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Ref: SSD 9835

Dear Erica

**Re: SSD 9835 Sydney Football Stadium Redevelopment – Condition C17 Noise Monitoring Results**

I refer to SSD 9835 for Sydney Football Stadium Stage 2 (Design, construction and operation), which was approved by the Minister for Planning and Public Spaces on 6 December 2019. Savills has been appointed by the Applicant, Infrastructure NSW, to manage the post approval activities leading up to the commencement of construction.

Condition C17 requires short term noise monitoring to be undertaken at nominated sensitive receivers. The results are required to be reported to the Planning Secretary every three months following commencement of construction.

John Holland (the appointed contractor) has recently completed the first three month tranche of noise monitoring. Please find enclosed the Noise Monitoring Report No. 1 documenting the noise monitoring results for the period March – June 2020. The Report concludes no major exceedances were breached and no complaints were received from surrounding properties.

Should you have any questions regarding this letter please contact the undersigned on 0412 775 365.

Yours sincerely



6 August 2020

**Stephanie Ballango**

Director

Consultant to Infrastructure NSW

# **Sydney Football Stadium Redevelopment Stage 2**

## **Noise Monitoring Report 1 (March - June 2020)**

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# 1 Introduction

## 1.1 Project Scope

Stage 2 of the Sydney Football Stadium (SFS) Redevelopment (SSD 9835) was approved by the Minister for Planning and Public Spaces on 6 December 2019. The SFS Redevelopment is an Infrastructure NSW initiative to build a new rectangular stadium within the Moore Park Precinct<sup>1</sup>.

SSD 9835 provides consent for the following works:

- construction of the stadium, including:
  - 45,000 seats (additional 10,000 - person capacity in the playing field in concert mode) in four tiers including general admission areas, members seating and corporate | premium seating;
  - roof cover over all permanent seats and a rectangular playing pitch;
  - a mezzanine level with staff and operational areas;
  - internal pedestrian circulation zones, media facilities and other administration areas on the seating levels;
  - a basement level (at the level of the playing pitch) accommodating pedestrian and vehicular circulation zones, 50 car parking spaces, facilities for teams and officials, media and broadcasting areas, storage and internal loading areas;
  - food and drink kiosks, corporate and media facilities; and
  - four signage zones.
- construction and establishment of the public domain within the site, including:
  - hard and soft landscaping works;
  - publicly accessible event and operational areas;
  - public art; and
  - provision of pedestrian and cycling facilities.
- wayfinding signage and lighting design within the site;
- reinstatement of the existing Moore Park Carpark 1 (MP1) upon completion of construction works with 540 at-grade car parking spaces and vehicular connection to the new stadium basement level;
- operation and use of the new stadium and the public domain areas within the site for a range of
- sporting and entertainment events; and
- extension and augmentation of utilities and infrastructure.

## 1.2 Noise and Vibration Management Plan

A Construction Noise and Vibration Management Plan (CNVMP) was approved on 19 March 2020 by the Planning Secretary's delegate. The CNVMP addresses the requirements of SSD 9835 and identifies

<sup>1</sup> SSD 9835 defines Moore Park precinct as:

*The land bounded by:*

- *The northern, eastern and southern boundaries of SCSG controlled land;*
- *The western boundary of the Entertainment Quarter adjacent to Driver Avenue;*
- *Lang Road to the south between Driver Avenue and Anzac Parade;*
- *Anzac Parade to the west between Lang Road and Moore Park Road; and*
- *Moore Park Road between Anzac Parade and the boundary of SCSG controlled land.*

(amongst other things) residential and non-residential receivers, construction noise levels at all identified receivers, High Noise Impact Works and their associated predicted construction noise levels that might exceed NMLs and or reach or exceed 75dB(A)  $L_{Aeq}(15min)$ . The CNVMP also identifies the reasonable and feasible management and mitigation measures to be implemented in the event predicted noise levels are exceeded.

This report should be read in conjunction with the approved CNVMP given that the latter establishes the parameters within which short term attended noise monitoring is required to occur. The approved CNVMP can be viewed at:

<https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSD-9835-PA-12%2120200318T222843.933%20GMT>

## 1.3 Reporting Requirements

Conditions C7 and C17 of SSD 9835 relate to noise. Condition C7 requires intra-day respite periods to be implemented if construction works exceed 75dB(A)  $L_{Aeq}(15mins)$ . Condition C17 requires the carrying out of short term attended noise monitoring and the preparation of a noise monitoring report which must be submitted to the Planning Secretary every three months following the commencement of construction.

The purpose of this document is therefore to fulfil the reporting requirements of Condition C17. The report covers the construction period from March 2020 – June 2020.

Conditions C7 and C17 are reproduced below in their entirety.

Condition	Requirement	Section Discussed in this Report
<b>C7</b>	All works that generate noise exceeding 75dB(A) $L_{Aeq}(15mins)$ are subject to the intra-day respite periods, as approved by the Planning Secretary in the CNVMP in condition B28 <sup>2</sup> .	Section 2.2
<b>C17</b>	The Applicant must undertake short term attended noise monitoring for all 'High Noise Impact Works' that predicted to exceed the NMLs, identified in the CNVMP (B28). (sic) and any other works that generate noise exceeding 75dB(A) $L_{Aeq}(15mins)$ and a noise monitoring report must be produced and submitted to the Planning Secretary every three months following commencement of the construction to verify that:	Section 2.1
<b>C17(a)</b>	construction noise levels do not exceed the recommended NMLs identified in the Stage 2 SSDA – Noise and Vibration Assessment prepared by ARUP dated 30 August 2019; and	Section 3

<sup>2</sup> Condition B28e provides:

(iv) the following intra-day respite periods (as defined by ICNG) for works exceeding 75dB(A)  $L_{Aeq}(15 mins)$ , unless otherwise agreed with the identified sensitive receivers such as UTS, Kira Child Care Centre and / or Fox Studios and evidence of the agreement provided to the Planning Secretary, prior to the commencement of the works:

- in continuous blocks not exceeding 3 hours each with one hour of respite every three hours block;
- scheduling of works outside of the examination time for educational establishments; and
- noise intrusive works commencing after 8am and be undertaken within the approved standard construction hours.



C17(b)	Noise management and mitigation measures have been implemented where the NMLs are exceeded.	Section 4
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## 1.4 Surrounding Land Use

Residential zones are located to the north and north-east in Paddington, east and south-east in Centennial Park, as well as west along South Dowling Street in Surry Hills and Redfern. Non-residential premises also surround the site, with scattered child cares, places of worship, educational facilities and Paddington Town Hall located in Paddington and Centennial Park, high schools located across Anzac Parade and various recreation areas nearby, shown in Figure 1.

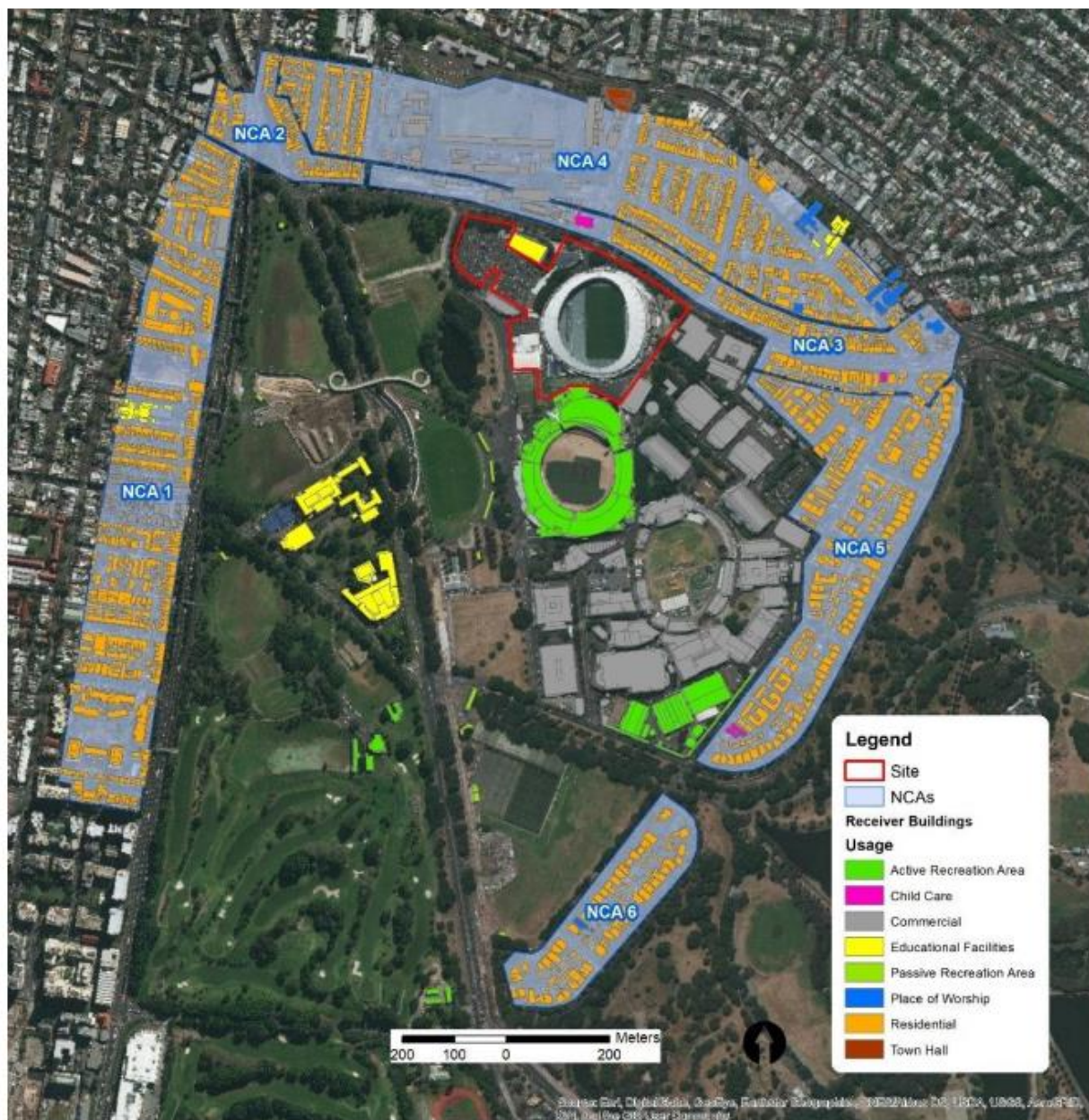


Figure 1 - Noise sensitive receiver locations and NCAs

## 2 Noise Monitoring Locations

### 2.1 Short term monitoring locations

In accordance with Section 6 of the approved CNVMP, short term attended noise monitoring (15 minutes) was conducted at the four locations identified in Figure 2:

1. University of Technology Sport Sciences Faculty Building (UTS);
2. Fox Studios Australia Sound Stage 2
3. Kira Child Care, 230 Moore Park Road, Paddington;
4. 252 Moore Park Road.

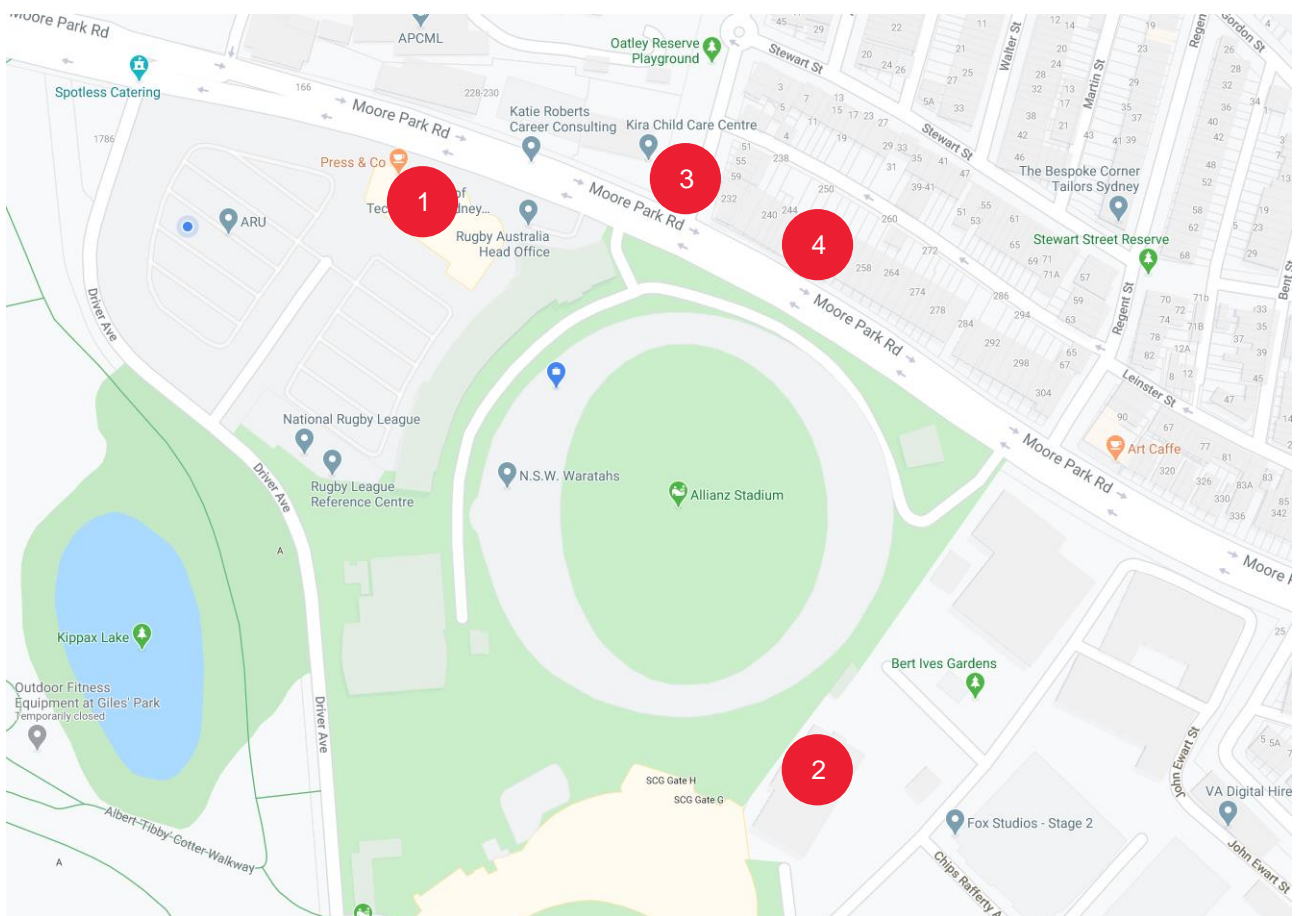


Figure 2 - Noise Monitoring Locations

Monitoring at each of these locations was conducted at the beginning of each stage of works, and then on an on-going monthly basis during the carrying out of any 'High Noise Impact Works' undertaken on site.

### 2.2 Real time monitoring locations

Real time monitors are located at Kira Child Care Centre (A) and on the north east boundary of the site adjacent to Moore Park Road (B) as shown below in Figure 3.



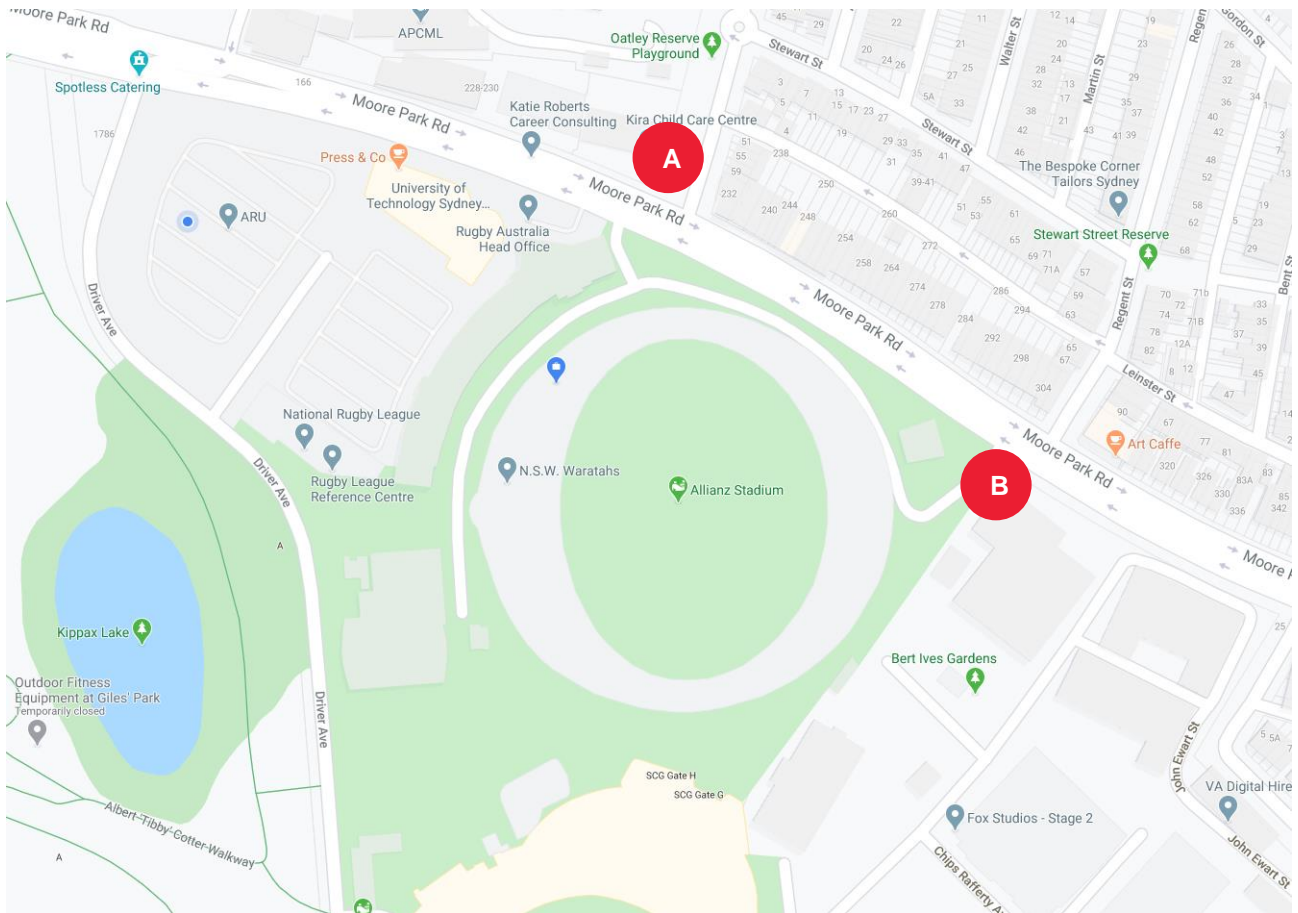


Figure 3 - Real Time Monitoring Locations

## 2.3 Works Undertaken

In the three month period covered by this report, construction works included:

- Site Establishment
- Bulk earthworks
- Piling
- Pile trimming
- Haulage of spoil
- Concreting

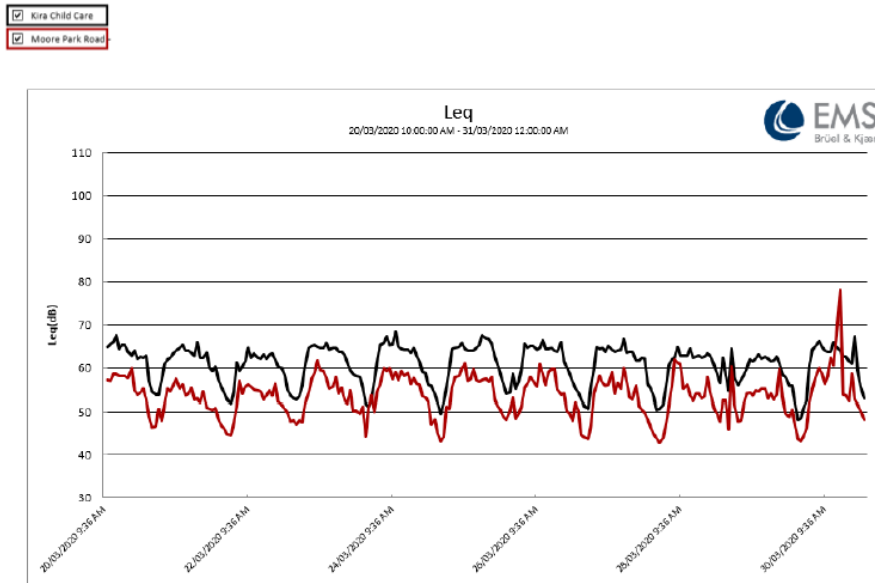


## 3 Noise Monitoring Results

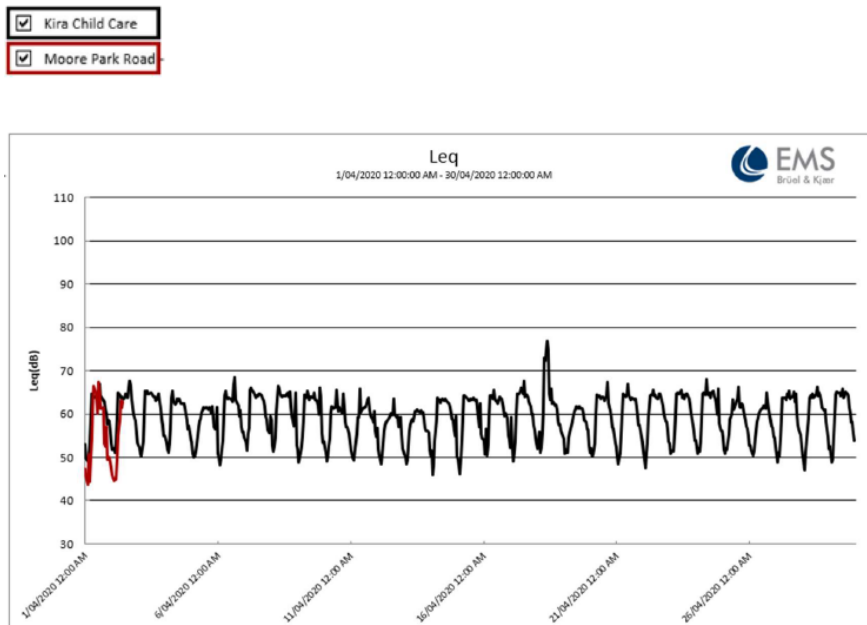
### 3.1 Short term noise monitoring results

The following figures present the short term monitoring results achieved between March 2020 and June 2020 for the two nominated locations. The graphs demonstrate that works were compliant with the established noise level criteria and there were no exceedances of any trigger levels.

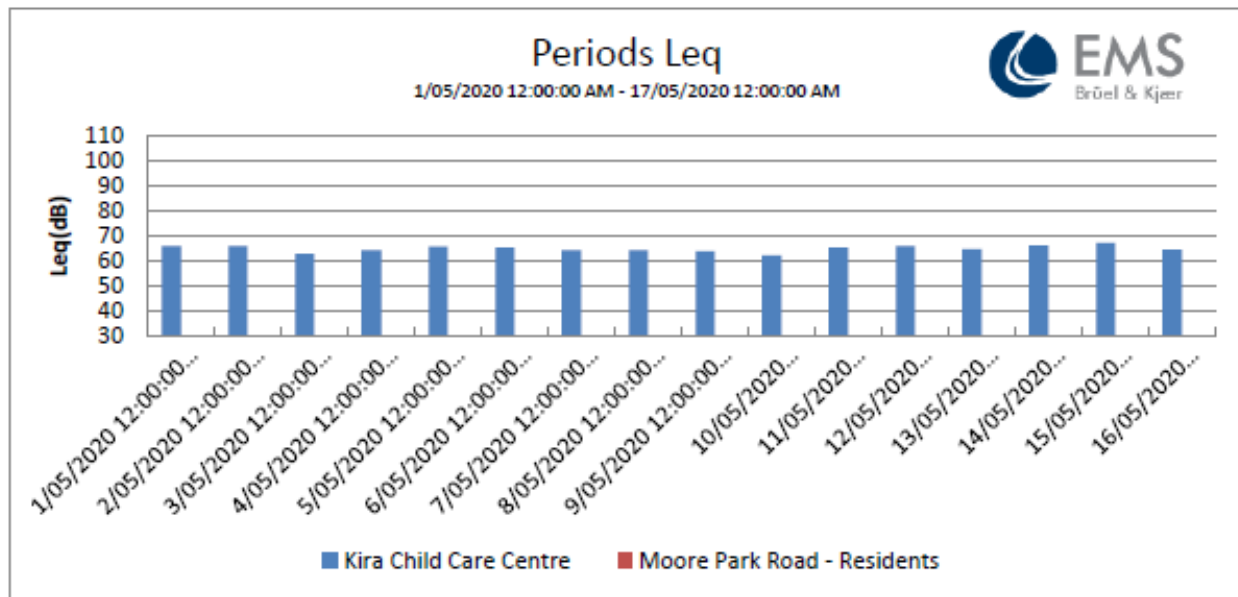
#### March (20/3 to 31/3)



#### April 2020



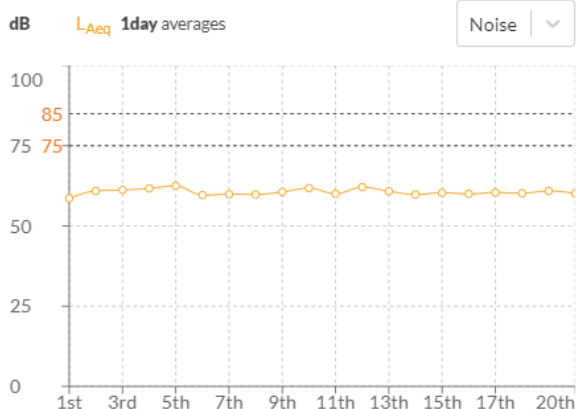
May 2020



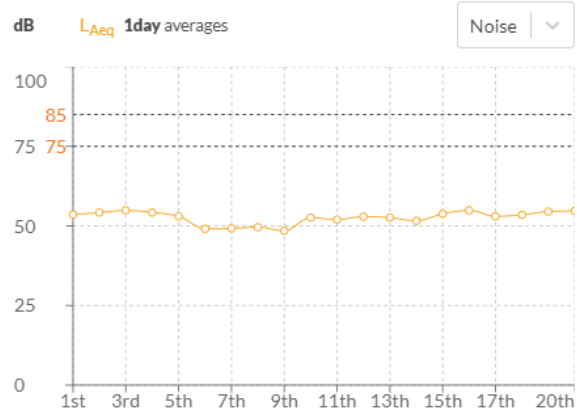
June 1 – June 20

**Kira Child Care Centre**

Jun 1 2020 - Jun 20 2020

**Gatehouse, Moore Park Road**

Jun 1 2020 - Jun 20 2020



### 3.2 Attended noise monitoring

Attended monitoring was carried out at the locations identified above, with the exception of Fox Studios which was closed and therefore inaccessible due to COVID 19 restrictions. In its place, a representative proxy location was chosen on the adjacent boundary.

The attended monitoring results observed during the period are presented in the table below and demonstrate that the construction works were largely inaudible to nearby residential and non-residential receivers due to road noise.

Date	Time	Location	Predicted Laeq(15)	NML Laeq(15)	Result Laeq(15)	Monitoring Trigger	Comment
<b>23/3/20</b>	10:05	1	77	55	65.5	Start of Stage CC1	Compliant
	10:35	2	75	70	73.4	Start of Stage CC1	Compliant
	11:20	3	76	55	69.1	Start of Stage CC1	Compliant – heavy traffic and SFS works were not audible
	11:55	4	80	62	72.1	Start of Stage CC1	Compliant – heavy traffic and SFS works were not audible
<b>20/5/2020</b>	14:05	1	75	55	65.4	Start of Stage CC2	Compliant
	14:35	2	74	70	72	Start of Stage CC2	Compliant – extraneous noise from SCG delivery vehicle
	15:10	3	73	55	70.4	Start of Stage CC2	Compliant – heavy traffic and SFS works were not audible
	15:30	4	78	62	70.2	Start of Stage CC2	Compliant – heavy traffic and SFS works were not audible
<b>19/6/2020</b>	10:00	1	75	55	64.5	High Impact Noise	Compliant - high impact activities barely audible
	10:30	2	74	70	71.2	High Impact Noise	Compliant – high impact activities barely audible
	11:00	3	73	55	74.1	High Impact Noise	Compliant – heavy traffic and SFS works were not audible
	11:20	4	78	62	74.4	High Impact Noise	Compliant – heavy traffic and SFS works were not audible

## 4 Mitigation Measures

Whilst construction levels marginally exceeded the NMLs on a number of occasions, they remained under the predicted levels. John Holland confirms that during these occasions all mitigation measures identified in Section 5 of the adopted CNVMP were in place.

In particular, John Holland did not undertake any high impact noise works prior to 8am and implemented respite hours (3 hours on and 1 hour off). In addition, a Class A hoarding was installed along the boundary.

On the basis of the results observed between March 2020 and June 2020, the management and mitigation measures nominated in the approved CNVMP are considered satisfactory and do not require revision or updating at this stage. Furthermore, corrective actions are not required at this stage to reduce the likelihood for a repeat non-conformance.