Metz Way / Abbeymead Avenue

Noise Statement

July 2016

Document Control Sheet

Project Name:	Metz Way/Abbeymead Avenue
Project Number:	COGL43041187
Report Title:	Noise Statement
Report Number:	Revision 0

Issue Status/Amendment	**Prepared**	**Reviewed**	**Approved**
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Site1 - Metz Way/Eastern Avenue junction and Site 4 - North Upton Lane Signals

Overview statement

The two proposed highway improvements at site 1 and site 4 consist of highway re-alignment and localised carriageway widening. Site 1 at Metz Way is near to the junction with Eastern Avenue, a busy traffic signal controlled junction with commercial premises either side of Metz Way. As there are no residential dwellings nearby, a commercial premise (Homebase) was used for the purpose of identifying noise change. Site 4 at the Abbeymead Avenue/North Upton Lane junction is in a residential area with the nearest dwellings in Pinery Road and The Oaks being approximately 25 to 30 metres distance from the highway.

Both schemes consist of widening the existing carriageway to improve capacity and to facilitate left turn manoeuvres in order to reduce queue lengths. In terms of change in noise, both schemes have a minor effect as the widening is to an existing heavily trafficked highway where the influence from the 'existing' highway is dominant over any impact from the 'altered' highway.

The noise predictions carried out focused on the impact from just the altered section of highway, the results of which showed a change of up to +0.4 dB for both schemes. Changes of this magnitude equate to an appraisal rating of neutral.

It is noted however, that the actual change may be less due to the influence from the existing highway as detailed above.

Road Traffic Noise Predictions

Site 1 Metz Way/Eastern Avenue junction

The proposed scheme is the widening over a distance of approximately 160 metres of the east bound side of Metz Way between Eastern Avenue and Eastbrook Road. The widening is tapered with a maximum increase of around 3.5 metres.

There are no residential dwellings close to the proposed scheme; the nearest buildings are primarily commercial retail. For the purpose of assessing the potential noise change, the nearest noise sensitive receptor has been taken as Homebase, to the north east of Metz Way.

To undertake the assessment the following criteria was used:

Traffic flow:	15,305 18 hr, 2% HGV
Mean traffic speed:	48 km/h
Distance to receptor (existing):	48.6 metres
Distance to receptor (proposed):	45.6 metres
Receptor height:	4 metres

Calculations have been carried out in accordance with the Calculation of Road Traffic Noise Manual. It is assumed that the proposed scheme does not alter the main parameters used in the calculations i.e. traffic volume, speed, composition etc.

The results of the assessment:

Receptor	Do Minimum (existing)	Do Something (proposed)	Difference	GCC appraisal score
	$L_{A10\ 18hr}$, dB	$L_{A10\ 18hr}$, dB		
Homebase	64.8	65.1	+0.3	0

The results show a marginal change in noise of +0.3 dB which equates to neutral under the GCC environmental appraisal rating. The increase of 0.3 dB likely to represent a worst case scenario as the prediction is based solely on traffic using the section of highway being altered. No account is taken of the influence traffic noise from Eastern Avenue and other nearby non-traffic sources has on the receptor and therefore the actual change is likely to be lower than 0.3 dB.

Site 4 North Upton Lane signals

The proposed scheme involves the widening of Abbeymead Avenue to the west of the junction with North Upton Lane in order to extend a dedicated left turn in to North Upton Lane. There is also some minor widening of around 2 metres on the south side bringing the carriageway nearer to properties in The Oaks.

There are no dwellings directly fronting Abbeymead Avenue.

To undertake the assessment the following criteria was used:

Traffic flow:	14,900 18 hr, 2% HGV
Mean traffic speed:	40 km/h
Distance to receptor (existing):	32.5 metres (Pinery Road), 22.9 metres (The Oaks)
Distance to receptor (proposed):	29.5 metres (Pinery Road), 20.9 metres (The Oaks)
Receptor height:	4 metres

Calculations have been carried out in accordance with the Calculation of Road Traffic Noise Manual. It is assumed that the proposed scheme does not alter the main parameters used in the calculations i.e. traffic volume, speed, composition etc.

The results of the assessment are as follows:

Receptor	Do Minimum (existing)	Do Something (proposed)	Difference	GCC appraisal score
	$L_{A10\ 18hr}$, dB	$L_{A10\ 18hr}$, dB		
12 Pinery Road	64.8	65.2	+0.4	0
10 The Oaks	65.7	66.1	+0.4	0

The results show a marginal change in noise of +0.4 dB at both sample properties equating to a neutral rating under the GCC environmental appraisal score. The change of 0.4 dB is likely to be an over estimation as the prediction is based solely on traffic using the section of highway being altered. No account has been taken of the influence from traffic movements at the junction therefore the actual change may be lower than 0.4 db.