Robberg Bitou: Estuary Crossing

The location of Bitou Substation makes it nearly impossible for the 66kV overhead line to enter the substation from any other direction.

The image below (figure 3) indicates the limited number of choices to cross the river/estuary. The crossing selected is the shortest and most ideal of all possibilities. The location of the mountain on the north side of the Estuary will prove difficult for the line to traverse, not to mention the exorbitant cost impact thereof.

The supply point is from Robberg 66kV Substation, coming from the South. To select an alternative route around the mountain would result in an overhead line approximately three times longer than the proposed line. Therefore the chosen line route is deemed the best route.

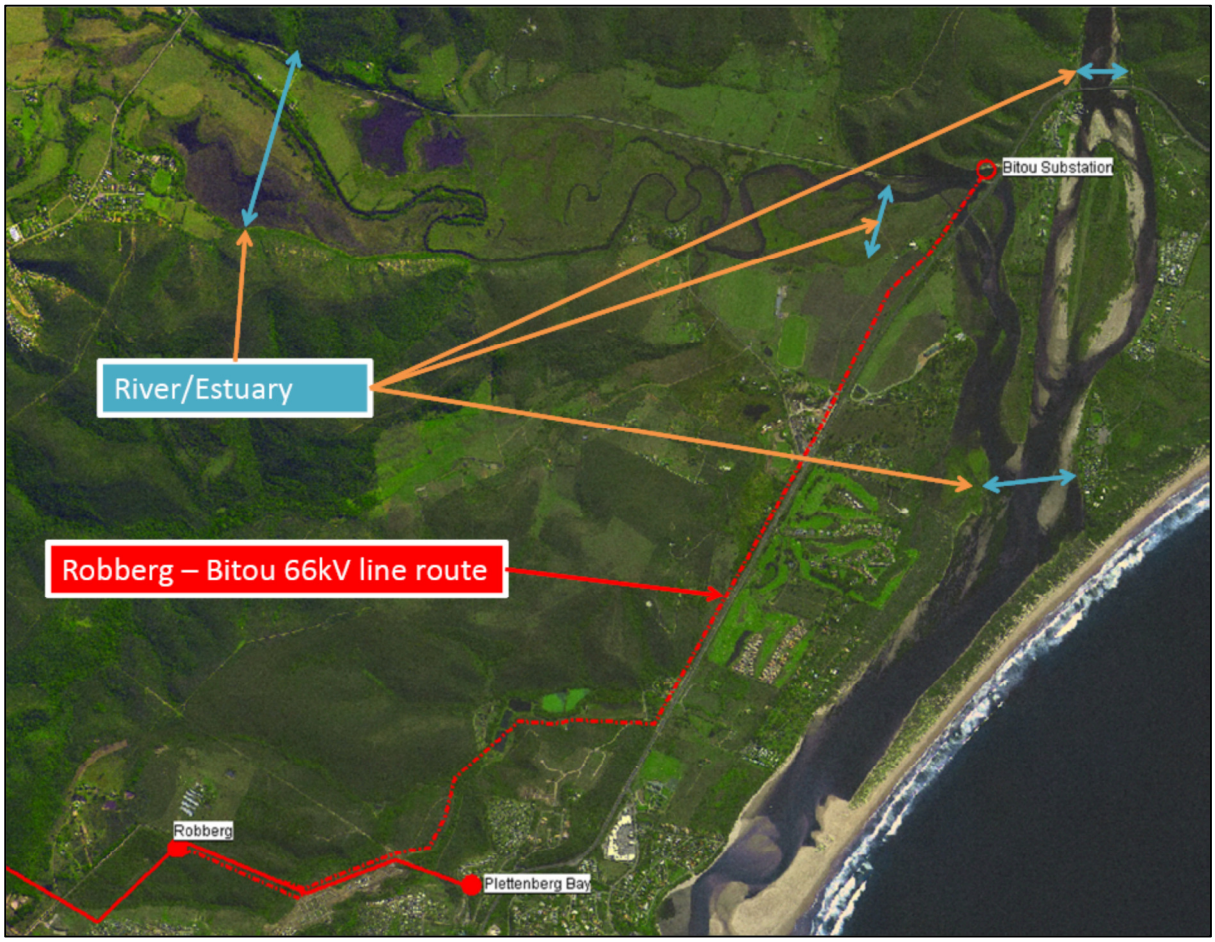

Figure 3

The chosen route results in a proposed wind span in excess of 350m, as shown in the image below (figure 4).

Figure 4

It is assumed, prior to a Geotechnical Investigation, that the structures to be installed on either side of the estuary will be installed on either padded chimney foundations or bolted concrete foundations. Access to these locations will be determined by Eskom's Land Development. Access will be determined based on the route that would result in the least amount of disturbance to the surroundings. Should the surroundings have been disturbed it will be rehabilitated once construction has been completed.

Structures to be used:

The options are Steel Monopole structures and Steel Lattice structures. See figures 5 & 6.

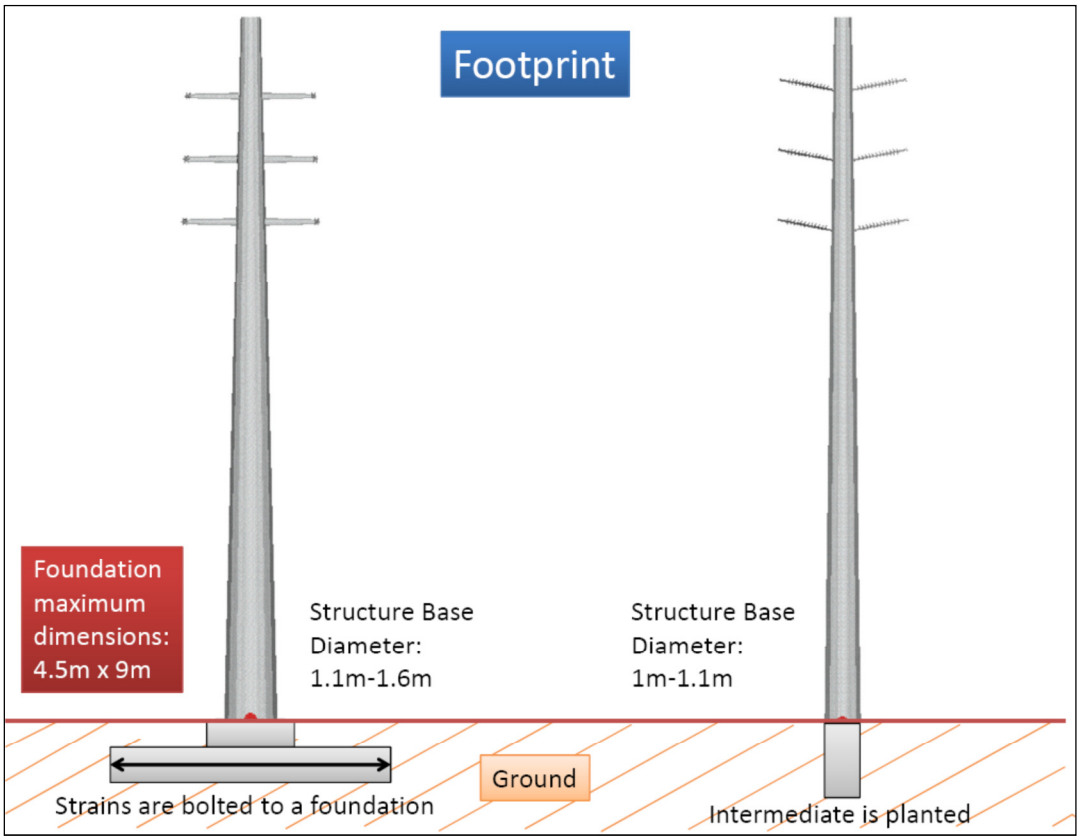

Figure 5 Steel Monopole Structures

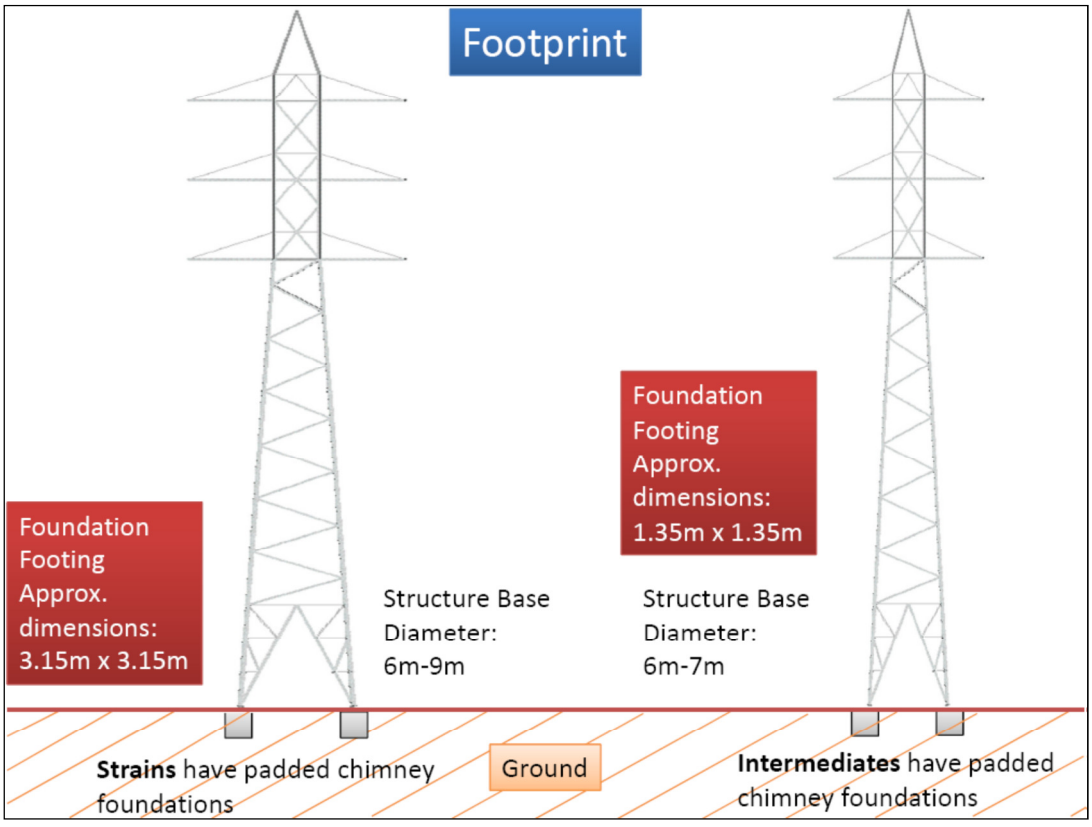

Figure 6 Steel Lattice Structures