



Report reference: N&V-R2816

**NOISE INVESTIGATION AT [REDACTED]
(AUGUST 2020)**

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1. COMPLAINT DETAILS

Complaint ref.	11380906		
Property location	Northern line. Between Kennington and Oval; above the Kennington loop (see Figure 1)	LCS Codes	KEN-OVL: N144/NSBLO 240m N144/NNBLO 550m Loop: N192/NRD01 600m

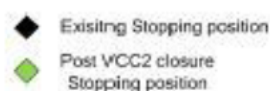
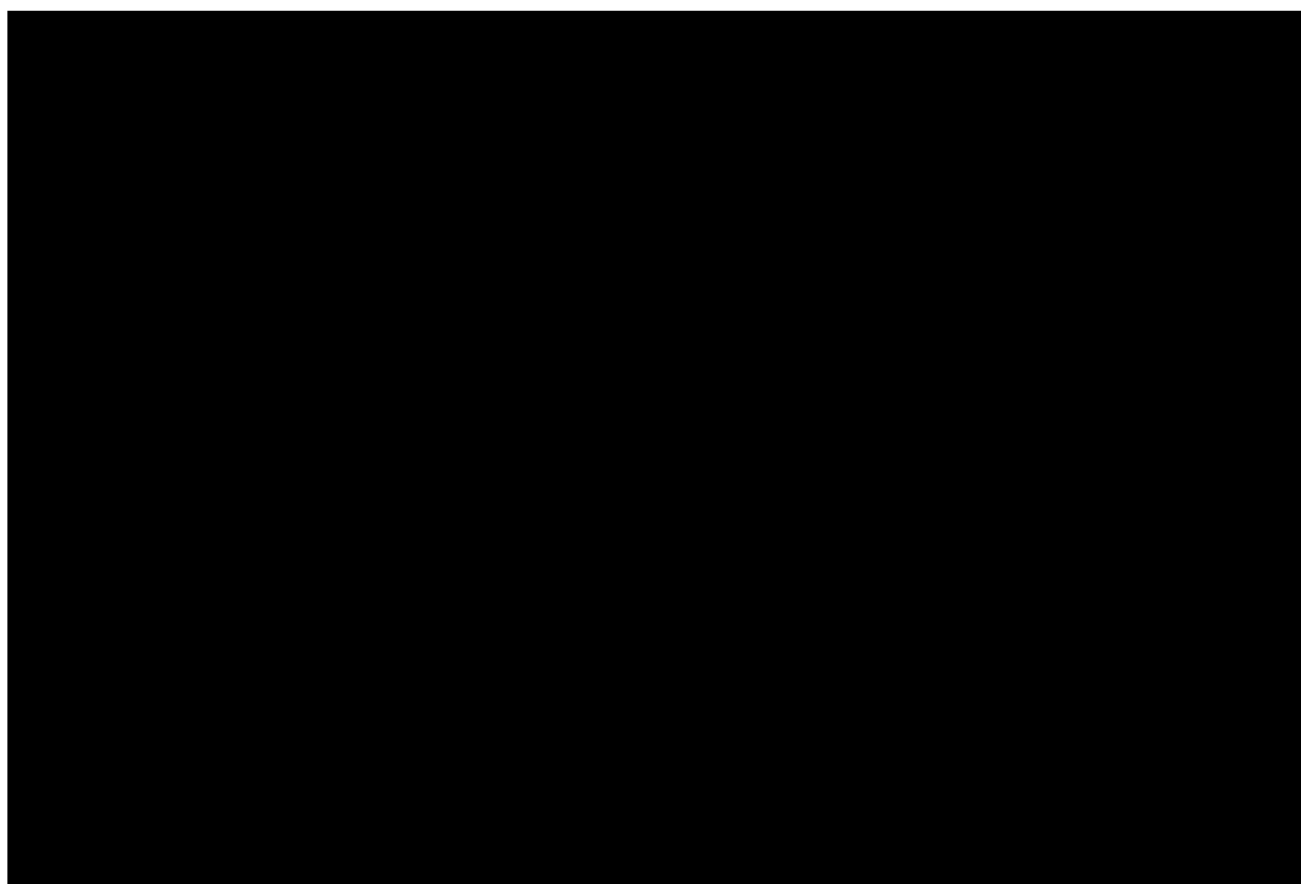


Figure 1: 11 [REDACTED] in relation to Kennington Loop on the Northern Line

2. BACKGROUND

Initially, [REDACTED] was one of the properties identified for the Inspector to visit as part of the Northern Line Extension public inquiry. Noise monitoring has been carried out a number of times in this property since February 2014, with the previous set in January 2020. Just prior to those measurements from 27th December 2019 the signal positions around the loop had been altered. There are now only two stopping positions where there were three previously. The old and new signal positions are shown in Figure 1.



Subsequent to the January 2020 measurements, local residents raised the possibility of permanent noise monitoring being undertaken. It was explained that aside from being intrusive to residents, it would not enhance our understanding of the issues. Instead it was proposed by TfL that periodic noise monitoring in a few properties above the loop at 3 or 4 monthly intervals should be sufficient. As a significant amount of data has already been obtained at [REDACTED], it was agreed that this was a suitable property for on-going routine noise monitoring.

The latest measurements have been taken to assess the current noise levels within the property.

3. MEASUREMENT DETAILS

Date of latest measurements	13 th August 2020
Equipment used	Svante SVAN 958A sound & vibration meter S/N 69836
Measurement location	Basement dining room. Microphone tripod-mounted (height c.1.2m) offset from the centre of the room.

All measurements at this property have been taken in the basement dining room. This is the part of the house where the train noise was considered by the resident to be most noticeable.

4. RESULTS OF NOISE MEASUREMENTS - ($L_{A\text{MAX},\text{FAST}}$) dB(A):

The direction of travel of the trains was identified by subsequent reference to TrackerNet (an internal network application).

Prior to the December 2019 change in the signal positions it was evident that most of the trains travelling around the loop stopped at a signal in very close proximity of [REDACTED]. Each train was audible as it approached and came to a halt at the signal, and then again as it started and travelled on towards Kennington.

For both sets of measurements taken in 2020, although the signal close to [REDACTED] has been moved back only a few metres, trains stopping are no longer audible. Only trains moving on towards Kennington are audible.

In addition to the latest results, all previous noise levels measured for trains around the loop are included in Table 1.



	Loop – approaching the signal				Loop – departing the signal				Background L _{A90}
Date	Min	Max	Mean	No. of trains	Min	Max	Mean	No. of trains	
11/02/2014 09:30-10:05	33	43	38	8	40	44	42	7	21
12/12/2014 09:20-09:50	35	44	41	10	41	47	45	8	20
27/10/2015 10:15-10:45	37	40	38	9	43	44	43	6	23
14/12/2015 17:25-17:50	37	40	38	6	41	44	42	6	24
16/09/2016 10:55-11:25	42	46	44	9	47	52	49	10	25
18/11/2016 10:45-11:10	38	40	39	7	44	47	45	10	25
23/03/2017 16:05-16:35	41	45	43	9	47	49	48	11	25
30/08/2017 10:29-11:15	39	45	43	12	47	49	48	12	23
27/10/2017 11:12-11:35	41	45	43	7	48	50	49	8	24
19/12/2017 09:34-10:10	41	46	44	11	48	49	48	13	23
08/01/2018 11:00-11:40	41	45	42	12	45	50	47	13	22
17/04/2018 10:15-10:50	41	44	42	8	47	50	49	11	25
29/10/2018 09:40-10:20	38	46	40	9	44	50	46	9	23
07/01/2020 11:45-12:15	Not measurable				44	46	45	10	24
13/08/2020 10:10-10:40	Not measurable				47	48	47	10	20

Table 1: Noise levels for trains travelling around the loop

Note: Trains travelling in both directions between Kennington and Oval are also detected within the property, albeit at lower noise levels than for trains on the loop. For the current visit the L_{Amax,fast} noise levels for northbound trains were, on average, 34dB(A) and for southbound trains 31dB(A). The levels are consistent with those recorded previously.



5. OBSERVATIONS

The August 2020 mean $L_{Amax,fast}$ noise level for trains around the loop has increased since the previous results in January 2020. It's now in the middle of the range of noise levels recorded at this property. Since the change in the signal positions, trains on the loop are only audible when they move from the relocated signal towards Kennington, which means that the number of train noise events has reduced by half.

The noise of trains travelling around the loop remains pervasive, and is observed as a deep rumble, with an impulsive component.