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VicRoads

South Western Projects, 174-212 Colac Road

Highton, Victoria, 3216, Australia

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Ref: 30U-16-0190-TNT-620355-1

Additional noise modelling work for Drysdale Bypass

Vipac Engineers and Scientists (Vipac) has been requested by HWL Ebsworth (on behalf of VicRoads) to prepare an addendum to the report *30U-16-0190-DRP-612037-4 - Noise Modelling Prediction Report* in order to respond to PSA submissions. The report was prepared for the traffic noise study for the Drysdale Bypass development by Vipac. In the report traffic noise limits at the residences including school nearby the development corridor were established according to the VicRoads traffic noise policy. The noise mitigations to achieve these noise limits including noise walls and earth mounds were recommended in the report.

To prepare the addendum I have reviewed the PSA Submissions 1 to 50. The following comments are in response to PSA submissions.

***Submission 4***

> *(iv) we would prefer not to have a 3.5 metre wall built outside our property as this would block our views of the ocean and potentially decrease the value of our property. Further, we run a business from our property and such a wall could impact upon our family income given that drivers on the road would not be able to see our property passed this wall. It is also our view that such a wall would not be aesthetically pleasing. Our preference would be for modifications to be made on our property to deal with the sound levels (such as sound-proofing our windows) at the expense of Vic Roads;*

Response/comment

The 3.5m high noise wall was designed to achieve outdoor noise limit at this property according to the VicRoads traffic noise policy.

In-principle, it is possible to maintain indoor noise levels by treating the envelope of the building instead of a noise wall between traffic and the building.

It should be noted that the window treatment (typical façade treatments for traffic noise) may not be enough if other parts of the building, e.g., doors, roofs, etc. are weaker in terms of sound transmissions. Thorough investigations of sound transmissions through the entire envelope of the building shall be conducted by a qualified acoustic consultant before construction commences. An acoustic report shall be prepared to detail the current construction (envelope) of the building and upgraded building elements to achieve the indoor noise limits specified in the relevant Australian standard.

***Submission 10***

*Also, I disagree with your noise assessment. In the raw data, there were abnormal noise levels from 2000 to 2100hrs of 30dB above the normal background. This was NOT taken into account when the averages were done. This abnormal data should not have been used as it is clearly an outlier. (normal statistical process is to remove outliers that make no sense or cannot be reasonably explained.) It was probably due to the sound recording device being placed within a meter of the outside air conditioning unit. (or a measuring fault as it happened at the same time each day) If these spurious data are removed the average dB becomes 45dB and so I believe that the PONL becomes 57dB. As it is a logarithmic scale this is a significant reduction in nose to the current proposal.*

Response/comment

The Project Objective Noise Level (PONL) at the current residential property was reviewed in accordance with *VicRoads Traffic Noise Reduction Policy.* The measured existing noise levels $L_{A,18h}$ and PONL calculated based these levels are presented below. There was a calculation error for noise level on 26/2/2015. The revised PONL is 59dBA and the noise wall height for 38 Drakes Road in the report *30U-16-0190-DRP-612037-4* will slightly increase. The current wall height for 38 Drakes Road is 0.5m.

| **38 Drakes Road** | **19/2/2015 (Thursday)** | **20/2/2015 (Friday)** | **23/2/2015 (Monday)** | **24/2/2015 (Tuesday)** | **25/2/2015 (Wednesday)** | **26/2/2015 (Thursday)** | **Average** | **PONL** |
|---|---|---|---|---|---|---|---|---|
| 30U-16-0190-DRP-612037-4 | 45 | 47 | 49 | 48 | 47 | 49 | 48 (47.5) | 60 |
| Reviewed on 12 July 2017 | 45 | 47 | 49 | 48 | 47 | 47 | 47 (47.2) | 59 |

***Submission 17***

*I believe that there will be an increase in road noise to my property as the road will be to the south of the property as well as to the west as it is currently, therefore potentially surrounding my home in more noise.*

Response/comment

The VicRoads requirements for traffic noise are achieved based on the current road design.

***Submission 24***

*Insufficient and inadequate noise readings were undertaken from selected sites only, with the resulting findings making unsubstantiated assumptions relating to current and projected noise levels. The siting and proximity of all existing and current dwellings and title boundaries have not been clearly defined on the plans and reports exhibited, the results of which can not be accurately determined and have not been adequately considered when formulating appropriate noise levels and the location, number and length of noise barriers proposed.*

Response/comment

The locations for existing noise measurements were selected with consideration of existing noise sources (primarily major traffic sources). This is in line with standard practice for modelling traffic noise for new road developments. The chosen dwellings are representative of those that will be affected by noise from the new

developments. The objective limits of the omitted buildings will naturally be satisfied when the representative buildings are satisfied by nature of their location (behind the selected buildings or further away from the new road).

*In addition to this, no noise protection barriers have been provided to mitigate noise impacts to the existing dwelling on the north-east corner of Princess Street. The dwelling is existing and all endeavours should be taken to minimise noise impacts to current and future occupants.*

Response/comment

No noise walls are required for the buildings at 121-137 Princess Street to meet the objective noise levels for the current road design. The noise wall in front of the north-east building at this address is to protect buildings at 36-44 Huntington Street and 46-62 Huntington Street.

*Further, no existing conditions noise mapping has been provided in the exhibited documents nor a noise map that indicates road chainages at locations tested. These need to be provided to accurately locate test areas to easily identify existing noise levels for comparative purposes.*

Response/comment

VicRoads traffic noise reduction policies only require noise protection at 1 m from the facades of existing buildings. The predicted noise map is provided for information and a comparison to existing levels at arbitrary locations is not required by policy.

***Submission 25***

*When I purchased my property in 1994, the traffic on Portarlington Rd was quite light when compared with the number of cars today. The expansion of urban areas, development of new subdivisions and increased tourist activity on the Bellarine Peninsula has lead to a considerable rise in the amount of traffic on this road and correspondingly there has been an significant increase in noise levels to residences on this road.*

*I have had several discussions with VicRoads staff during the process of planning the bypass regarding noise levels to residences. Whilst I have been told that VicRoads has several strategies to control noise to properties, I have not seen any document or design to describe what will be used on this project. As a resident directly affected by the bypass I am concerned by the increased noise and the impact it has on the value of my property.*

*Is there a proposal for noise control and if not, why has this issue not been addressed?*

Response/comment

The VicRoads requirements for traffic noise are achieved based on the current road design.

***Submission 26***

> *We have a number of concerns, particularly the impact of the increased noise and lights when the trees at the front of our property are removed.*

Response/comment

The impact of vegetation on noise levels is minimal.

***Submission 28***

> *…. This plan will add significant noise and sound pollution levels and …*

Response/comment

The removal of vegetation will have minimal impact on noise mitigation.

To understand traffic noise impact from High Street/Port Road at 4 Reserve Road current traffic noise from the road was estimated based on the noise measurement at 1481-1489 Portarlington Road. The difference of the traffic volumes (current) between Portarlington Road and High Street/Port Road and distances from properties to the roads were considered for the estimations. The results show that the current traffic noise level at 4 Reserve Road is approximately 67 dBA ($L_{10,18h}$).

The predicted traffic noise (in *Noise Modelling Prediction Report*) from High Street/Port Road at 4 Reserve Road is below 63 dBA ($L_{10,18h}$) with the proposed wall design and the traffic volumes. Consequently, the noise level at 4 Reserve Road after building Drysdale Bypass will be lower than current traffic noise.

Vipac has been appointed to monitor current traffic levels to verify the estimates above. A noise logger will be deployed on site once the weather conditions are suitable according to VicRoads traffic noise policy.

Yours sincerely,

**Vipac Engineers & Scientists Ltd**

Xun Li

**Senior Acoustic Engineer**