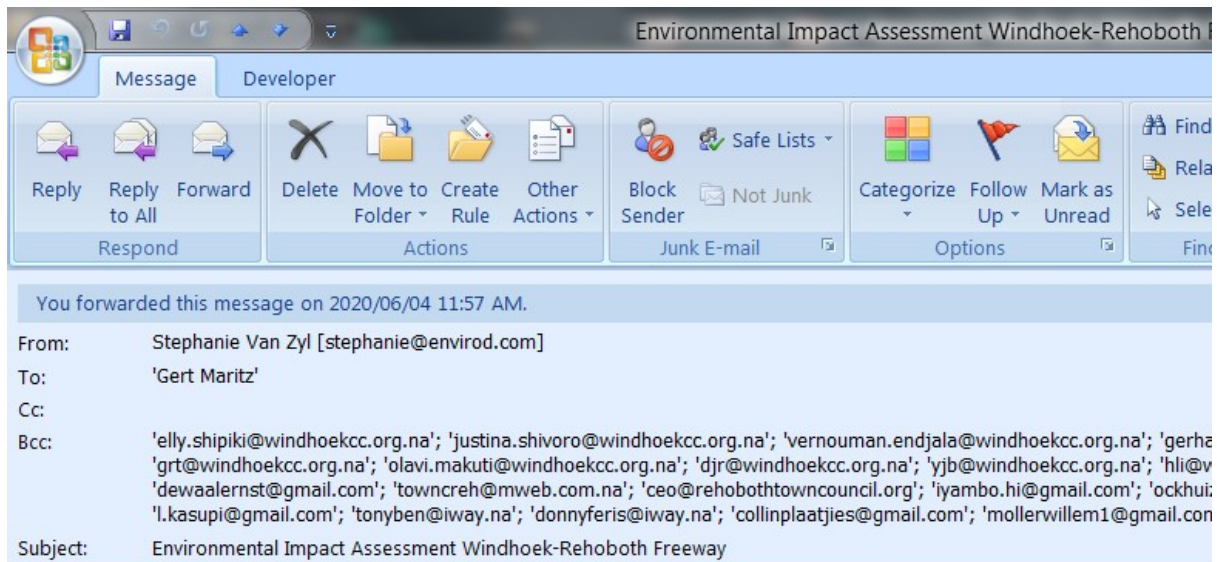


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Environmental Impact Assessment Windhoek-Rehoboth Freeway

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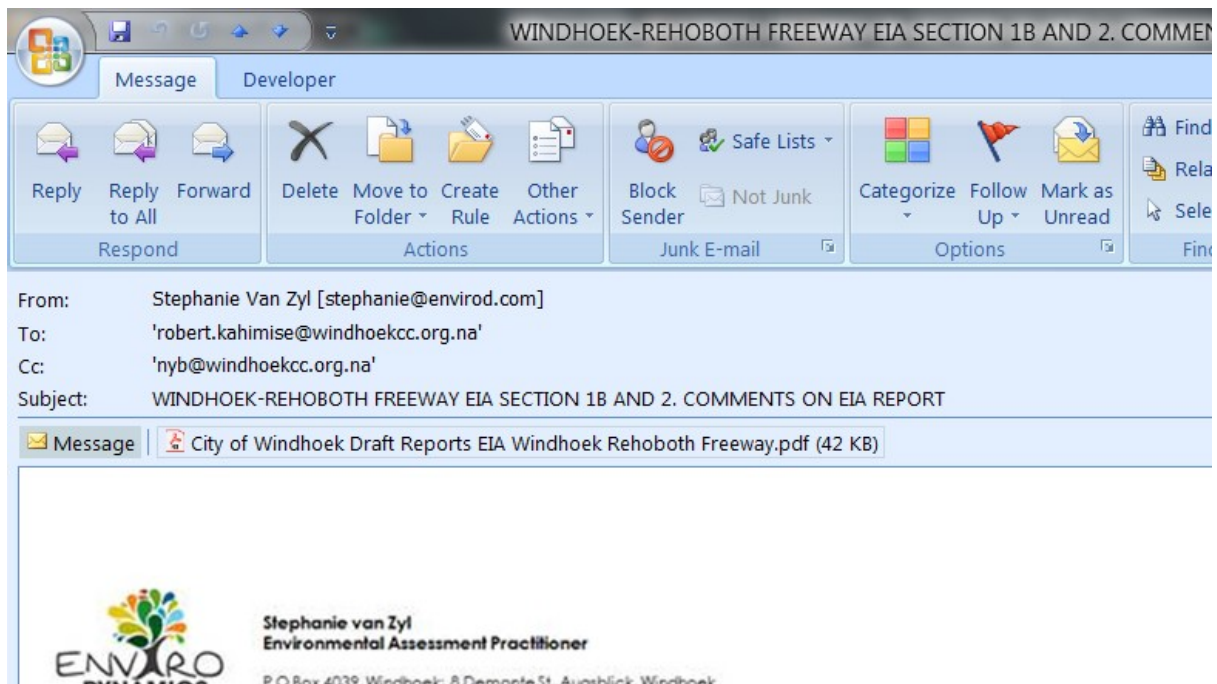
You forwarded this message on 2020/06/04 11:57 AM.

From: Stephanie Van Zyl [stephanie@envirod.com]
To: 'Gert Maritz'
Cc:
Bcc: 'elly.shipiki@windhoekcc.org.na'; 'justina.shivoro@windhoekcc.org.na'; 'vernouman.endjala@windhoekcc.org.na'; 'gerha.grt@windhoekcc.org.na'; 'olavi.makuti@windhoekcc.org.na'; 'djr@windhoekcc.org.na'; 'yjb@windhoekcc.org.na'; 'hli@windhoekcc.org.na'; 'dewaalernt@gmail.com'; 'towncreh@mweb.com.na'; 'ceo@rehobothtowncouncil.org'; 'iyambo.hi@gmail.com'; 'ockhui.l.kasupi@gmail.com'; 'tonyben@iway.na'; 'donnyferis@iway.na'; 'collinplaatjies@gmail.com'; 'mollerwillem1@gmail.com'

Subject: Environmental Impact Assessment Windhoek-Rehoboth Freeway

Dear Stakeholder,

You were previously consulted on the above project and I sent you documents regarding the beginning and



WINDHOEK-REHOBOTH FREEWAY EIA SECTION 1B AND 2. COMMENTS ON EIA REPORT

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From: Stephanie Van Zyl [stephanie@envirod.com]
To: 'robert.kahimise@windhoekcc.org.na'
Cc: 'nyb@windhoekcc.org.na'
Subject: WINDHOEK-REHOBOTH FREEWAY EIA SECTION 1B AND 2. COMMENTS ON EIA REPORT

Message City of Windhoek Draft Reports EIA Windhoek Rehoboth Freeway.pdf (42 KB)

 Stephanie van Zyl
Environmental Assessment Practitioner
P.O. Box 4039 Windhoek, 8 Damons St, Auschick Windhoek

COMMENTS RECEIVED

Comment:

The detail does not show the cycle lane (I commute to Windhoek from Valhalla by bike). I have no further comments beyond the obvious rule of freeways adapted from Parkinson's Law: *Traffic expands to fill the roads available for its use.*

Response

Noted. It is a Freeway and as such cycle lanes can not be accommodated on a Freeway.

Comment:

Waar jy die waarde van die Windhoek Aquifer aandui dit is die "Economic value". (Where you show the value of the Windhoek Aquifer: It is the "Economic Value").

Die hoogste risiko vir besoedeling in die gedeelte deur Avas Poort.
(the highest risk for pollution is through the AvasPoort)

Response:

Duly noted and reported as such.

Comments in Red and responses in green:

Road Cross Section: Beside a geometric issue is also relates to land take, road safety consideration, and waste or non-renewable resource

- **The excessive wide median**, with respect, is an outdated freeway design standard. It should and can be much narrower. In a mountainous and rolling topography such a unnecessary wide median will result in excessive earth works, unnecessary cost. The standards, including the cross section, was discussed with the client at the start of the project. It affects a lot of

other elements like bridges and drainage structures as well. The client requested that we do not deviate from their published standards. RSA standard requires a 18m wide median for the same standard of road. The wide section actually generates more material which is suitable for the construction of the road and therefore reduces the use, and impact, of borrow pits.

- **Inner shoulder:** From information provided it seems that the inner shoulder is planned to be 2.0m surfaced. A surfaced shoulder of 0.5m is safe and will suffice. It will save 2x 1,5m length of the road surface, cost and non-renewable natural resources: There is no scientific proof that a 2.0m inner shoulder contributes to a safer road. To the contrary, it creates a specific unsafe situation. (I refer to the recent "**Road Safety Audit of the Trans-Kunene and Windhoek-Luanda Corridors December 2018**" done for the Roads Authority in which the inner shoulder width is addressed. (The study was conducted by Burmeister & Partners and I was the project engineer, not sure if this study is public knowledge.) On the Windhoek Okahandja freeway it was observed that the wider (2.0m) inner shoulder are misused for overtaking, needless to say what unsafe situations are created at speeds > 120km/h. The shoulder widths we discussed as part of the discussion regarding the standard cross section for the project. As indicated above, no deviation from NRA standards were allowed.
- **Non-renewable resources:** Construction of the unnecessary 1.5m wide inner shoulder requires unnecessary road building material. Direct waste of non-renewable resources and also funds. An inner shoulder width of 1.5m is considered to be the minimum for similar divided rural dual carriageway roads in RSA.
- **Cross movement:** It is not clear if any barriers on the median are planned, except for the section at Omeya,: It is common cause that U-turns over the medians are in the order of the day and cannot be enforced successfully. The serious road safety issues that go with U-turns crossing the median are obvious. Access to the road is only allowed at access interchanges and no other at grade access to the freeway will be allowed. It is not foreseen that any drivers other than errant drivers, who might have missed a turnoff, might do u-turns. The construction of barriers along the entire road will be costly and also not a safe practice.

- **Reduce inner shoulder and use saving for median barriers:** I think the logic in this statement speaks for itself and if road safety is really a concern, serious consideration will be given to this suggestion.
The cost of concrete safety barriers along the median will be significantly higher than any possible saving from achieved by reducing the inner shoulder widths from 2m to 1.5m.
- **Land take:** Needless to say, if the median is optimised less land would be required.
As discussed above, the RSA SANRAL median is 6m narrower than the NRA standard. The wider median does provide additional safety benefits in the form of larger recovery areas for errant vehicles. Reduced lanes, shoulders, medians are normally considered when land is expensive/developed and in mountainous areas.

Road Safety:

The analysis of the outdated crash records is very basic and one cannot really draw any conclusions with any confidence. There are more updated crash statistics available. Comparison with other countries is meaningless if it is not clear what type of crashes on what type of roads is compared. It is common cause that the type of crashes on a divided dual carriageway will differ from a normal two lane road.

The statistics quoted is as received from official sources.

Design Speed:

- The reduction of the speed limit in the Omeya area from 120km/h to 100km/h doesn't make sense: There is no at grade access and no pedestrians are permitted on/within the road reserve: You don't build a high standard facility with the objective of mobility and then reduce the speed for no valid reason: Unwarranted speed limits leads to disrespect towards obeying them.
The reduced speed restriction is due to the reduced verge, the reduced median, the concrete barrier separating the 2 carriageways and the adjacent access road.

Ground water:

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The reports focus, right fully, on the Windhoek aquifer protection but is silent on the ground water resources on the road/affected area further south. If not mistaken Omeya is totally depended on groundwater. I am not sure if they have establish other water sources. Would it not be important to include Omeya and surrounding developments in hydrological report? (Please note I have no interest in Omeya). Not sure if "construction water" has been addressed in the design report.

We (the Environmental Assessment Practitioners) had a discussion with the Geohydrologist at the outset of the project and the Windhoek Aquifer and Oanob aquifers (in a separate report for that section) were identified as those needing further investigation, i.e. further specialist work. There are aquifers along the route such as at Omeya and others fed by the riverbeds, but they are not as vulnerable as the mentioned ones. For the others, strict waste and spillage control is crucial. These measures, as well as a statement on construction water, i.e. that water should be negotiated with the private land owners, with the necessary permits, including consideration to sustainable yields, water saving measures also considered, have been written into the Management Plan. We will check again before submission that these statements are worded clearly and strongly enough.

Audits:

Will this road sections be subjected to technical design and road safety audits?

No, this is not a requirement from the NRA.

For consideration:

- The **environmental impact** can be reduced if the median with is reduced, and the inner shoulder is reduced form 2.0.m to0.5m.
Not standard practice in the region.

The **road safety** will be improved is the inner shoulder is reduce and the saving be used to provide a median barrier. Current practice in the region requires 1.5m minimum inner shoulder. Median barriers with H1 containment levels with W4 conditions, considered as the minimum protection levels by SANARL, costs in the region of N\$

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6000/m length. This will result in significant in a significant increase in the project cost.