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ACOUSTIC REPORT 2607073 REVISION 0

EXTENDED TRADING HOURS DEVELOPMENT APPLICATION

KFC ROCKINGHAM BEACH LOT 1, 18 PATTERSON ROAD ROCKINGHAM WA 6168

1. ND Engineering was commissioned to provide an acoustic report to demonstrate that KFC Rockingham complies with the Environmental Protection (Noise) Regulations 1997 for extended trading during the night time as defined in the Noise Regulations.

2.1 The current trading hours for KFC Rockingham are:
- Sunday to Thursday 10:00 am - 10:00 pm; and
- Friday and Saturday 10:00 am - 11:00 pm, note that 10.00 pm – 11.00 pm are already part of the night time trading hours.

2.2 The KFC Rockingham proposed 24/7 trading hours include the night times from 10.00 pm - 7.00am Monday to Saturday and from 10.00 pm - 9.00 am Sunday & Public holidays

3.1 The assessment of the Assigned Noise Levels is contained in Annex A with the relevant Assigned Noise Levels for KFC Rockingham night time trading hours being:

LA10 = 46 dB(A), LA01 = 56 dB(A), and LAmax = 66 dB(A).

3.2 The Assigned Noise Level criteria are further described as follows:

a. The LA10 is the top 10% noise level, previously referred to as the average maximum noise level associated with normal continuous operation of air-conditioning, ventilation and refrigeration equipment. The LA10 represents an occurrence of 90 seconds in any 15 minute measurement period; and

b. LA01 is the top 1% noise level which represent an occurrence of 9 seconds in any 15 minute measurement period. This LA01 criteria is typically difficult to measure as it is heavily influenced by background noise such as aircraft, animals, voices, vegetation, vehicles and wind. The LA01 criteria is not normally a source of complaint due to the difficulty of obtaining a noise measurement and subsequent post site analysis. The LA01 criteria has been included in this report for comparison purposes only; and

c. LAmax criteria is an instantaneous maximum noise emission that is time independent and for this type of site is typically associated with the ordering point speaker due to the abrupt increase in noise emissions from the speaker when KFC staff ask the customer for their order.

4.1 Measurement weather at 7.45pm Saturday 18 July 2026 was:
- Mostly cloudy with some rain spitting: - Temperature 15°C with Humidity 67%;
- Pressure 1,021 hPa; and - Wind WSW at 13 km/h or 3.6 m/s without any gusts.

4.2 Measurements and calculations, with comments, were taken at the following locations (See FIGURE 1 below) being the two closest residential noise sensitive premises.

a. Southern side of the driveway ~5m opposite the #2 ordering point speaker.
This measurement location is dominated by the speaker noise.
This measurement was used to calculate the noise levels at the following locations:

- #5 Ray St	Front gate	with adjustments for background, tonality & fence
- #5 Ray St	Ground floor façade	with adjustments for background, tonality & fence
- #7 Ray St	Ground floor facade;	with adjustments for background, tonality & fence
- #7 Ray St	1st floor façade	with adjustments for background, tonality.

Application of tonality adjustment +5 dB(A) for LAmax and LA01 calculations is questionable but has been included to provide a very conservative assessment.
Note that the fence adjustment of -5 dB(A) is not required for 1st floor façade calculations.

b. #7 Ray St front gate near letter box with adjustments for background, LAmax/LA01 tonality.
#7 Ray St Ground & 1st Floor facades with adjustments for background, LAmax/LA01 tonality.

Application of tonality adjustment of +5 dB(A) for LAmax and LA01 calculations is questionable but has been included to provide a conservative assessment.
Measurement assessment shows there is no requirement for LA10 tonality adjustment.
Fence adjustment of -5 dB(A) is not required as dominated noise source is KFC roof top mechanical services with direct line of sight.

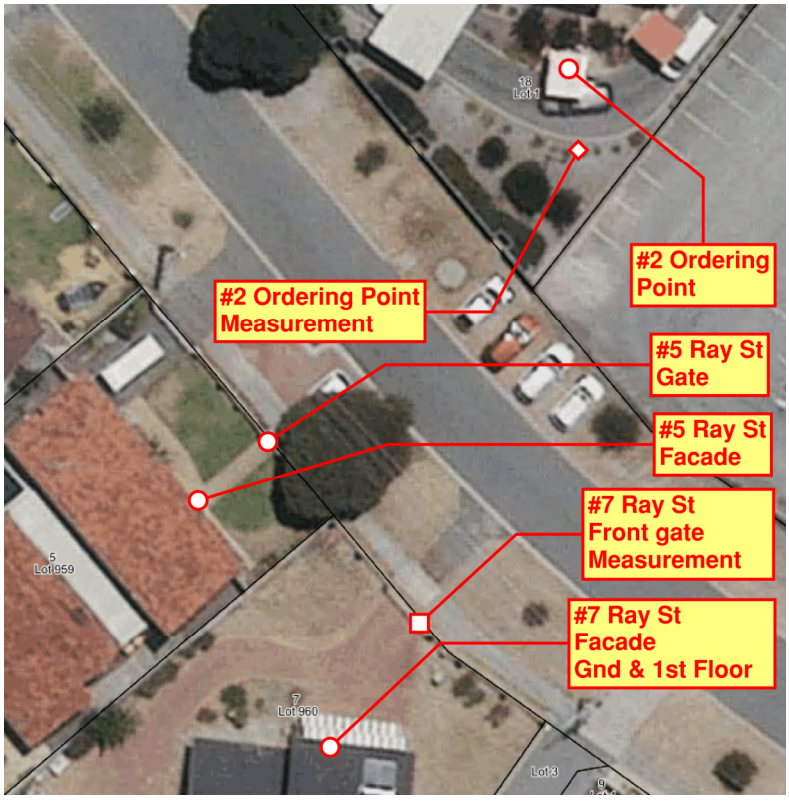


FIGURE 1 – MEASURMENT & CALCULATION POINTS

5.1 The results of the assessment are shown in TABLE 1 below. The results show compliance with the Assigned Noise Levels at all locations and most importantly at the facades.

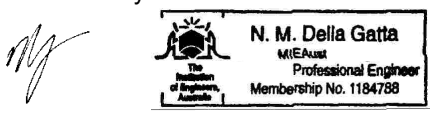
TABLE 1 – RESULTS

Assigned Noise Levels dB(A) **Night Time**		**2200-0700 hrs Monday to Saturday** **2200-0900 hrs Sunday, Public holidays**		
		LA10	**LA01**	**LAmax**
		46	**56**	**66**
POINT OF NOISE RECEPTION				
	#5 Ray St measurement at the front gate	43	52	56
	#5 Ray St Ground floor façade	**41**	51	**55**
	#7 Ray St Ground floor façade	**40**	49	**53**
	#7 Ray St 1st floor façade	**45**	54	**58**
	#7 Ray St measurement at the front gate near letter box	46	52	64
	#7 Ray St Ground & 1st Floor façade	**44**	50	**62**

5.2 In conclusion ND Engineering's opinion is that the KFC Rockingham noise emissions at all times (from air-conditioning, ventilation, refrigeration, order point loud speakers, drive through vehicles) at the two nearest noise sensitive premises being #5 and #7 Ray St as found at the time of measurement complies with the Environmental Protection (Noise) Regulations 1997.

6. If you require any further assistance please contact me

Yours Sincerely



21 July 2026

ANNEX A - ASSIGNED NOISE LEVELS

A1. The assigned noise level, as determined by the Noise Regulations 1997, comprises a Base Noise Level and an Influencing Factor adjustment to take into consideration noise from nearby features such as major roads, industrial, utility and commercial premises

A2. The base assigned noise levels are shown in the following table.

Table A2 – BASE ASSIGNED NOISE LEVELS

Noise sensitive premises at locations within 15 m of a building directly associated with a noise sensitive use.	Time of day	Time of day	Assigned Noise Levels dB(A)		
			LA10	LA1	LAmax
	Day	0700-1900 hrs Monday to Saturday	45+IF	55+IF	65+IF
		0900-1900 hrs Sunday, Public holidays	40+IF	50+IF	
	Evening	1900-2200 hrs all days			55+IF
	Night	2200-0700 hrs Monday to Saturday	35+IF	45+IF	
		2200-0900 hrs Sunday, Public holidays			

A3. The following table shows the Influencing Factor calculation for the adjustments to the base noise levels based on the City of Rockingham TPS Map 5.

Table A3.1 – INFLUENCING FACTOR ASSESSMENT

INFLUENCING FACTOR CRITERIA			ASSESSMENT		
Item	Criteria	Value	Criteria	Value	Totals
Major Road within the					6 (Transport Factor ≤ 6)
- 100 m radius inner circle	veh/day > 15000	6 dB	Patterson Road	6	
- 450 m radius outer circle	veh / day > 15000	2 dB	-	0	
Minor Road within the					
- 100 m radius inner circle	15k > veh/day > 6k	2 dB	-	0	
Type A 'Industrial and Utility premises' within the					5 (≤ 30)
- 100 m radius inner circle	1/10 x Area%	≤ 10	0 %	0	
- 450 m radius outer circle	1/10 x Area%	≤ 10	0 %	0	
Type B 'Commercial premises' within the					
- 100 m radius inner circle	1/20 x Area%	≤ 5	60 %	3	
- 450 m radius outer circle	1/20 x Area%	≤ 5	53 %	2	
					INFLUENCING FACTOR = 11 dB(A)

A4. The assigned noise levels at receiving noise sensitive premises, Silver Chain Rockingham Respite Cottage Lot 969 5 Ray St, as per the Noise Regulations 1997 are shown in the following two tables.

Table C4.1 – ASSIGNED NOISE LEVELS_EAST Residences

Noise sensitive premises at locations within 15 m of a building directly associated with a noise sensitive use.	Time of day	Time of day	Assigned Noise Levels dB(A)		
			LA10	LA1	LAmax
	Day	0700-1900 hrs Monday to Saturday	56	66	76
		0900-1900 hrs Sunday, Public holidays	51	61	76
	Evening	1900-2200 hrs all days	51	61	66
	Night	**2200-0700 hrs Monday to Saturday**	**46**	**56**	**66**
		2200-0900 hrs Sunday, Public holidays			