

Environmental Noise Directive
Round 2
CNMA to NMA Report

Map 05– High St Monifieth
CNMA 10



Legislative background

The Scottish Government published the Environmental Noise (Scotland) Regulations 2006 in recognition of their devolved responsibility to deliver the requirements of the Environmental Noise Directive (END)¹. The Dundee Agglomeration comprises of Dundee City Council, Angus Council, and Perth and Kinross Council, and has assisted the Scottish Government in producing the Dundee Agglomeration Noise Action Plan.

What is a Candidate Noise Management Area (CNMA)?

Mathematical modelling and statistical analysis has identified the top 1% of areas across the Dundee Agglomeration where people are most likely to be annoyed by major road and railway network noise. They locations have been classified as CNMAs.

CNMA to NMA declaration

In line with other Agglomerations and Transport Scotland, the members of the Dundee Agglomeration have used the Candidate Noise Management Area (CNMA) to Noise Management Area (NMA) determination process template produced by Transport Scotland and the SENSG during END Round 2.

This report outlines our recommendation to the Scottish Government on whether or not this CNMA should progress to NMA status.

Evidence must substantiate (or pass) all of the 'test' criteria outlined in Appendix B with respect to land use, geography, traffic and receptor in order to progress to an NMA status. The CNMA to NMA declaration process comprises an initial CNMA identification through modelling and statistical analysis followed by a verification process using evidence from a desk-study and site visit.

Based on the Appendix B criteria, the following summary is offered for this CNMA:

Criteria	Summary
Land use	There is a questionable density of residential properties at this location There are no planning proposals for future residential development at this CNMA.
Geography	High density of sheltered accommodation dialling the location into CNMA status
Traffic	Data used in model is largely correct save for HGV%. LA data from a measured site to the west of the CNMA indicates 2.71 (not 6 as modelled)
Receptor	The CNMA contains 86 residential properties, mainly sheltered housing, of which 65 are restricted to single occupancy. Less than 35% of the total has a habitable room fronting onto the carriageway and none have any useable external amenity space fronting onto the carriageway.

Recommendation

This report concludes that CNMA 10 should not progress to an NMA based on the 'test' criteria statements in Appendix B.

Date 4th June 2014

¹ European Parliament and Council Directive for Assessment and Management of Environmental Noise 2002/49/EC

Appendix A – CNMA to NMA Site reporting template

Survey details			
Date and time	4 th June 2014 @1030hrs		
Name	Alex. Henderson/Wendy Ball		
Weather	Dry		
A: Land use			
CNMA Reference Number	10		
CNMA Map number	05		
Location of CNMA	High Street, Monifieth		
Transportation Type	LA Major Road		
Route Number	A930		
Local Authority	Angus Council		
Land use change since 2010	No		
Proposed new developments post 2010	No		
Is this location already an NMA from END Round 1	No		
B: Geography			
Traffic commentary	Free Flowing		
Topography	Flat		
Existing mitigation onsite	Noise barrier:	No	
	Other:	No	
New noise management potential	Low		
Photographs taken	Yes		
C: Traffic			
Direction of flow	E/W		
AAWT Flow (AC figures)	11661 (24hrs)		
Speed (kph)	41		
% HGV	2.71		
Road Surface Type	Hot Rolled Asphalt (HRA)		
Road Surface Condition	Good		
D: Receptors			
SPS (Section Rank)	105.2 (18)		
Population (Section Rank)	114 (revised using 75% single occupancy) (18)		
Buildings	Mostly residential with some retail and supermarket		
Building Orientation to CNMA	Mostly away		
Habitable room orientation to CNMA	Mostly away		
Glazing	Single / Double (+)	All double	
	Secondary	None	
Ventilation	Mech. Vent	None	
Decade of building construction	1900s / 70s / 80s		
Supporting evidence			

% HGV modelled data is high in comparison to LA data

Majority of residential property are single occupancy (Servite and Hometay House)

Majority of properties face away from the carriageway (see photographs in Appendix D)

See additional supporting evidence/discussion in Appendix C

Appendix B - CNMA to NMA process

Evidence tests		“Criteria statements” below support and underpin the CNMA to NMA declaration process and are to be considered with respect to desk and site evidence along with the modelled data to determine the CNMA to NMA designation and rank within the top 1%			
Test	Question	A: Landuse	B: Geography	C : Traffic	D: Receptor
		Commercial use and potential development.	Topography and existing mitigation	Check flows, speeds and changes since model data input	Check double glazing and building orientation
1	<p>If evidence confirms the validity of any of the criteria statements (A to D) for test 1, the candidate location must be declared as the following:</p> <p>“Not an NMA”</p>	<p>Numerous small local retail/offices along with a large supermarket.</p> <p>No realistic development opportunity not involving demolition.</p>	<p>Flat with no existing mitigation and no potential to implement any such measures retrospectively.</p>	<p>HGV% modelled is double that of LA data. Appendix 3 of Tech Guidance indicates a -1.5dB in BNL</p>	<p>Less than 35% of residences have a habitable room facing onto the carriageway.</p> <p>76% of residences are restricted to single occupancy.</p> <p>All useable external amenity space is to the rear of the properties and away from the carriageway.</p>
2	<p>If evidence confirms the validity of any of the criteria statements (A to D) for test 2, the candidate location must be declared as the following:</p> <p>“Further investigation required within 2 months to determine NMA status”</p>	N/A	N/A	N/A	N/A
3	<p>If evidence confirms the validity of all of the criteria statement (A to D) for test 3, the candidate location must be declared as the following:</p> <p>“NMA”</p>	N/A	N/A	N/A	N/A

Appendix C Supporting Evidence

Land use:

High St represents the economic hub of Monifieth with an array of local services including various shops and some office accommodation on the north side of the road plus a large supermarket to the south.

Geography:

The area is flat in nature with a variety of 1,2,3 and 4 storey properties, mainly to the north. The south comprises principally of a 3 storey block of sheltered flats and a supermarket. The only notable incline is the exit from said supermarket. The carriageway surface is HRA which is in good condition.

Traffic:

The Council has no traffic data specific to the CNMA. However, available data from the junction of Ferry Road and Grange Road approximately half a mile to the west supports the modelled figures with one qualification. There is a notable disparity in the percentage of HGV movements in that Angus Council data indicates this to be 2.71% against 6% used in the model. This would suggest some 653 HGV/buses within the AAWT 18hour. A 30 minute weekday count carried out late morning revealed a total of 10 HGVs passed through the CNMA (7 buses and 3 lorries). Using local authority data and applying the correction factor available within Appendix 3 of the Technical Guidance suggests this would have a 1.5dB reduction on modelled levels.

Given that there are a number of side roads situated in the CNMA as well as the entrance to the supermarket, two bus stops and a signalled pedestrian crossing, the traffic moves surprisingly freely, though this would be expected to alter slightly during the morning and evening rush hour. Such free flowing traffic corroborates the average speed used in the model and that resultant noise from vehicles is a consequence of engine noise rather than tyre/road interaction.

Receptors:

There are 86 residential properties within the CNMA, 75 of which offer sheltered care for the elderly. 65 are restricted to single occupancy only, the remaining 10 limited to double occupancy, thus significantly reducing the population exposure to the existing noise climate. Orientation and location indicates only 38% of properties have a habitable room looking directly onto the carriageway. 21% are orientated such that habitable rooms are at right angles to the road with the remaining 41% either facing completely away from the roadway and/or protected by barrier effect due to those properties fronting onto the road. Orientation/location therefore plays a large part in further reducing the population exposure to traffic noise.

(Using the tool supplied by AECOM in October 2014 which allowed for the recalculation of the BPS (Building Prioritisation Score) and therefore the SPS (Source Prioritisation Score), the resultant SPS was 99.3, down from the original 105.2 It is considered this provides further evidence that the population exposure is much less than that originally modelled.)

General:

Whilst the area is a mixture of properties, the majority would be considered relatively modern (sheltered housing) and overall gives the appearance of all buildings having been maintained to a good standard. Older properties have been modernised over time and are fitted with double glazing in line with modern builds, though no acoustic glazing has been specified by Angus Council in any previous redevelopment within the area. Nevertheless, standard thermal double glazing is recognised as affording a reasonable protection against noise.

All useable external amenity space available to the residential properties within the CNMA are located to the rear and therefore protected from the impact of noise from traffic. Garden ground fronting on to the roadway is regarded as minimal and decorative in nature and offering no external amenity (see photographs in appendix D)

The small nature of the CNMA along with the composition of the built environment dictates that there is no realistic option to incorporate any retrospective acoustic provisions to minimise any noise impacting on the residential properties. There is also little opportunity for development/redevelopment that would afford any opportunity to implement such measures in the future. The most likely (though in itself most unlikely) opportunity for redevelopment would be if the supermarket were to close, with the obvious reduction in vehicle movements, quite possibly negating the area to be considered as a CNMA. The free flowing nature of the traffic within the 30mph limit is arguably an already optimal circumstance in terms of noise (in relation to the accepted character of the area) offering little, if any benefit, in manipulating the composition/speed/flow of the traffic.

Conclusion:

Whilst it is understood why the modelling process identified the area as a CNMA, it is considered that;

- The number of residents exposed to traffic noise is appreciably lower than initially modelled;
- There is no viable option to address any perceived existing noise issue with retrospective provisions;
- There is little potential for further development/redevelopment within the area; and
- There are no overtly sensitive receptors nearby that would benefit from NMA designation, and
- Recalculation of the SPS employing the AECOM tool notably reduces the SPS

Accordingly it is believed that the CNMA should not progress to NMA status.

Appendix D – Site Visit Photographs



Hometay House situated on the south west section of the CNMA



High St Monifieth viewed to the east



Servite House situated on the north east of the CNMA



Hometay House viewed to the west. Supermarket access/egress