Appendix N: Outputs from online Noise Calculation tool

http://resource.npl.co.uk/acoustics/techguides/crtn/

Output 1 of 4: Baseline condition with 0.8% Heavy Vehicles: BNL = 61.5 dB(A) 2018 traffic forecast from 2017 quarry ES

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This web page is no longer being maintained and updated.
The model uses JavaScript and therefore only works if your browser is JavaScript enabled.
This software has not been subjected to NPL's Quality Assurance procedures.
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Revision History

This model implements most of the procedure detailed in the Calculation of Road Traffic Noise (CRTN - ISBN 0 11 550847 3) issued by the Department of Transport in 1988. The aim has been to provide a basic platform for calculating road traffic noise levels for non-complex situations. The model is limited where for example; a separate calculation will be needed to take account of any complex arrangements of reflecting surfaces, as only a simple reflective correction is implemented here. Where consideration is to be given to situations where low traffic flows occur, it will be necessary to make specific reference to CRTN. In such cases, a further correction is generally needed, which is not implemented here. Copies of CRTN are available from The Stationery Office.

The results from this calculation method may now be converted to the new EU noise indices. Please see the DEFRA website for further information.

Stage 1 - Divide the road scheme into segments

Divide the road scheme into segments such that the variation of noise within the segment is small.

Stage 2 - Basic Noise Level

Calculate the basic noise level at a reference distance of 10m away from the nearside carriageway edge for each segment.

Time Period ☐ Hourly L_{10} ☑ 18 Hour L_{10}
Total Vehicle Flow 4870 (Veh/Hour : Veh/18 Hour) help
Speed 40 (km/h) - Estimated from the road class? ☑
Heavy Vehicles 0.8 (%)
Gradient 0 (%) ☐ Upward flow help
Road Surface Impervious help

Calculate 61.5 dB(A)

Output 2 of 4: Condition with additional 110 Heavy Vehicles (total 3.0%): BNL = 62.6 dB(A)

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The results from this calculation method may now be converted to the new EU noise indices. Please see the DEFRA website for further information.

Stage 1 - Divide the road scheme into segments

Divide the road scheme into segments such that the variation of noise within the segment is small.

Stage 2 - Basic Noise Level

Calculate the basic noise level at a reference distance of 10m away from the nearside carriageway edge for each segment.

Time Period ☐ Hourly L_{10} ☑ 18 Hour L_{10}

Total Vehicle Flow 4980 (Veh/Hour : Veh/18 Hour) help

Speed 40 (km/h) - Estimated from the road class? ☐

Heavy Vehicles 3.0 (%)

Gradient 0 (%) ☐ Upward flow help

Road Surface Impervious help

Calculate 62.6 dB(A)

Output 3 of 4 'Busy' Condition with additional 140 HGV (Total 4.0%): BNL = 63.0 dB(A)

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The results from this calculation method may now be converted to the new EU noise indices. Please see the DEFRA website for further information.

Stage 1 - Divide the road scheme into segments

Divide the road scheme into segments such that the variation of noise within the segment is small.

Stage 2 - Basic Noise Level

Calculate the basic noise level at a reference distance of 10m away from the nearside carriageway edge for each segment.

Time Period ☐ Hourly L_{10} ☑ 18 Hour L_{10}

Total Vehicle Flow 5075 (Veh/Hour : Veh/18 Hour) help

Speed 40 (km/h) - Estimated from the road class? ☐

Heavy Vehicles 4.0 (%)

Gradient 0 (%) ☐ Upward flow help

Road Surface Impervious help

Calculate 63 dB(A)

Output 4 of 4 'Busy' Condition with additional 220 HGV (Total 5.1%): BNL = 63.4dB(A)

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The results from this calculation method may now be converted to the new EU noise indices. Please see the DEFRA website for further information.

Stage 1 - Divide the road scheme into segments

Divide the road scheme into segments such that the variation of noise within the segment is small.

Stage 2 - Basic Noise Level

Calculate the basic noise level at a reference distance of 10m away from the nearside carriageway edge for each segment.

Time Period ☐ Hourly L_{10} ☑ 18 Hour L_{10}

Total Vehicle Flow 5130 (Veh/Hour : Veh/18 Hour) help

Speed 40 (km/h) - Estimated from the road class? ☐

Heavy Vehicles 5.1 (%)

Gradient 0 (%) ☐ Upward flow help

Road Surface Impervious help

Calculate 63.4 dB(A)