

PROPOSED WIDENING OF THE N3 BETWEEN DURBAN AND CEDARA, KWAZULU-NATAL. APPLICATION FOR ENVIRONMENTAL AUTHORISATION AND WATER USE LICENSE APPLICATIONS

N2/N3 EB Cloete- Paradise Widening Viaduct Access for Paradise Valley and Westville

RECORD OF MEETING & SITE VISIT WITH ETHEKWINI TO IDENTIFY ROUTES TO ACCESS AREAS BELOW PARADISE AND WESTVILLE VIADUCTS

Date: 04 December 2015

Venue: Paradise Valley Nature Reserve and Viaduct; Pavilion Car Park and Westville Viaduct

Time: 08.30-12.30

Attendance:

- Lyle Ground, Greg Mullins & Terry Stewart (Ethekwini Environmental); Ashleigh McKenzie & Barry Patrick (ACER); Neil Bloy & Andrew Liebnitz (SNA).

Site Meeting purpose:

- To identify the most optimal access routes to gain entry under the Paradise Valley and Westville Viaducts that will be acceptable from an environmental and an engineering perspective and which will have the support of Ethekwini Metro Environment and Climate Change Department & the Paradise Valley Reserve management.

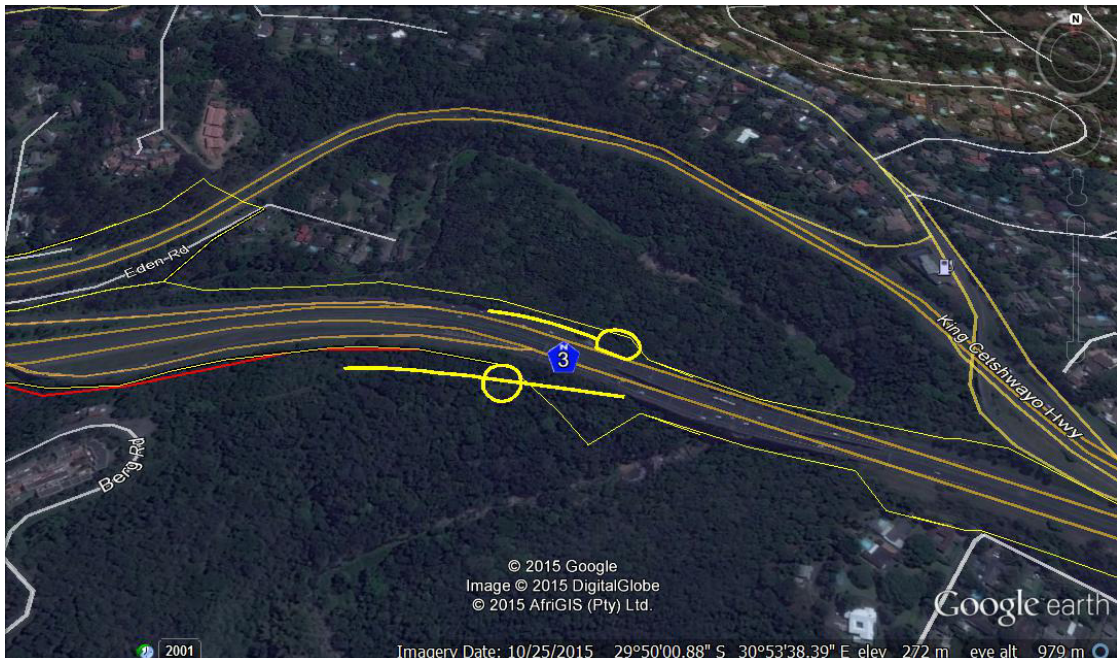
Presentations

- SNA presented aerial images of the areas overlaid with the proposed project over which potential alternative routes were discussed before heading out into the field.

Paradise Valley Viaduct

Routes & construction camp alternatives

- A route through the middle of the nature reserve was agreed as unviable for obvious reasons (highly significant impacts on biophysical and social environment). Two other alternatives (see google image attached) were proposed by Terry Stewart (082 824 4258) who was reserve manager from 1992 until recently and knows the area intimately.
 - a. One route was from the north east side of the viaduct, directly off the N3 from the east-bound carriageway.
 - b. The other route is from the south east side via Berg road running parallel to the west-bound carriageway, leading into the reserve where the old EKZNW staff quarters are situated (currently unused).
- The route from Berg Road is best as avoids having to access directly off the N3 which has traffic and other implications. It is also possible (provided a suitable MOU is drawn up) to use the old staff quarters area as a site camp. This access has been used previously by the surveyors and geotech teams. To get down to the river use will need to be made of the existing terraces that were put in when the bridge was originally built.
- There was discussion about using the above routes in tandem, - the use of both access routes may still be required.
- There is no access from the eastern side of the bridge (from Westville side), other than a limited area on either side of the bridge for positioning of cranes. This would require extensive earthworks which would impact on the Eastern side of the reserve. Access to the existing platform under the bridge on the eastern side is to be limited to use of the original access ramp/path



Other issues raised (Paradise)

- Paradise Valley is a **proclaimed nature reserve**.
- **Boundary fence.** There is a boundary fence between the N3 and the reserve which will be taken down during construction. It is essential to maintain an intact boundary fence due to issues of land invasion, crime and poaching, thus necessary to erect and maintain a boundary fence during the entire construction period. If it is a temporary fence, then a permanent one would need to be put in place afterwards.
- **Security & Crime.** Urban reserves are conduits for crime and contractors will need to be mindful of security on site at all times. Paradise Valley has easy escape onto the N3 if fences are cut.
- **Disruption of access to the reserve's popular tourist attraction - the waterfall.** The viaduct works will directly cut off access to the waterfall. If this tourist attraction is closed for an extended period, the reserve will experience a major loss of income. Estimated annual revenue from tourists is R750 000- R1 million. **Either, access for tourists will need to be maintained throughout the construction period (which has serious health and safety implications) or monetary compensation for loss of revenue will be required.**
- **Disruption of staff access.** Access for reserve staff must be maintained. This should be possible if reserve staff are put through the safety induction course.
- **Umbilo waterworks.** A portion of the old dam wall / spillway is directly in the path of the construction. **Permission to destroy it will need to be obtained from Amafa.**
- **Destruction of indigenous forest and individual indigenous trees (protected).** Destruction of certain trees is unavoidable. **DAFF permits will be required.**
- **Engineering issues in the river channel.** This river is prone to severe floods which are made worse by the increase in hard surfaces in the catchment and potentially worse due to climate change. There are already several piers in the river channel which trap vegetation and large trees that get washed down. The pedestrian bridge downstream of the viaduct is regularly washed away due to floods. The reserve staff have to clear trapped vegetation beneath the viaduct after storms to avoid wash away of the river banks. Addition of further piers on the river bed (as currently designed) will **effectively block the channel to an unacceptable extent** and hydrologists and design engineers will have to find a solution. Engineers also to investigate **changing the shape of the base of the existing piers** to reduce trapping of flood debris.
- **Access down to the river** is to be restricted as much as possible across to the area beneath the bridge (between the existing pillars).
- **Access to the existing platform under the bridge on the eastern side** is to be limited to use of the original access ramp/path
- **Rehabilitation post construction.** The footprint of destruction must be limited as far as possible. The closing of the median will cause a rain shadow and block out further light below the viaduct. This means that plants used for rehabilitation will have to be tolerant to very low

levels of water and light (a dead zone in the centre might still result). Rehabilitation of the access track, camp and stockpile areas will also be important.

- **Alien Plant Control.** Sufficient funds must be set aside to ensure that alien plants are properly controlled for a sufficiently long period after the contractor has moved from site, because without the necessary follow-ups, alien plants control as part of rehabilitation will not be successful.
- **Litter from N3.** It is reported that the contractors who clean up the N3 throw the litter off the bridge into the nature reserve.
- **Stormwater off the N3.** It was requested that the engineers carefully consider control of stormwater off the N3 down into the river as currently it is not ideal.
- **Number of river crossings.** To be limited to one crossing. A water use license will be required.

Westville Viaduct

Route alternatives & other issues

- The valley is steep sided and the best alternative from a topographical perspective is to enter from the suburban road south of the viaduct (from Chesterville) at the bottom and contour along the east or west bank, the west being preferred by the engineers.
- There is a wetland along the river channel and at the bottom of the valley. Wetland to be avoided. However a water use license will be required.
- River crossings must be limited (ideally should only be crossed once).
- The valley is so infested with mature aliens (especially *Syringa* and *Litsea sebifera*) that impacts on biodiversity are of low concern. However, the riparian area around the river channel should be considered as sensitive. It is likely that the area was once grassland that has now been encroached by alien trees. EtheKwini suggested that alien plant control will be almost ineffective as the infestation is past the point of no return due to the massive established seedbank. Rehabilitation efforts must focus on erosion control and restoration of the riparian zone.
- Due to the proximity to residential suburb there will be some social impacts.
- Currently, there is a pedestrian pavement providing access over the bridge, which is well used. **This access will be lost during construction and alternatives need to be found to accommodate pedestrians .**
- Crime/security is likely to be an issue.

