

Comment sheet

The Proposed Phase 1 Extension of Houmoed Avenue, Sunnydale

EIA Reference: 16/3/3/1A6/45/2027/19

Reviewer and respondent as an IAP: Sean Kyle Bassett

Qualifications: BEng (Chemical Engineer) ICHIME Associate Member

Summary of response:

The Environmental Impact Assessment referenced above was reviewed according to the following scope:

- Noise Impact Report
- Herpetology Feedback Notification
- Methodology of Determining significance
- Transport Impact Assessment
- Storm Water management plan

The documents were reviewed in accordance with the guidelines outlined in the various NEMA Acts/ Local and International standards. It was found that above documents are deemed **unacceptable** due to the following findings;

- A) The Noise impact does not take into consideration any noise levels during the construction phase. The study does not take into consideration of the elevation façade of properties (Sound Receiver points reference to the Sound Source) and hence even a 2m wall will not be sufficient and the sound level will be above acceptable levels. The sound study does not take into consideration of noise level due of pedestrians and the current baseline recorded noise levels do not include the sound power levels in the evening (L_{evening} , L_{day} , L_{DEN} , L_{dn}). The study does not take into effect of various environmental conditions (Wind direction/speed/temperature inversion etc and is not provided in the report). The noise report does not include the type of vehicles (i.e. Light commercial, heavy industrial, public transport buses etc) as the frequency varies considerably between light and heavy vehicles. The report does not highlight the adverse cardiovascular related effects of noise pollution on the population as is provided in the Noise Guidelines of the WHO. High levels of noise pollution will affect the local fauna and cause both localised and potential overall dysfunction of natural eco-system. Other inputs to the noise study (traffic flows) do not match the transport impact assessment by as much as 66%.
- B) The feedback from the Herpetologist was that the letter was intended for internal processes for Chand and does not satisfy the requirements for EIA process. The study does not consider the effects the migration routes of toad species, and potential negative effects on genetic variability with only one “small pond” being

protected. As noted, the Leopard Toads do in fact utilize the Sunnydale properties and there is no evidence that that the dry culverts will work especially with vibrations from the road above.

- C) The associated studies with professional experts (Faunal, Noise, Herpetologist etc) did not include any signed register of present parties when quantifying impacts in reference to Appendix K. The Document does not have a cover page with document author and revision page. Any study of quantification should always be done in a group setting with CoCT representative, Professional expert, independent Study Leader to mitigate against personal bias.
- D) The summary of findings in traffic study is clear that even with Scenario 3,4 or 5 implemented that Ou Kaapse Weg will operate well over capacity and will lead to bottlenecking at the major external links to the South Peninsula which is not fully understood due to the scoping of this study. In addition, future expansion of the Southern Peninsula (i.e. Chapmans Peak Estate/s, Dido Valley development, Harbour Bay development) are not factored into this study. It does not make sense that the EIA can be accepted without a full integrative traffic study being performed for the Southern Peninsula and identifying alternative feasible modes of transport across the Mountain. The traffic study assumes that the Houmoed road will feed mostly Noordhoek North west bound road during peak AM traffic flows and visa versa for PM traffic. As Chapmans Drive is a tolled route most of the traffic will be routed to Ou Kaapse (Turning right) for Middle to Medium Low-Income housing working over the mountain (Scoping study issue). This will lead to further pressure on the Ou Kaapse/ Noordhoek road interchange even with a feeder lane.
- E) The storm water management plan is still in a draft format and has not been finalised. There is no indication of the location of the sound attenuation wall required and how this road reserve interfaces with existing properties with walls. Many of the current properties/ complexes on the wetland interface are experiencing damage to property walls due to the poor soil quality and soil erosion. The building of a road and associated infrastructure close to the walls will cause further weakening with non-lined open water channels.

In addition, no information is provided on lighting proposals for the road and light pollution expected by vehicles/permanent lighting taking into consideration this road servitude in an ecologically sensitive area.

Finally, it must be stated that the history of (mis)management of not only this wetland, but many of wetlands across the Cape Town, serves as a good assessment of future management of this proposed road project and maintenance and care of the wetland in the Proposed Operational phase of Houmoed Phase 1.

1. NOISE STUDY RESPONSE

Document Title: Houmoed Avenue Extension, Phase 1: Noise Impact Assessment- FINAL

No	Comments	Reference
1.	<p>The Noise Assessment did not include the noise level associated with the construction phase. Compactors and excavators will not only produce noise levels in excess of 80dB but will also produce excessive ground vibrations.</p> <p>Many of the boundary walls on the Sunnydale area will not be insured by insurance companies due to the fact the walls lie on the wet land boundary. Excess water runoff has already weakened many of the wall foundations and any further vibrations by civil works shall cause further weakening and damage to the walls and building structures.</p> <p>The understanding is that the sound attenuation wall can only be built once all civil works are complete hence fauna and Sunnydale residents will be exposed to high noise levels during the construction. The effects on fauna (Toads and frogs' species) are significant and is outlined below.</p>	
2.	<p>The sound study does not consider that the sound receiver locations used in the study are normally taken at the height level of 1-1.6m. Many of the houses along the Sunnydale/ Wetland interface are 2 storeys. The study does not take into consideration the elevation façade of structures along the boundary line.</p> <p>A 2m sound attenuation wall will only reduce noise levels for 1 storey buildings however 2 storey building will still receive sound levels above the acceptable limits. The 2m sound wall is not an effective mitigation.</p>	Section 4.4.1 Page 18 of 74
3.	<p>The sound study does not consider the additional sound inputs from the pedestrian traffic along the proposed route. It is expected that high volumes of pedestrian traffic will be expected along this road as for many Masiphumulele residents walking to the shops, this route would be shorter as compared with using Sunnydale road.</p> <p>This would add to the baseline noise levels along the currently quiet wetland boundary.</p>	Table 1 and Section 3.3
4.	<p>The baseline noise levels did not consider the current maximum/evening/night sound levels ($L_{evening}$, L_{day}, L_{DEN}, L_{dn}, L_{max}) which are important to determine if the maximum levels will be exceeded particularly at night. This is a requirement of SANS 10103:2008.</p>	Table 1 and Figure 2
5.	<p>The study does not consider different meteorological conditions that are relevant to study area. The proposed road/ wetland area does lie in a valley. The study should include such examples of typical conditions such as temperature inversions on a still night, typical SE and NW wind direction and speed as this contributes to the atmospheric transmission and reflection of sound.</p> <p>Attachments of the inputs to the Sound Model sound must be provided.</p>	Section 3.3
6.	<p>The inputs on traffic volumes expected on the road are not in alignment with the outputs of the 2028 Traffic Study.</p>	Section 4.2.4

	<p>In the traffic study (See page 62 & 63 of Appendix G (iv)) The expected peak traffic flows are over 60% than what is used for the Noise Study.</p> <p>In addition, the Noise study and Traffic study do not reflect the ratio of vehicle types (i.e. Light commercial, heavy industrial, public transport buses etc). Also, since the speed will be hopefully be maintained below 60 km/hr, the dominating sound will be from the vehicle engines.</p> <p>The number and type of vehicles has a significant impact of the sound levels and individual sound levels.</p>	
7.	<p>The WHO organisation defines in Table 4.1: Guidelines for community noise in specific environments that “<i>existing outdoor quiet areas and the ratio and protruding noise to natural noise should be kept low</i>”.</p> <p>https://www.who.int/docstore/peh/noise/Comnoise-4.pdf</p> <p>In addition, the <i>protruding noise</i> shall have undesirable and deleterious effect on wildlife (and in particular endangered local amphibian species) in the small corridor wetland. Traffic noise levels will prevent essential communication between faunal species which shall lead to impaired breeding.</p> <p>Please refer to publications listed below of noise effects of typical local fauna.</p> <p>https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4806738 https://www.ncbi.nlm.nih.gov/pubmed/26611079</p> <p>The Noise study does not take into consideration that the wetland is a protected area and does not consider the negative effects on the local wildlife in that is already under severe stress from Anthropological activity. This would likely lead to a high significant impact according to the Appendix K methodology.</p>	Section 4.1
8.	<p>The sound study noise map for Alternative road 2 (Figure 7) shows a wall to attenuate the sound however this is not shown in the noise map for Road Alternative 1 (Figure 6).</p>	Figure 6 & 7

OUTCOMES: NOT ACCEPTED

2. Faunal Impact assessment and Herpetologist Feedback

Documents Referenced: Appendix G(v) Faunal Impact Study

Appendix H(ii) Notification of Herpetology Feedback

No	Comments	Reference
1.	“This letter summarises the key findings of the review. It is understood that this feedback is for their internal purposes only, and rests outside the ambit of the formal environmental application processes.”. As this forms part of the Formal EIA process, a formal report for review is required.	Page 2 of 16
2.	There is no reference in the report to the potential noise impacts and pollution run-off from the road and how this can be mitigated. The traffic study did not provide information on what vehicles will be allowed and expected on the road. Please refer to publications listed below of noise effects of typical local fauna. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4806738 https://www.ncbi.nlm.nih.gov/pubmed/26611079	
3.	The impacts due to the operational phase would be not only be limited to the site boundary but also to the local wetland ± 20m into the wetland from site boundary. Hence the direct faunal impacts will be beyond the site boundary. Hence suggest changing the Significance from Medium → High for no mitigation and from Low → Medium with Mitigations.	Page 26 of 42
4.	Even with mitigations of have the underpasses	Figure 9

OUTCOMES: PARTIALLY ACCEPTED

3. METHODOLOGY FOR DETERMINING SIGNIFICANCE

No	Comments	Reference
1.	The Methodology Used for by the Fresh Water consultant is different than the one supplied in Appendix K. As noted, the qualitative impacts (See Table 6, 7 and 8 in the Appendix G Fresh Water reports are a degree of significance different due to the different methodologies used. For example, on Table 8: “Increased ongoing disturbance to aquatic and semi-aquatic fauna, due to traffic and street lighting [NEGATIVE]” is listed as Medium significance however according to Appendix K this would be High significance without mitigations.	
2.	The Methodology does not have cover page, document number, or compiler, reviewer or revision hence it is not clear if this document is accepted by the CoCT.	

3.	All studies performed where this document was used should have a list of present parties that took part of in assessment. i.e. Noise Study, Faunal Impact Study, Freshwater impact study. Such qualitative assessments are open to personal bias and hence should be performed in a group with key parties present (Professional Service, CoCT Consultant, CoCT)	
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OUTCOMES: NOT ACCEPTED

4. TRAFFIC STUDY

Documents Referenced: Appendix G(lv) UPGRADING OF KOMMETJIE MAIN ROAD AND Ou KAAPSE WEG, SUN VALLEY/ KOMMETJIE AREA TRANSPORT STUDY

No	Comments	Reference
1.	The current scoping of the study does not include the new and in construction developments in the Southern Peninsula. Some to mention are Chapmans Peak estate/s, Dido Valley development, Harbour Bay development. As the study did not include a comprehensive integrative linking study to the Southern Peninsula (I.e. Analysis of Ou Kaapse Weg, Main Road, Southern Metrorail link, Chapmans Peak interface to Southern Suburbs/Hout Bay), the values provided in 2028 forecasted are prone to unperforated vehicles traffic along the Noordhoek road, Glencairn expressway/Ou Kaapse Weg interchanges. This will lead to further pressure on the Oukaapse Weg and Kommetjie interchange.	Section 3.2 and Appendix B
2.	As noted in the Summary (Section 5) and main links (Ou Kaapse Weg, Main road) are currently over capacity , and introducing further links (Houmoed) will just move the bottleneck.	Table 4.4
3.	A Class 4B urban road with a single lane (One-way access- North Bound for AM- South Bound for PM) for vehicles would have the same desired result for traffic delay mitigation. The road width servitude would be less than 15m and would serve by having the following attributes; <ul style="list-style-type: none"> a) Negative impacts on wetland environment during construction and operation phases can be limited compared to proposed 20m road reserve. b) Overall reduced noise levels as traffic will be limited to 50km/hr and single direction at a time (Southbound-PM, Northbound-AM) c) Road can take a maximum capacity of 1000 vehicle/hr which serves the requirements for the study. This should be considered.	Section 5
4.	The 2028 traffic flows from the Houmoed avenue to Noordhoek road reflect that most of the out and ingoing traffic will be along the Chapmans Drive. As the vehicles using this route will mostly from middle-lower income groups, the vehicles will not use this route (toll fees) but rather will turn right onto Noordhoek road to Filter Into Ou Kaapse Weg- North Bound. As these vehicles (>500 vehicles/hr) will turn right and cross the traffic, this will cause significant backups on Houmoed. This again shows discrepancies in the scoping of the study. Vehicles will in turn be rat running around Sun valley Mall shopping centre and shall cause traffic backup to Ou Kaapse turn off.	Drawings HHO-7228-200-4703 Page 67 HHO-7228-200-4702 Page 68

	<p>The scoping of the study also fails to reflect traffic flow on weekends. High traffic flows from Noordhoek to Sunvalley area.</p> <p>It shall be a major safety concern for cyclists and runners utilising the left-hand shoulder of the road at the Houmoed Avenue/Sunnvalley mall Noordhoek road interface.</p>	
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5. STORM WATER MANAGEMENT PLAN

Documents Referenced: Appendix G(viii) Phase 1: Lekkerwater Road to Noordhoek Main Road Stormwater Management Plan

No	Comments	Reference
1.	The report is listed as Draft. The report needs to be revised to be the FINAL version.	
2.	<p>It is not clear in the proposed road reserve cross-sectional drawing if the wall indicated on the edge of the verge is the sound attenuation wall or boundary wall of various buildings/complexes?</p> <p>If this is the sound attenuation wall, what is the spacing between the various building walls and the sound attenuation walls. All homesteads/complexes require access on the wetland side for maintenance of walls, fences, electrical fences etc. Has thought been given to suitable channels between the existing walls and sound attenuation wall?</p>	<p>HHO-7228-702-1101 rev C (Page 33 of 37)</p>
3.	<p>As per Section 4.2 of SANS 10400-R stipulates that storm water disposal will not result in undercutting of foundations, be capable of readily cleaned with maintenance program before the wet season.</p> <p>The existing walls on Sunnydale/Wetland area are showing some structural damage due to soil erosion which has been repaired. Any removal of soil close to the foundations during construction shall cause further damage to the walls. The open channels proposed are currently only G7/G8 material and erosion against the wall is still possible. It is recommended to use a terracrete grass block and move the channel against the retaining wall limiting the further exposure of existing foundations.</p>	<p>HHO-7228-702-1101 rev C (Page 33 of 37)</p>
4.	<p>With the existing culverts <i>"most of which are blocked and in need of maintenance"</i> and storm water run-off improvement recommendations where never made, hence showing the lack of responsibility from the CoCT municipality in looking after the Cape Wetlands. Lack of maintenance to the storm water culverts will in turn effect the migration of Leopard toads and other amphibians.</p> <p>Current wetlands in the greater Cape Town metropole not looked after including; Lotus River, Kuils River, Eerste River, Milnerton Lagoon, Zeekoevlei and Princessvlei.</p>	<p>Section 4 & 5</p>

Signed at Milkwood Park on the 11th January 2020

