already crossed by an existing line at this point. The small tributary is of a low ecological significance and also relatively impacted by the activities at Ulco. The potential impact of this proposed line for this section would thus be low to very low.</p> <p>Second Alternative (purple line) and First Alternative (yellow line) : This alternative route crosses the Lower Vaal Rivera as well as some small of its tributaries, including the Steenbok River. The route also crosses some small pans adjacent to the Vaal River. It is recommended that should this alternative be selected, the structures associated with the power line as well as the access roads would need to be placed outside the proposed buffers for the rivers and pans (green polygons in Google Earth image).</p> <p>Ulco Substation: There are no freshwater features in close proximity to the existing substation. The closest freshwater feature is the Steenbok River approximately 2.5km to the south-west of the substation.</p>

**Third Alternative:**

Some pans lie within the corridor for this route, with the largest being on Farms 173 and 221 near Longlands. It is advised that this larger pan which is relatively unimpacted be avoided, thus the structures associated with the power line as well as the access roads would need to be placed outside the proposed buffers for the pans (green polygons in Google Earth image).

Second and First Alternative:

These alternative routes cross a number of smaller pans and drainage lines. It is recommended that should one of these alternatives be selected, the structures associated with the power line as well as the access roads would need to be placed outside the proposed buffers for the pans (green polygons in Google Earth image).

3



Third Alternative:

This alternative route would cross the Vaal River upstream of the Harts River confluence. The river here is in a better ecological state and of a high ecological importance and sensitivity. The route will also cross some pans near the N12. The structures associated with the power line as well as the access roads would need to be placed outside the proposed buffers for the pans ((green polygons in Google Earth image).

Second and First Alternative:

These alternative routes would cross some smaller pans, or clusters of pans. It is recommended that should these alternatives be selected, the structures associated with the power line as well as the access roads would need to be placed outside the proposed buffers for the pans ((green polygons in Google Earth image).

4



All three alternative Routes:

For this section, all three alternative routes will follow the same path. The alternative routes for the power line will not cross over any significant rivers, pans or drainage lines. The proposed corridor is approximately 2km north of Kamfers Dam as the most significant freshwater feature within this section of the route.

Boundary Substation (addressed in the Beta to Boundary freshwater report):

The proposed expansion of the substation should not take place to the east of the existing substation as some pans are located there.