



**NGH**



# Annual Noise Monitoring Report

## Tharbogang Quarry and Landfill Operations

December 2021

Project Number: 18-393



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# 1. Introduction

Griffith City Council (Council) currently operates a landfill and quarry in Tharbogang, approximately 10 kilometres (km) northwest of Griffith in New South Wales (NSW). Access to the site is via Hillside Drive, off Slopes Road and Kidman Way (MR80). The Department of Planning, Industry and Environment (DPIE) have issued Conditions of Approval (CoA) for the site that requires a noise and vibration monitoring program to be prepared and implemented. Council has engaged NGH to monitor operational noise from the Tharbogang Quarry/Landfill annually for a period of three years.

Monitoring noise from facility operations enabled comparisons between actual noise levels from the facility and noise management levels at six sensitive receiver locations (Figure 1-1).

This letter details the results of the noise monitoring conducted within the quarry and for the six sensitive receivers. Monitoring was conducted on 1 December (afternoon) and 2 December 2021 (morning and midday periods).

## 1.1 Approach

An NGH consultant attended each sensitive receiver location to conduct noise monitoring over 15-minute intervals using a Type 1 noise logger (Svantek/Svan 959). The noise logger was positioned between 5 metres (m) and 30m from an external wall of each residential building, on a tripod 50 centimetres (cm) off the ground, with the microphone facing the main noise source(s).

The noise logger was calibrated at the beginning of each monitoring round and was within the service calibration period as shown in Table 1-1.

Table 1-1 Equipment service calibration dates

Equipment make/model	Calibration date	Date of next calibration
Svantek SVAN-959 Vibration Meter SN:21293	18/05/2021	18/05/2022
SV-33B Calibrator SN:109919	25/10/2021	25/10/2022



**Annual Noise Monitoring Report**  
**Tharbogang Quarry and Landfill Operations**

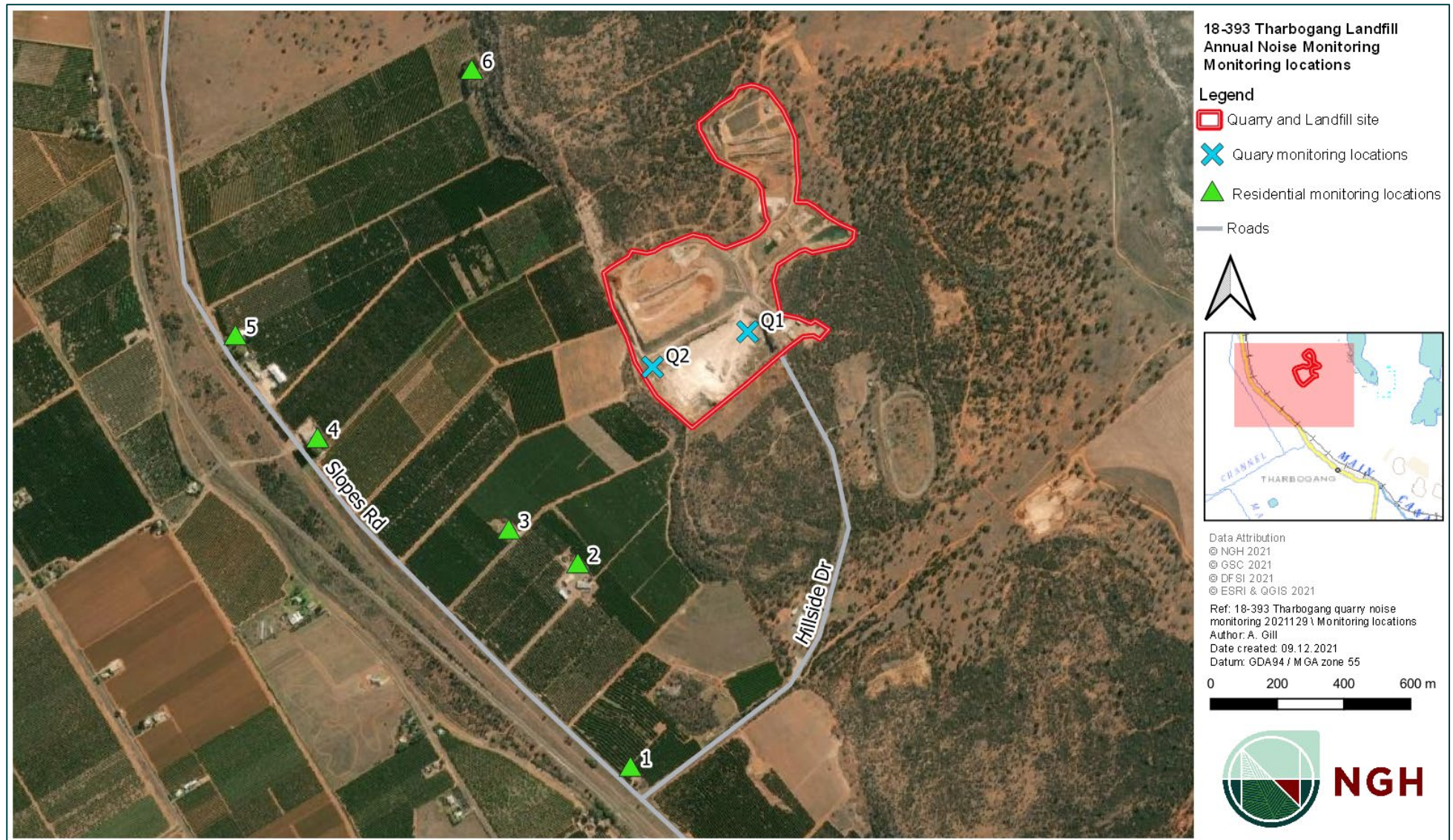


Figure 1-1 Monitoring locations

## 1.2 Weather conditions

The weather in Tharbogang on 1 and 2 December was fine and sunny with cloud cover ranging from 0% to 15%. Winds were experienced during the monitoring periods, with peaks of 19 kilometres per hour (km/hr). This had a minor impact on monitoring results as the wind caused nearby trees to rustle during noise recordings (refer to Appendix A). A summary of the weather data throughout the day from the weather station at Griffith Airport (station number 0750410) is provided in Table 1-2 (BoM, 2021).

Table 1-2 Meteorological data from Griffith Airport (BoM, 2021)

Date	Time	Temperature (°C)	Wind direction	Wind speed (km/h)
1/12/2021	3:00pm	30.1	ESE	9
1/12/2021	3:30pm	30.1	ESE	9
1/12/2021	4:00pm	29.2	ESE	9
1/12/2021	4:30pm	30.3	-	Calm
1/12/2021	5:00pm	30.5	-	Calm
1/12/2021	5:30pm	30.3	-	Calm
2/12/2021	8:00am	24.1	-	Calm
2/12/2021	8:30am	23.8	ESE	11
2/12/2021	9:00am	25.9	NE	11
2/12/2021	9:30am	26.1	ESE	13
2/12/2021	10:00am	27.1	E	17
2/12/2021	10:30am	27.9	NE	13
2/12/2021	11:00am	29	E	19
2/12/2021	11:30am	29.7	NNW	7
2/12/2021	12:00pm	30.5	ESE	7
2/12/2021	12:30pm	31.3	SW	2
2/12/2021	1:00pm	31.3	WNW	13
2/12/2021	1:30pm	32.3	WSW	17

### 1.3 Existing environment

A variety of foreground and background noises were audible at sensitive receiver locations that were not associated with quarry or landfill operations, including:

- Dogs barking
- People talking
- Cicadas
- Birds in nearby trees
- Wind rustling in nearby trees
- Tractors and large trucks working in nearby orange orchards
- Road traffic from Slopes Road and Kidman Way.

Line graphs showing the noise levels for each monitoring period are provided in Appendix A.

### 1.4 Noise monitoring results

The noise assessment criterion is 35  $L_{Aeq}$  for all times the facility is operational. The  $L_{Aeq}$  (15 min) for each monitoring period is provided in Table 1-3.

Table 1-3 Noise monitoring results summary

Time	$L_{Aeq}$ (decibels (dB))		
	Morning	Midday	Afternoon
Receiver 1	59.2	65.2	73.7
Receiver 2	52.7	45.2	54.3
Receiver 3	42.6	38.4	37.2
Receiver 4	49.5	41.1	*51.6
Receiver 5	51.5	47.2	*43.1
Receiver 6	42.3	42.4	*49.1
Quarry Location 1	46.3	59.7	60.3
Quarry Location 2	62.7	59.8	63.1

*\*Reading was taken after the development had ceased its daily operations.*



## **1.5 Impacts of Quarry/Landfill on residential receivers**

Noise monitoring was undertaken at the quarry site when the facility was fully operational. The assessment criterion  $35L_{Aeq}$  (15 min) was exceeded during each monitoring period at each sensitive receiver. However, the dominant audible noise sources varied throughout the day and at each location. A combination of noise sources unrelated to the facility contributed to exceedances of the noise assessment criterion including road traffic, dogs barking, landholder activities, cicadas and non-related machinery noise. Noise from the development was not audible at any of the sensitive receivers.

Afternoon noise readings taken for Residential Receiver 4, 5 and 6 occurred after the development had ceased its daily operations. Results for Residential Receivers 4 and 5 indicated that the  $L_{Aeq}$  was higher after facility operations had ceased. Therefore, it is likely that noise from neighbouring businesses (i.e., orchard farms) were contributing to the noise levels recorded at each location. Noise from the development was not observed to be a key noise contributor at any residential receiver locations.

Noise monitoring for Residential Receiver 1 indicates that the noise assessment criterion  $35 L_{Aeq}$  (15 min) was exceeded during the afternoon monitoring period (refer to Table 1-3). This residence is situated on the corner of Slopes Road and Hillside Drive. It is possible that vehicle moments to and from the facility contributed to the high reading (73.7 dB) obtained. Other residential receivers were located away from the intersection of Slopes Road and Hillside Drive, which likely accounts for the lower  $L_{Aeq}$  recordings.

Noise monitoring datasheets and a description of the main audible noise sources at each monitoring location are provided in Appendix B.

Yours sincerely,



**Alyce Gill**  
Environmental Manager  
(02) 6923 1564  
NGH

## **2. References**

BoM. (2021). *Climate data online*. Retrieved from Bureau of Meteorology:  
[http://www.bom.gov.au/jsp/ncc/cdio/weatherData/av?p\\_nccObsCode=139&p\\_display\\_type=dataFile&p\\_stn\\_num=074148](http://www.bom.gov.au/jsp/ncc/cdio/weatherData/av?p_nccObsCode=139&p_display_type=dataFile&p_stn_num=074148)

## Appendix A Noise monitoring results

### Residential Receiver 1

This sensitive receiver was located on the corner of Slopes Road and Hillside Drive. A condition of approval for the quarry and landfill operation was that noise monitoring at this sensitive receiver should include traffic noise monitoring of heavy vehicles on Hillside Drive. The resident may then be provided with the opportunity to have amelioration works done on their property should the monitoring demonstrate that the assessment criteria is exceeded.

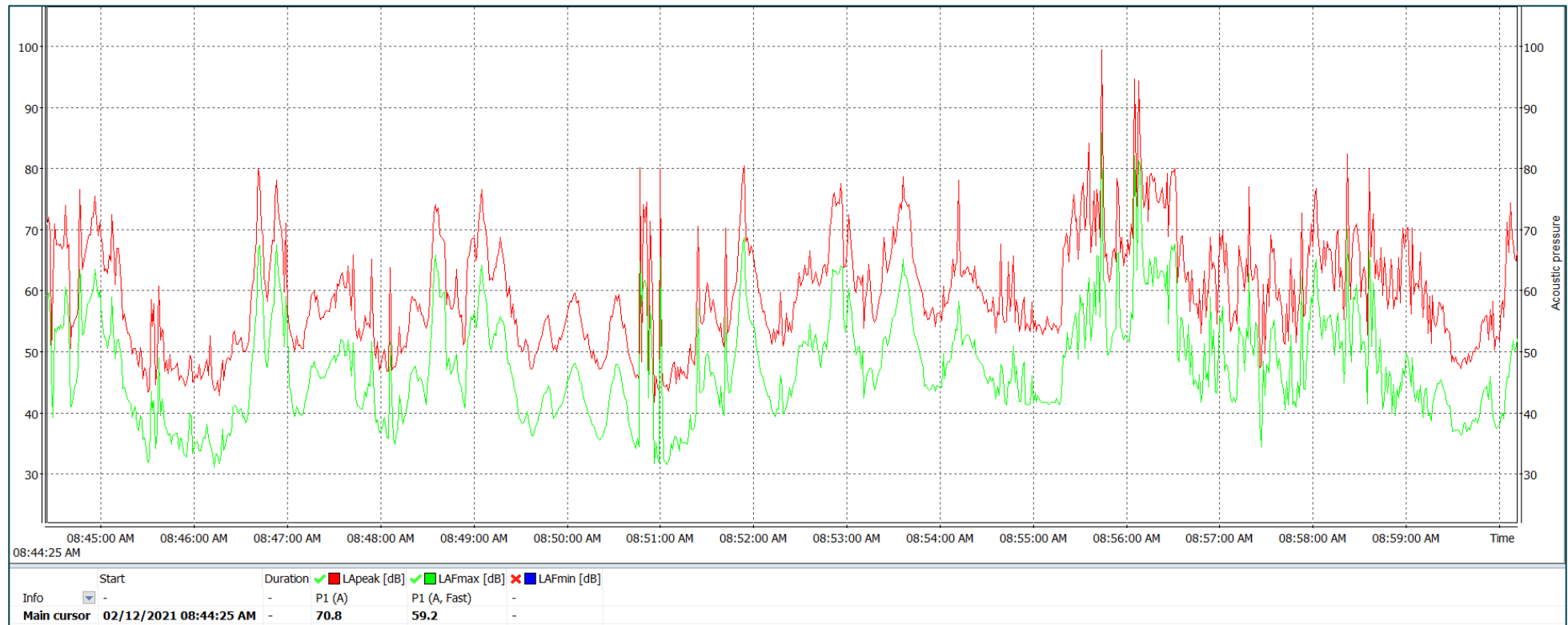
The noise logger was positioned within the yard, approximately 30m southeast of the nearest external wall of the building (Figure 2-1).



Figure 2-1 Location of noise monitor at residential receiver 1

## Morning

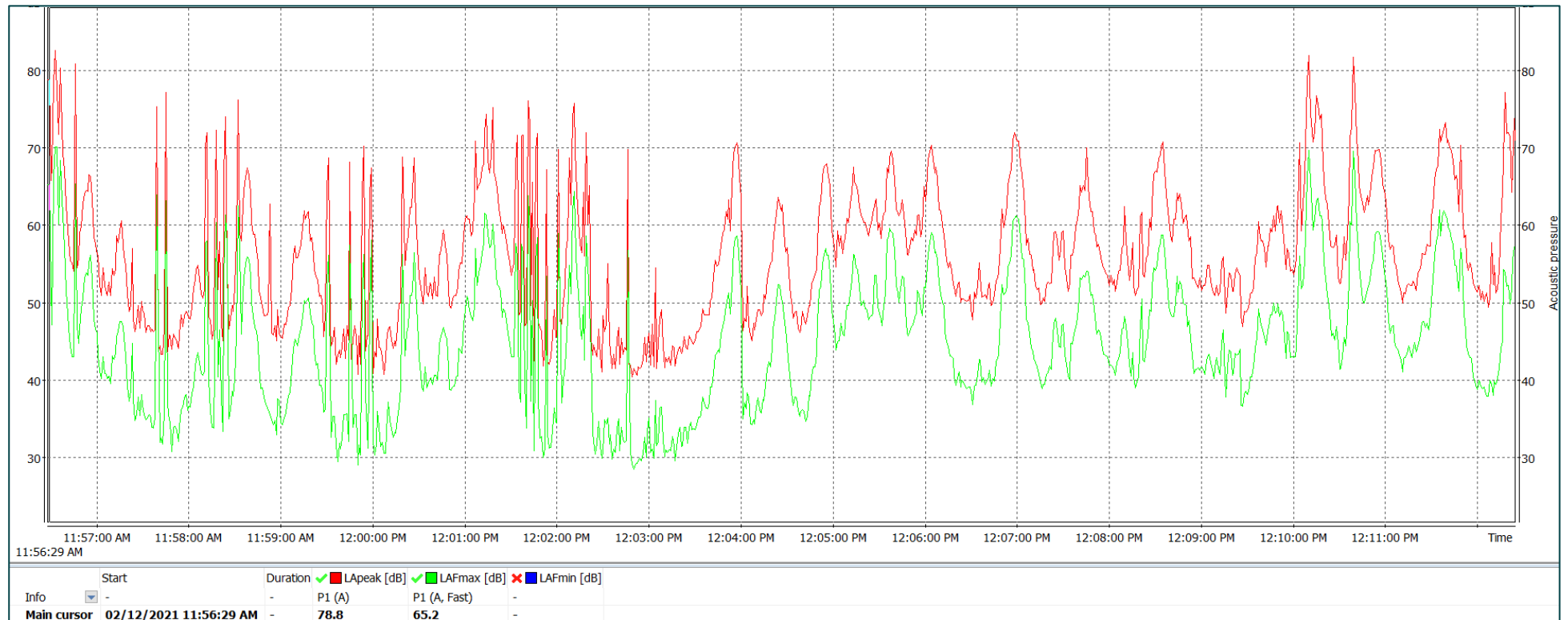
The dominant noise source was the dog barking for the first two minutes and at 8.51am, followed by birds and the resident of the house taking out their bin at 8.56am. Heavy and light vehicles passed the household periodically via Slopes Road. Operations at the landfill were inaudible. The  $L_{Aeq}$  (15 min) over the period was 59.2dB, which is over the 35  $L_{Aeq}$  (15 min) assessment criterion.





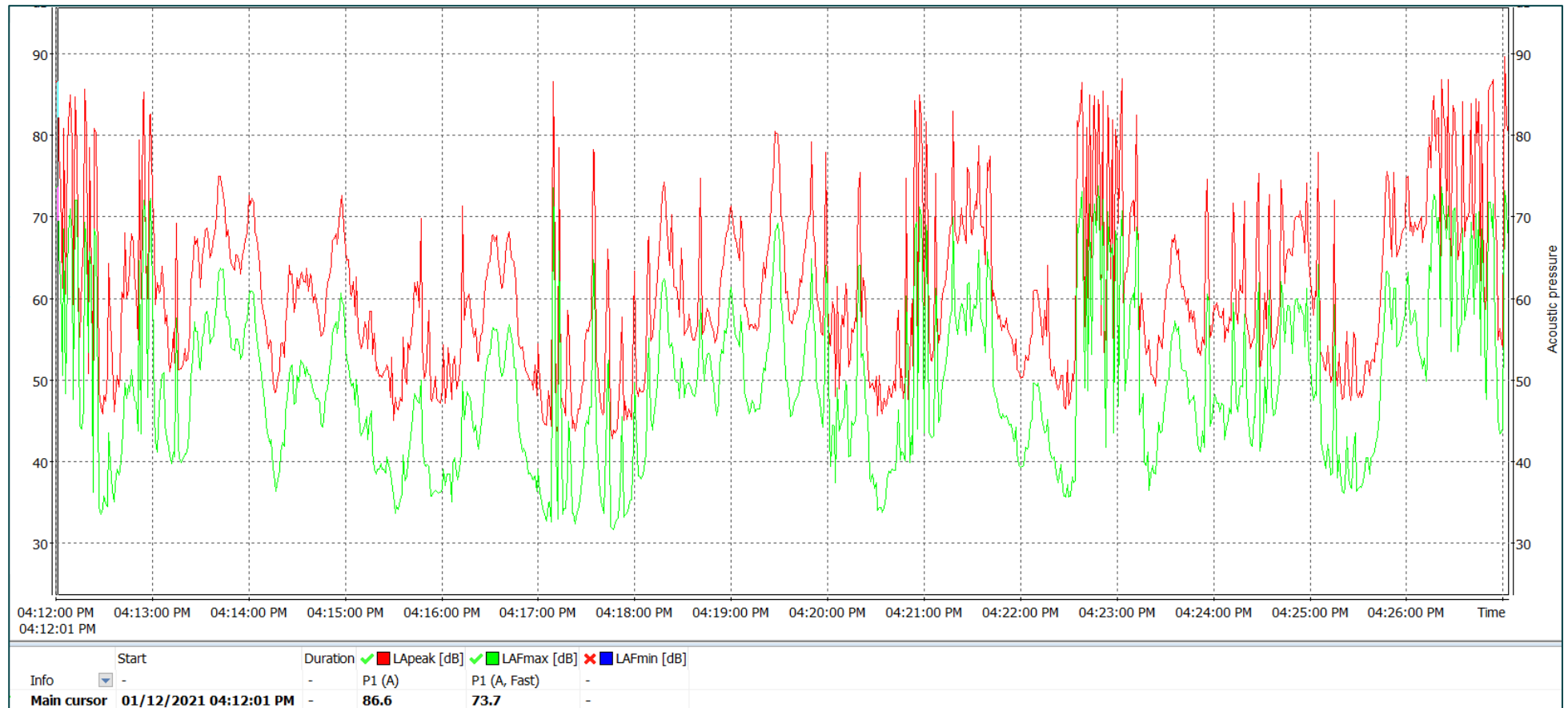
## Midday

The dominant noise source was the dog barking for the first five minutes, and the landholder calling his dog at 12:10pm. Background noise from birds and local road traffic was observed. Operations at the landfill were inaudible. The  $L_{Aeq}$  (15 min) over the period was 65.2dB, which is over the 35  $L_{Aeq}$  (15 min) assessment criterion.



## Afternoon

The dominant noise in the foreground included the resident's dogs barking and bird noises throughout the recording. The other dominant noise was a heavy vehicle movement on Hillside Drive at 4.23pm. Background noise from the landfill was inaudible. Traffic noise from the local road network was consistent throughout the monitoring period. Operations at the landfill were inaudible. The  $L_{Aeq}$  (15 min) was 73.7dB, exceeding the 35  $L_{Aeq}$  (15 min) assessment criterion.



## **Residential Receiver 2**

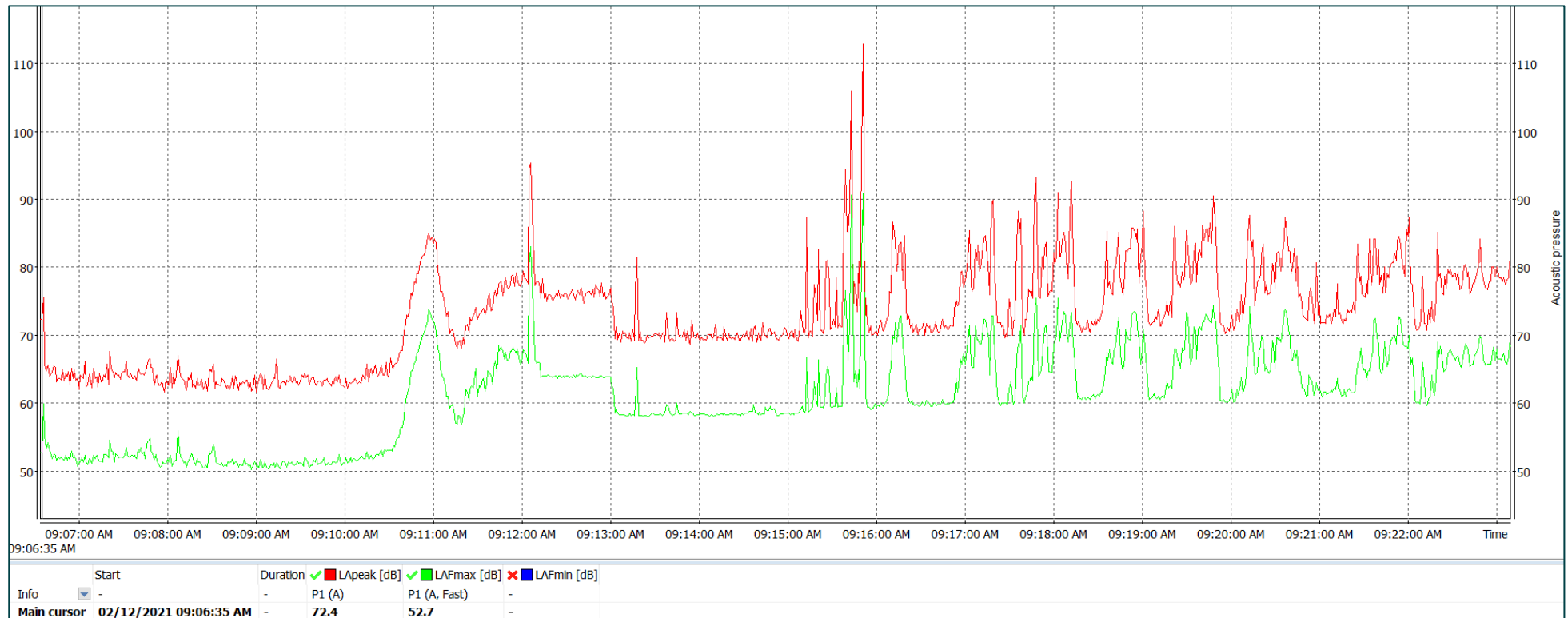
This sensitive receiver is located within an orange orchard, approximately 350m off Slopes Road and approximately 1020m from Tharbogang Quarry. The noise logger was positioned facing northeast, approximately 7m southeast of the residential building (Figure 2-2). The residential building is also within the same compound as two large sheds and a commercial refrigerator, which was operational and emitting an audible 'hum' throughout the day.



Figure 2-2 Location of noise monitor at residential receiver 2

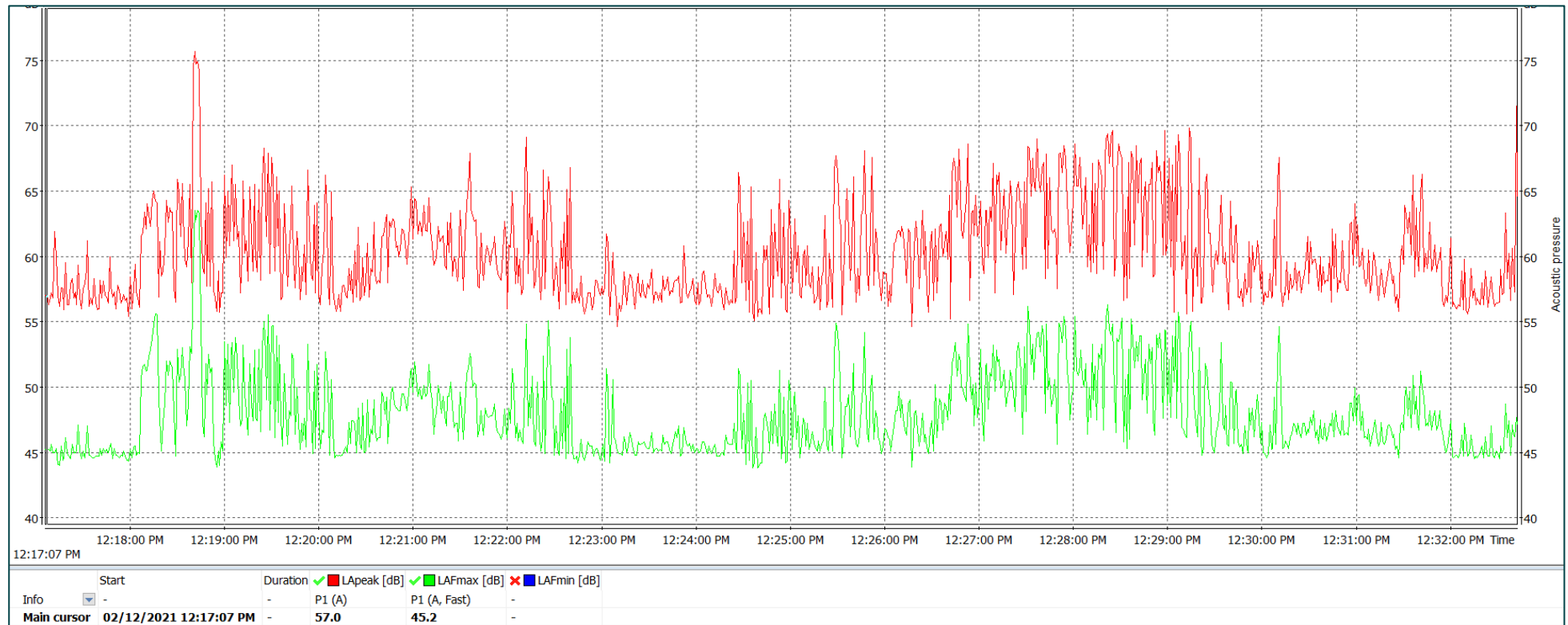
## Morning

The constant hum of the commercial fridge 30m from the house and bird activity were audible in the foreground and a dog barked loudly at 9:12am during the recording. At 9.16am a landholder vehicle pulled into the driveway. Operations at the landfill were inaudible. The dominant background noise was road traffic from Slopes Road. The  $L_{Aeq}$  (15 min) over the period was 52.7dB, which is above the 35  $L_{Aeq}$  (15 min) assessment criterion.



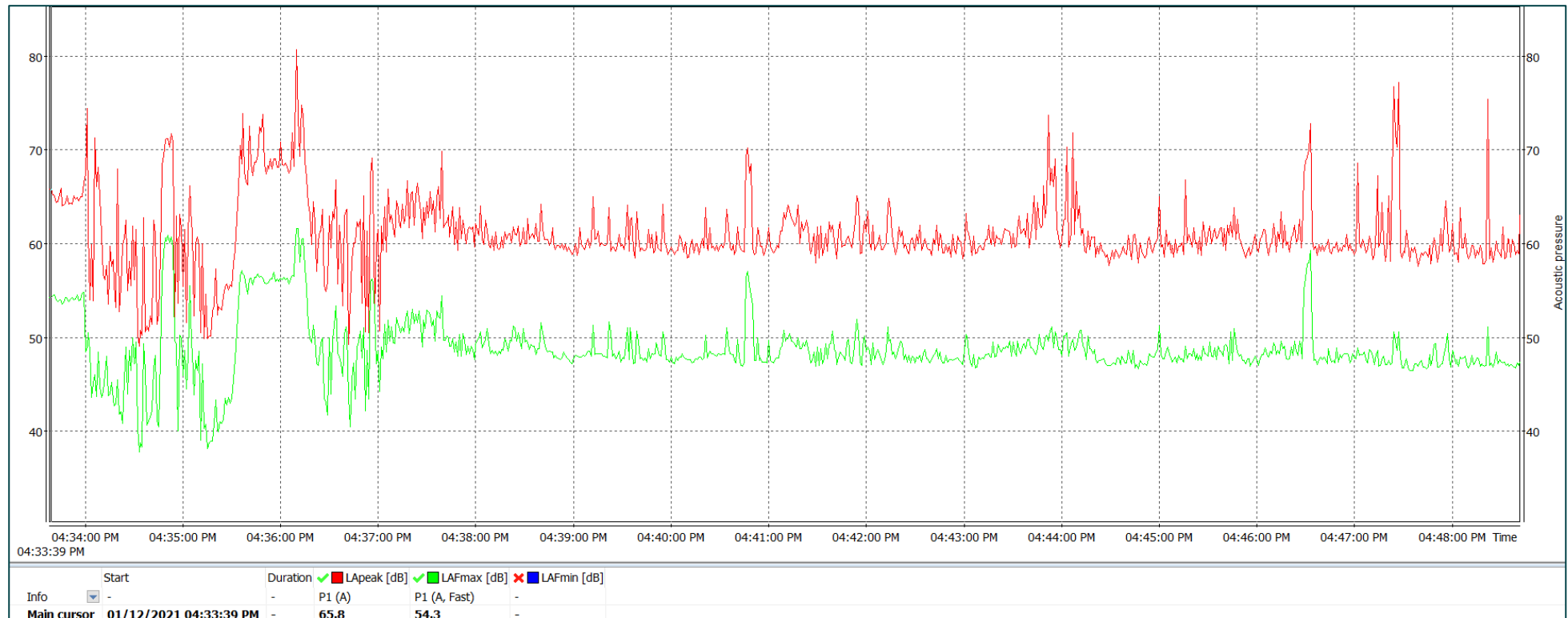
## Midday

The constant hum of the commercial fridge 30m from the house and bird activity were audible in the foreground during the recording period. At 12.19pm a semi-trailer pulled into the driveway. The truck was left idling, which continued until the end of the recording. Operations at the landfill were inaudible. The  $L_{Aeq}$  (15 min) over the period was 45.2dB, which is above the 35  $L_{Aeq}$  (15 min) assessment criterion.



## Afternoon

The constant hum of the commercial fridge 30m from the house and bird activity were audible in the foreground during the recording period. At 4.36pm, a vehicle pulled into the driveway and car doors were opened and shut. At 4.44pm, people were observed talking near a shed. Bird noise was the dominant background noise. Operations at the landfill were inaudible. The  $L_{Aeq}$  (15 min) over the period was 54.3dB, which is above the 35  $L_{Aeq}$  (15 min) assessment criterion.





### Residential Receiver 3

This sensitive receiver is located approximately 280m off Slopes Road and approximately 1757m from the Tharbogang Quarry. The dwelling is located within an orange orchard with an internal access road connecting it with residential receiver 2. The noise logger was positioned facing northeast into the orange orchard, approximately 25m from the residence (Figure 2-3).



Figure 2-3 Location of noise monitor at residential receiver 3



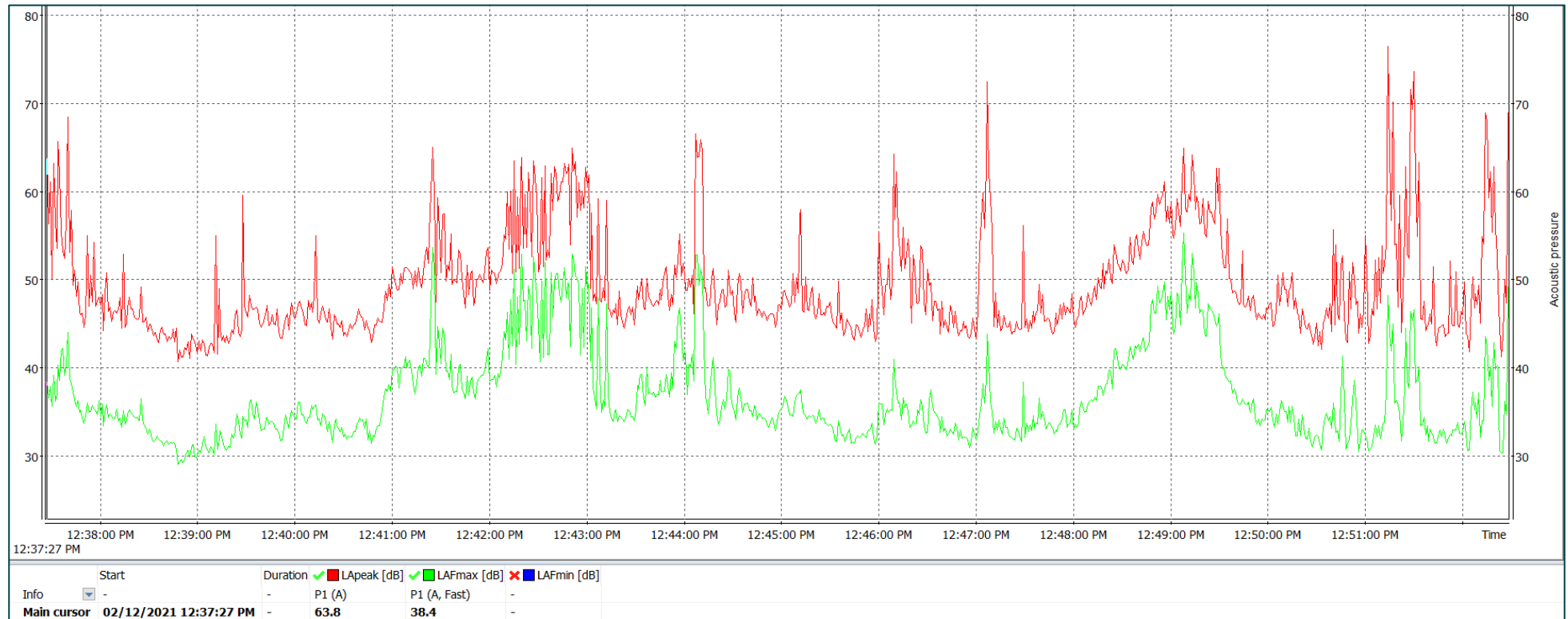
## Morning

At 9.32am a landholder vehicle drove onto the property and past the noise meter and into the driveway. It idled until 9.42am, which was during the recording period. Background noise consisted of a pool pump, bird activity and vehicle movements on Slopes Road. Operations at the landfill were inaudible. The  $L_{Aeq}$  (15 min) for the period was 42.6dB, which was over the 35  $L_{Aeq}$  (15 min) criterion.



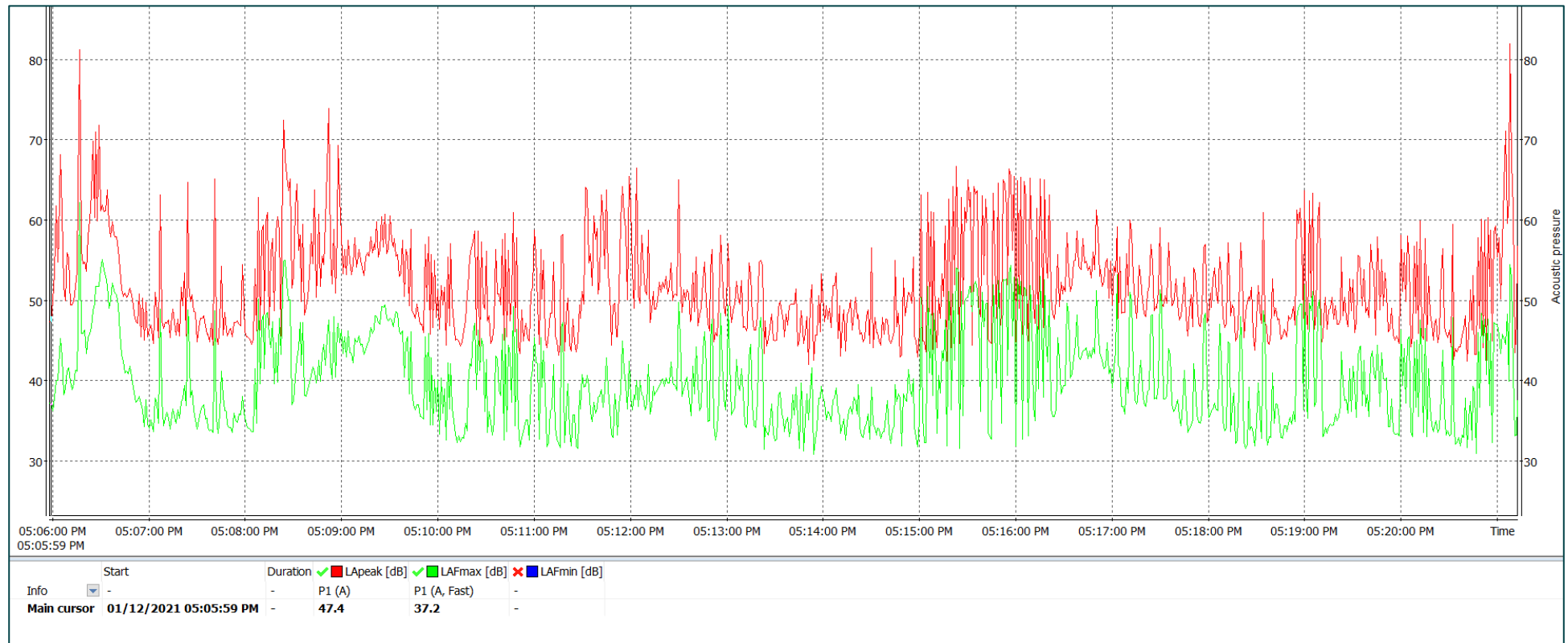
## Midday

People talking and music could be heard from a shed beside the residence. Background noises included bird noise, the operation of a pool pump and vehicle movements on Slopes Road. The  $L_{Aeq}$  (15 min) for the period was 38.4dB, which was over the 35  $L_{Aeq}$  (15 min) criterion.



## Afternoon

At 5.08pm a landholder vehicle drove down the driveway, opened a motorised garage door and parked. At 5.15pm two voices could be heard talking. Background noises included bird noise, the operation of a pool pump and vehicle movements on Slopes Road. The  $L_{Aeq}$  (15 min) for the period was 37.2dB, which was over the 35  $L_{Aeq}$  (15 min) criterion.



## **Residential Receiver 4**

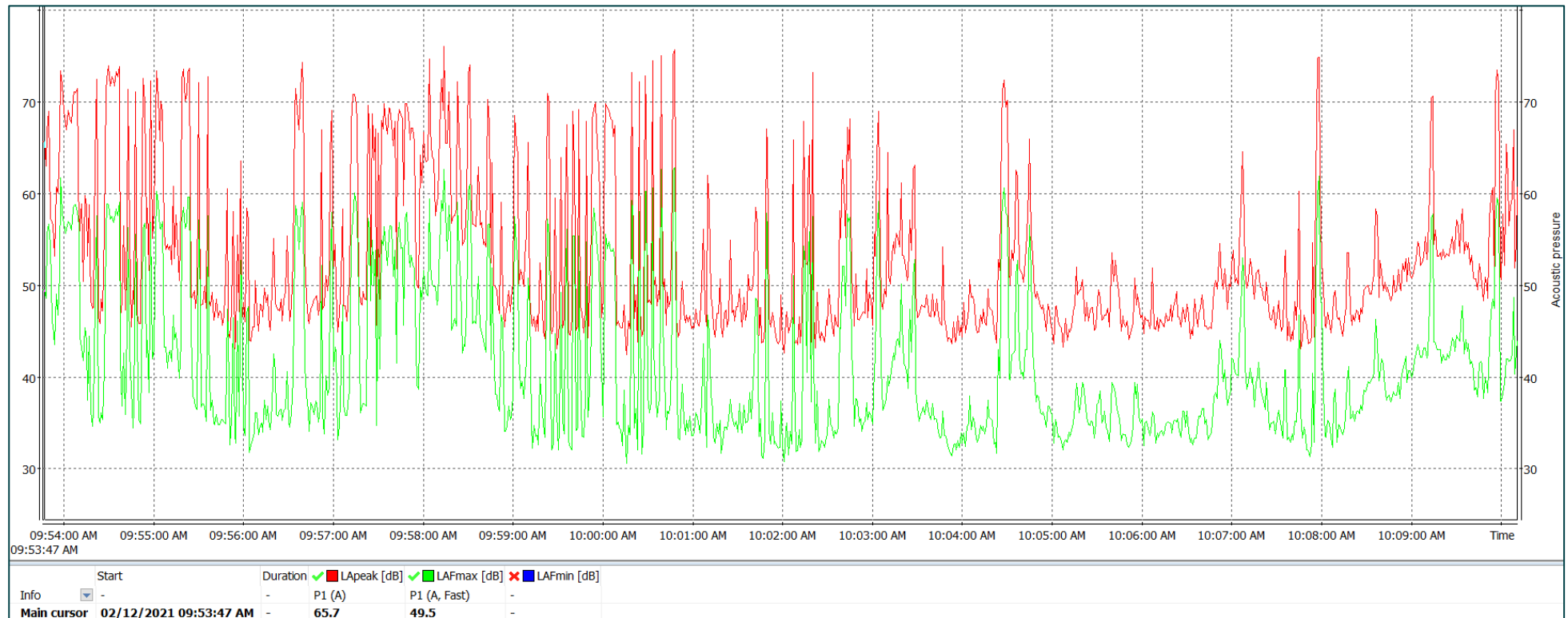
This sensitive receiver is located directly off Slopes Road, approximately 1760m from the Tharbogang Quarry. The residential building is surrounded by tall garden vegetation, which may have offered some protection from background noise emitted from the quarry, while increasing foreground noise emissions from birds, rustling leaves and insects. The noise logger was positioned 5m from the southern external wall of the residence (Figure 2-4).



Figure 2-4 Monitoring locations for residential receiver 4

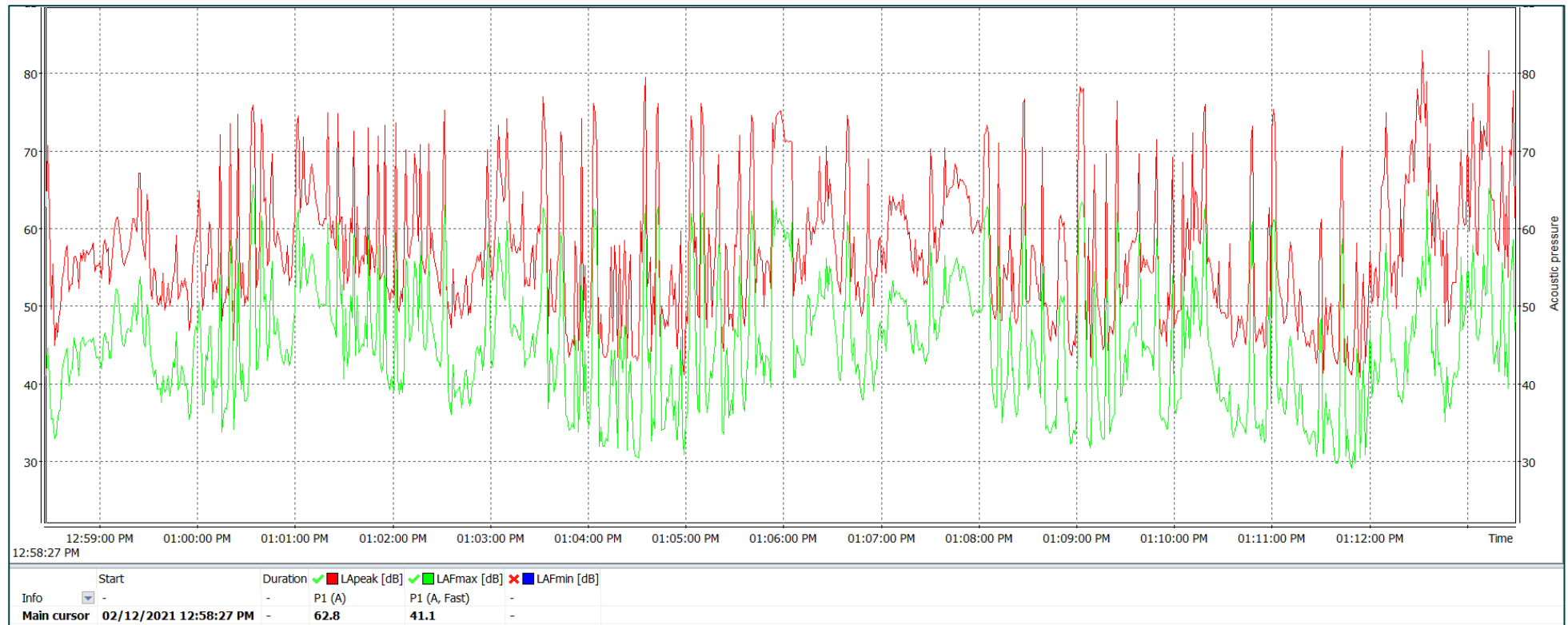
## Morning

The landholders had engaged a gardening service of three people, who were conducting a pre-start meeting throughout the recording. Background noises included bird activity and traffic on Slopes Road. Operations at the landfill were inaudible. The  $L_{Aeq}$  (15 min) for the period was 49.5dB, which was over the 35  $L_{Aeq}$  (15 min) criterion.



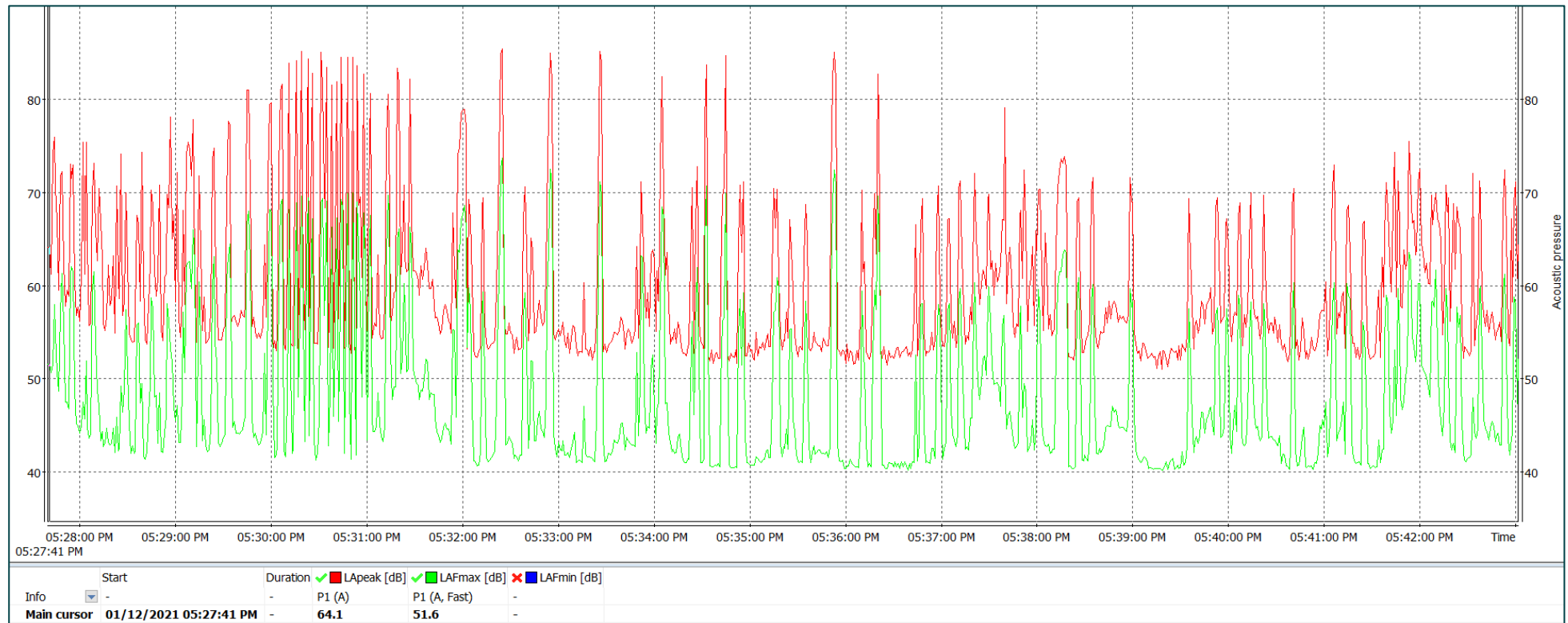
## Midday

The landholders had engaged a gardening service of three people, who were working throughout the recording. At 1.08pm, one of the workers was observed raking leaves nearby to the noise meter. He continued to work in this location until the noise recording ended. Background noise consisted of people conversing, bird activity and vehicle movements on Slopes Road. Operations at the landfill were inaudible. The  $L_{Aeq}$  (15 min) for the period was 41.1dB, which was over the 35  $L_{Aeq}$  (15 min) criterion.



## Afternoon

The main noise source detected during this monitoring period was an operational air conditioning unit, which was within proximity to the noise meter. Background noise consisted of bird activity and vehicle movements on Slopes Road. Noting that operations at the development site had ceased for the day, the  $L_{Aeq}$  (15 min) for the period was 51.6dB, which was higher than that observed during operational hours, and over the 35  $L_{Aeq}$  (15 min) criterion.





## **Residential Receiver 5**

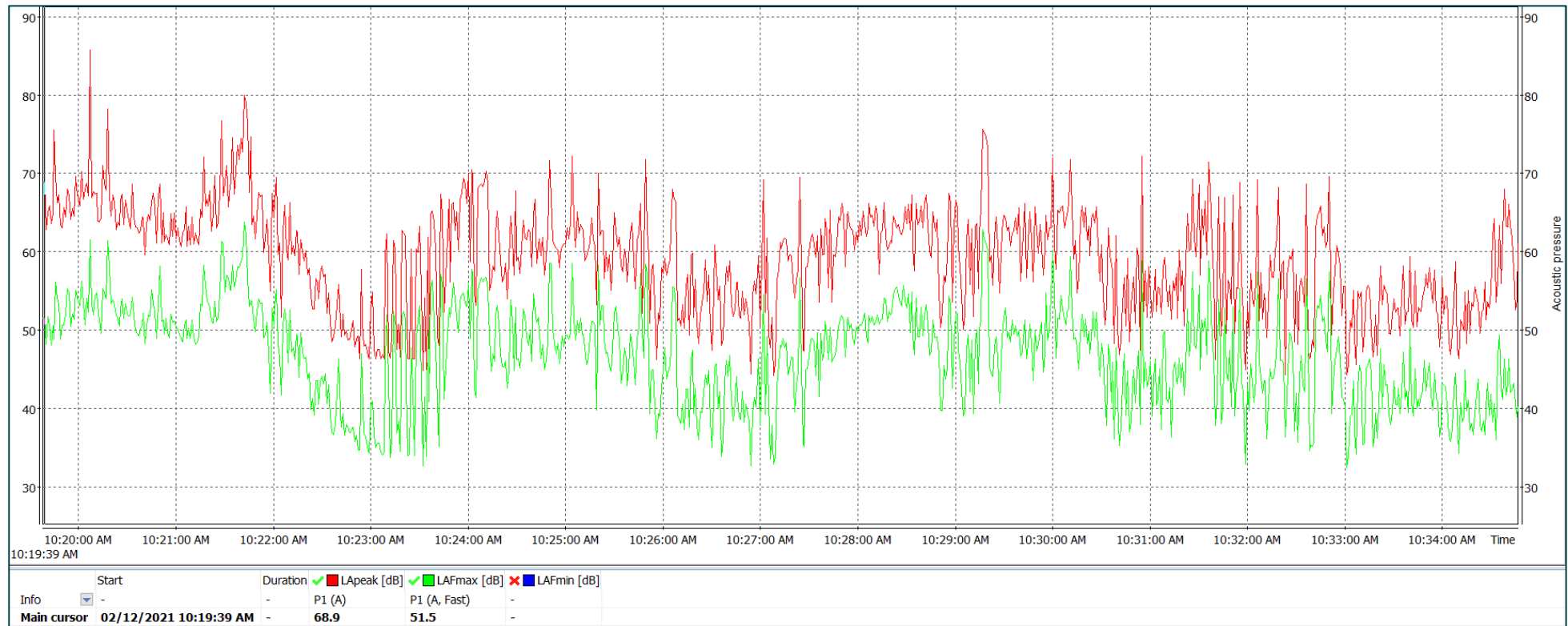
The residential building was surrounded by tall garden vegetation, which may have offered some protection from background noise emitted from the quarry, while increasing foreground noise emissions from birds, rustling leaves and insects. The noise logger was positioned at the end of the driveway, approximately 30m from the south-eastern wall of the dwelling, facing northeast (Figure 2-5).



Figure 2-5 Monitoring locations for residential receiver 5

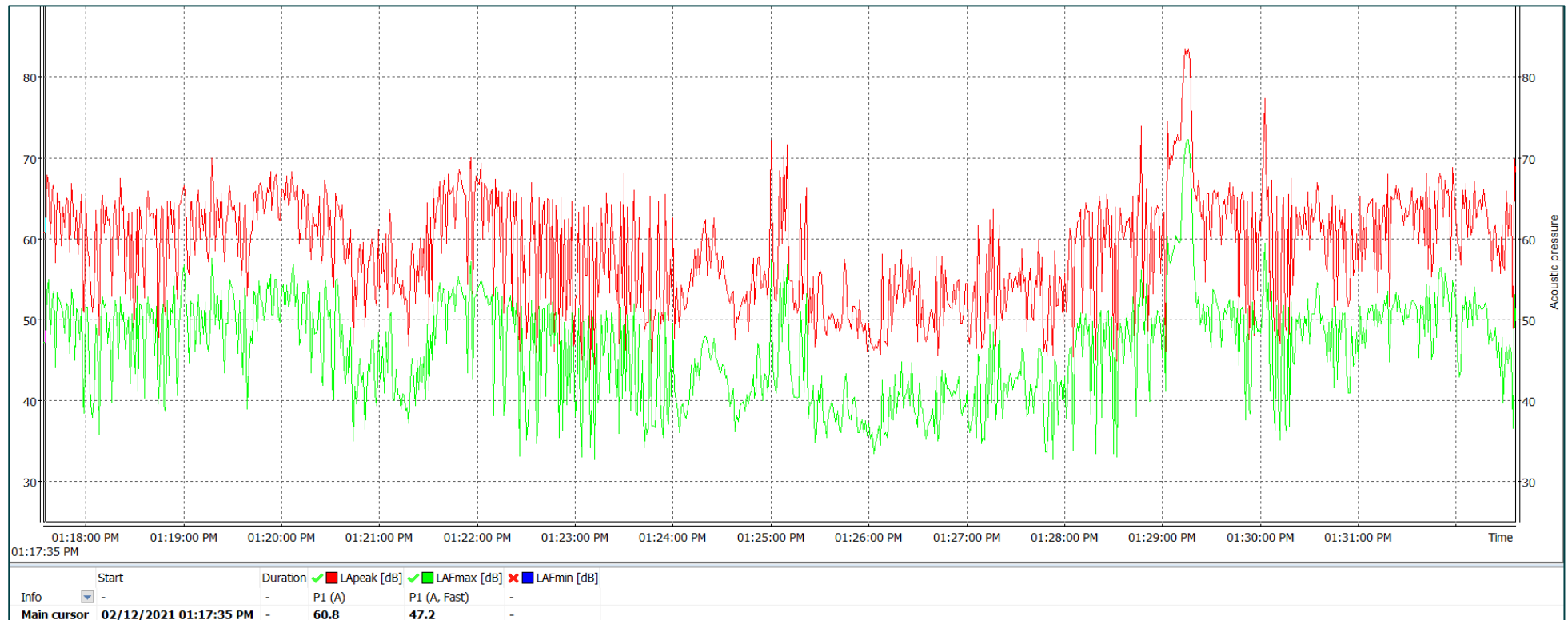
## Morning

During the recording, two people were observed talking within 15m of the monitoring device. The people proceeded to pack some things into a nearby vehicle, before re-entering the house. Background noises included bird activity and traffic on Slopes Road. Operations at the landfill were inaudible. The  $L_{Aeq}$  (15 min) for the period was 51.5dB, which was over the 35  $L_{Aeq}$  (15 min) criterion.



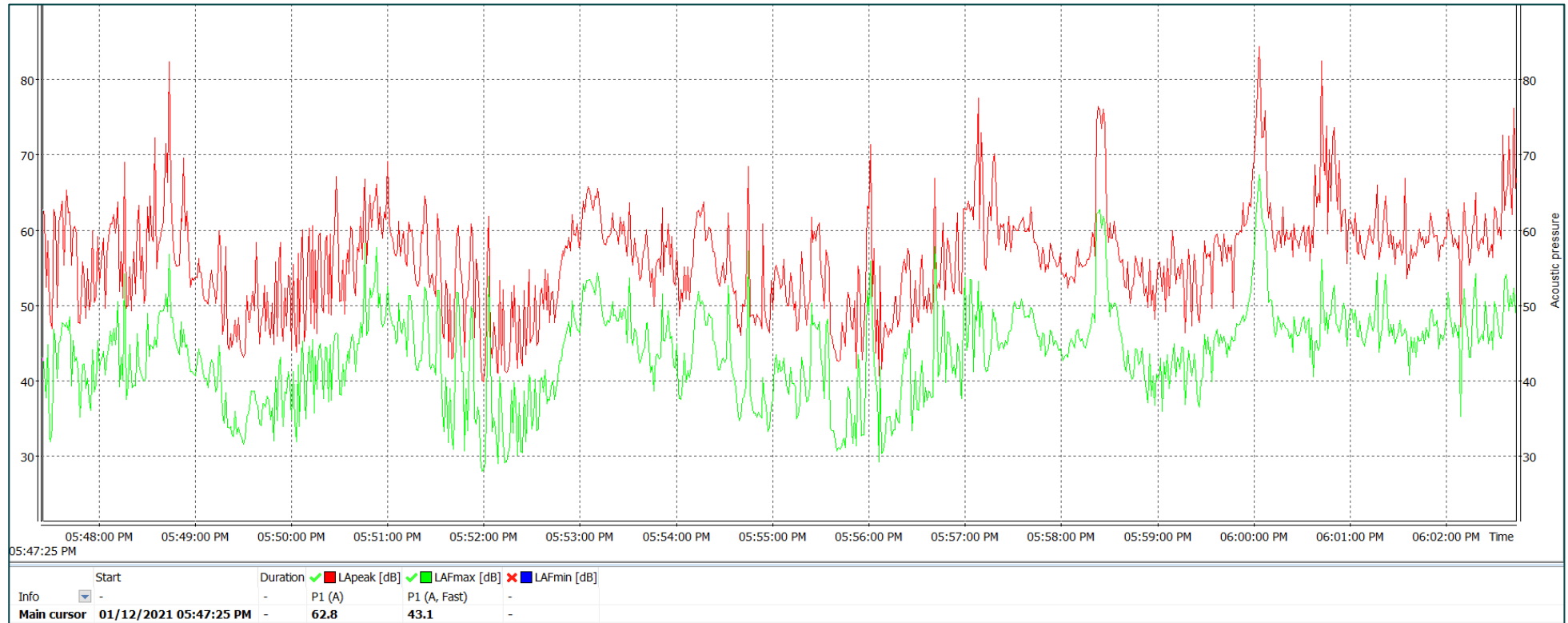
## Midday

At 1.29pm, a landholder drove a vehicle onto the property and parked within proximity to the noise meter. Background noises included bird activity, wind in the trees and traffic on Slopes Road. Operations at the landfill were inaudible. The  $L_{Aeq}$  (15 min) for the period was 47.2dB, which was over the 35  $L_{Aeq}$  (15 min) criterion.



## Afternoon

During this recording, background noises included bird activity, wind in the trees and traffic on Slopes Road. Noting that operations at the development site had ceased for the day, the  $L_{Aeq}$  (15 min) for this monitoring period was 43.1dB, which is higher than the 35  $L_{Aeq}$  (15 min) criterion.





## Residential Receiver 6

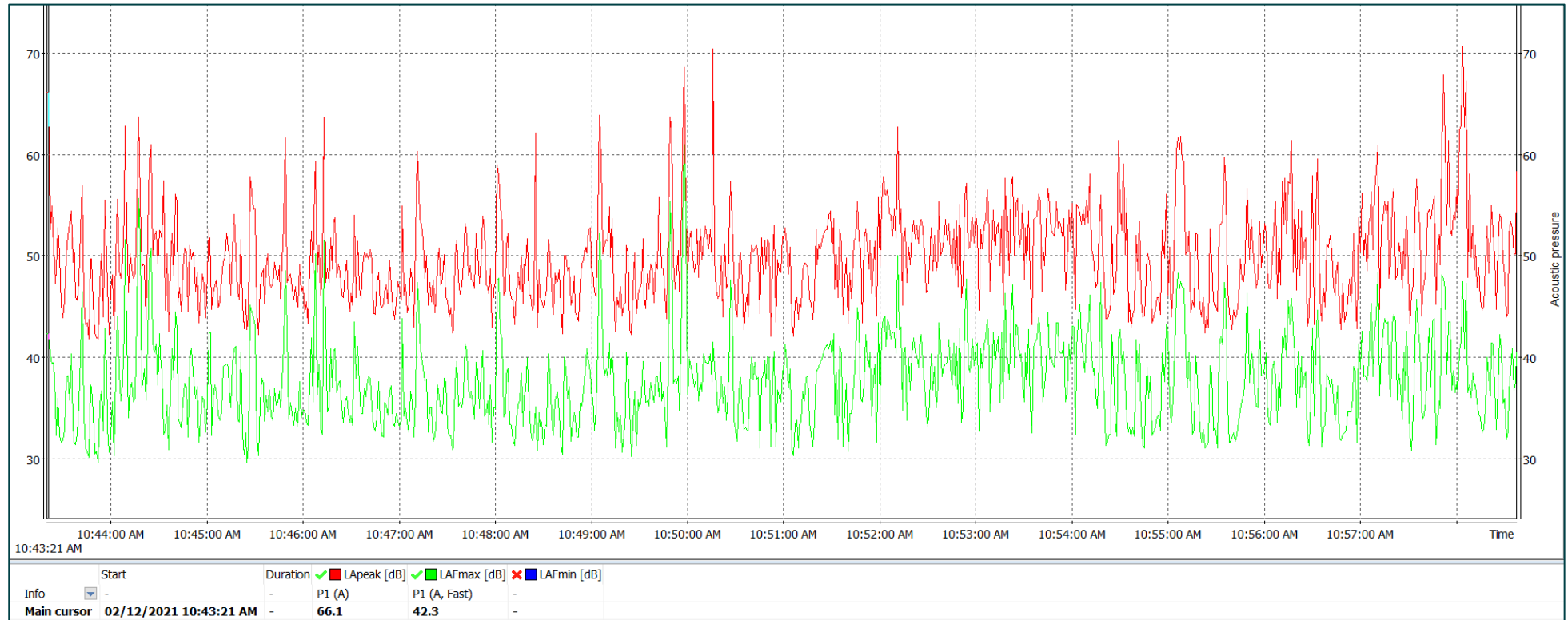
This sensitive receiver is located approximately 980m off Slopes Road and approximately 1020m from Tharbogang Quarry. The residence is situated overlooking an orange orchard to the south and was buffered by rocky hillside from the quarry to the southeast. The noise logger was positioned facing southeast, approximately 35m from the residence, at the edge of the orange orchard (Figure 2-6).



Figure 2-6 Monitoring locations for residential receiver 6

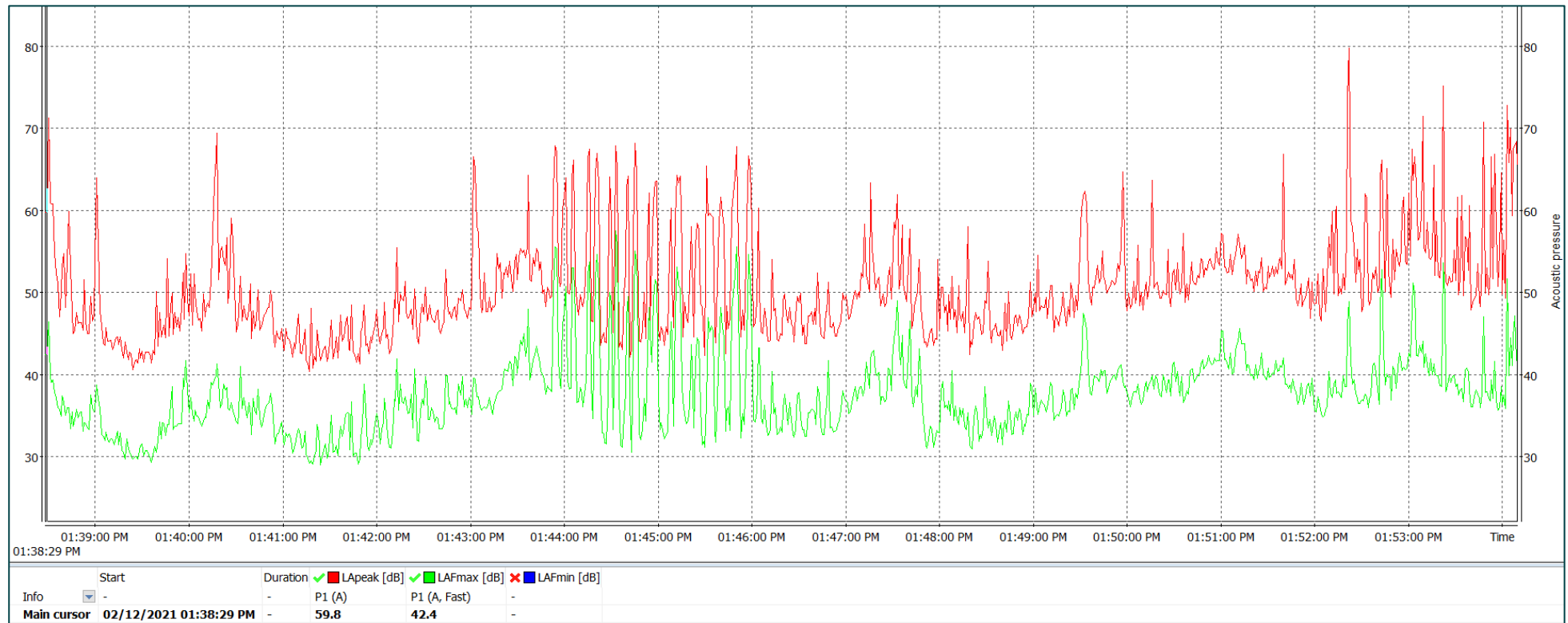
## Morning

Dominant noises included bird activity and wind in nearby trees. Operations at the landfill were inaudible. The  $L_{Aeq}$  (15 min) attended monitoring period was 42.3dB, exceeding the 35  $L_{Aeq}$  (15 min) criteria.



## Midday

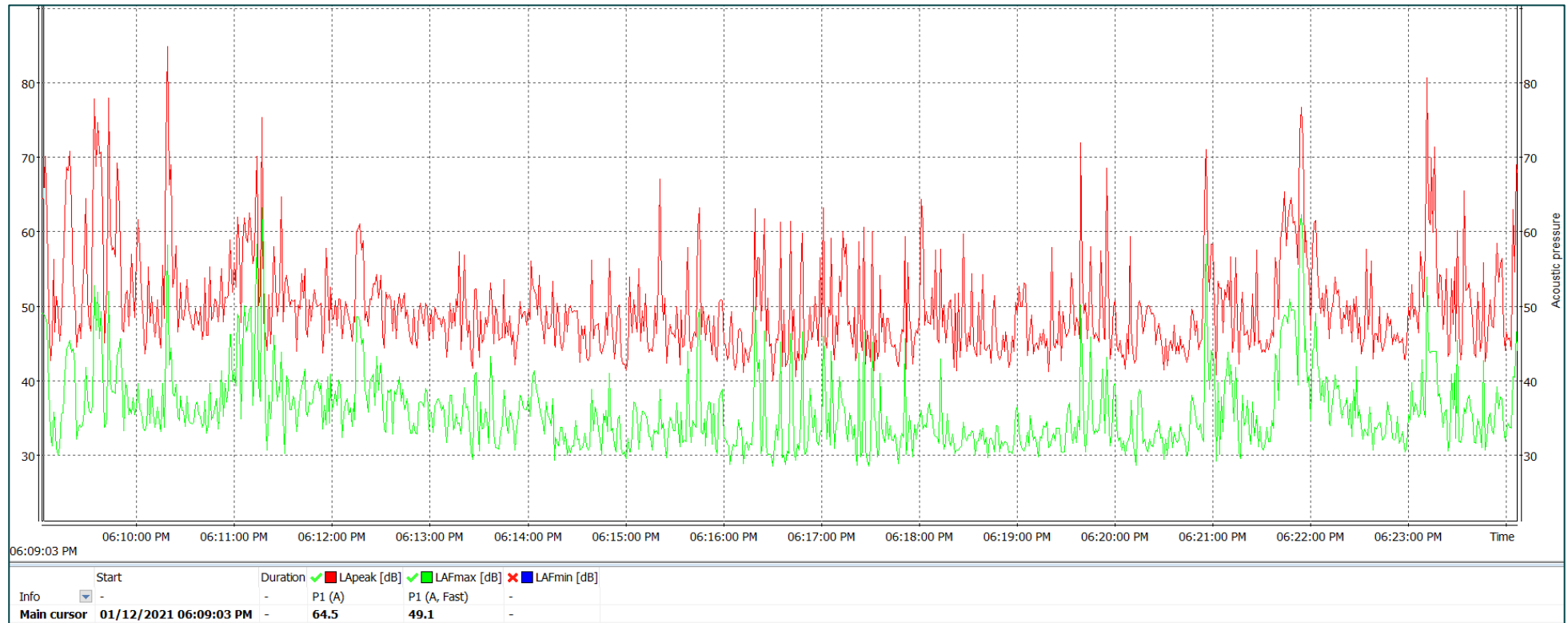
At 1.44pm the landholder was observed at the front of the house with a ladder. At 1.52pm the landholder greeted the onsite consultant. Background noises included bird activity and traffic along Kidman Way. Operations at the landfill were inaudible. The  $L_{Aeq}$  (15 min) attended monitoring period was 42.4dB, exceeding the 35  $L_{Aeq}$  (15 min) criteria.





## Afternoon

Dominant noises included bird activity, wind rustling the trees and road noise from Kidman Way. Noting that operations at the development site had ceased for the day, the  $L_{Aeq}$  (15 min) for this monitoring period was 49.1dB, which is higher than previous recordings and the 35  $L_{Aeq}$  (15 min) criterion.



## **Quarry Monitoring Location 1**

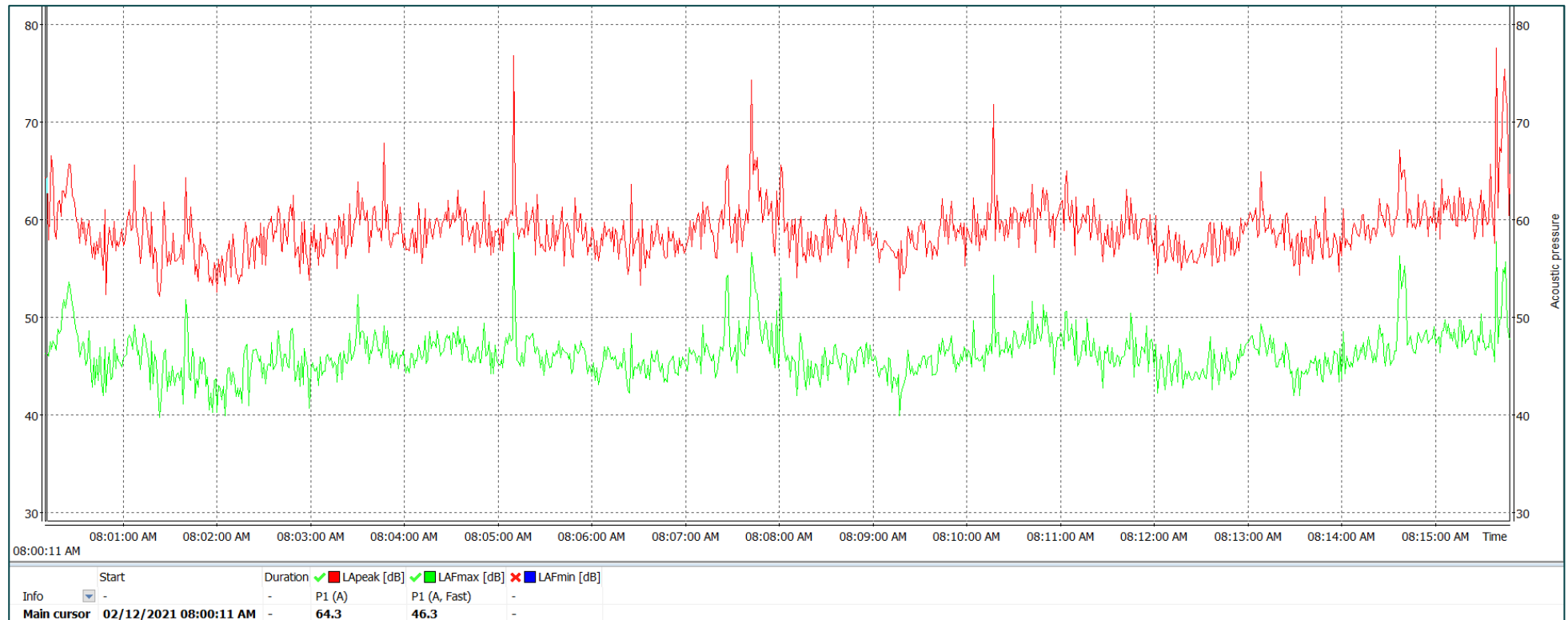
The noise logger was positioned facing into the quarry, in a southwest direction, approximately 200m from operational machinery (Figure 2-7).



Figure 2-7 Noise monitoring location for Quarry location 1

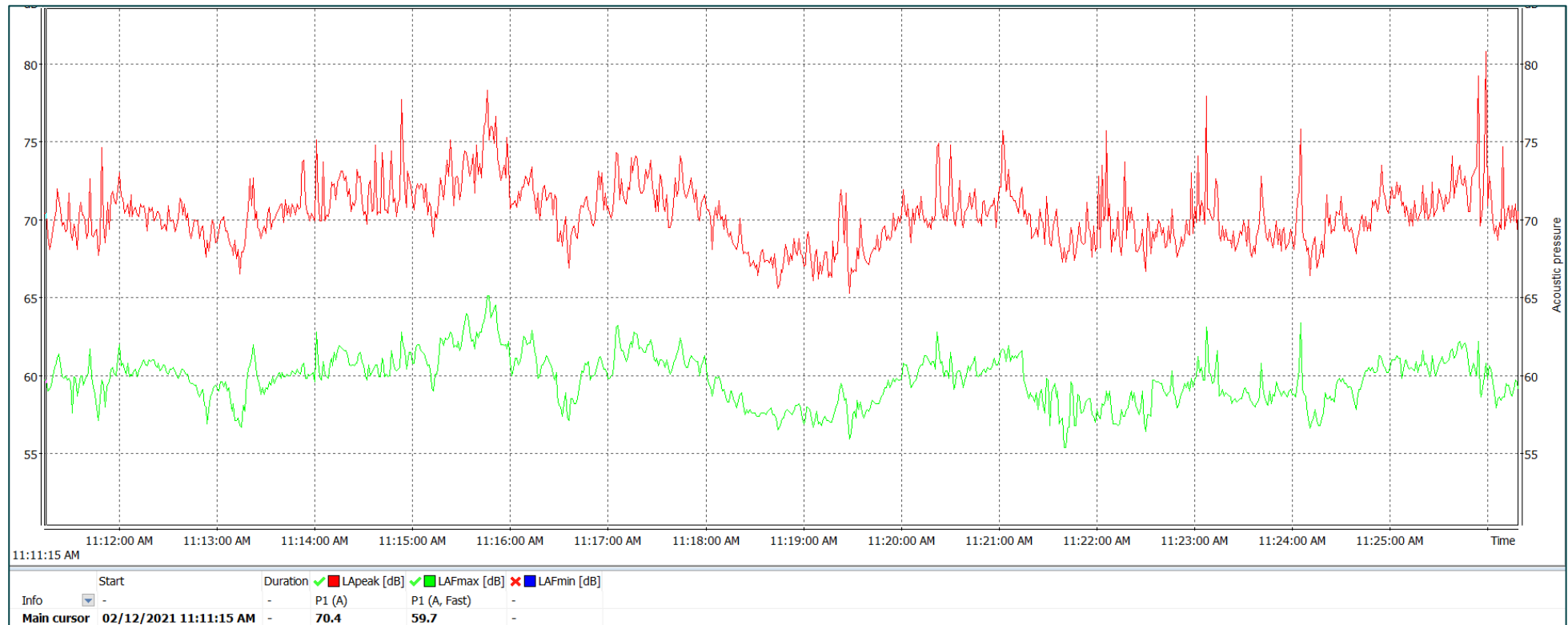
## Morning

An on-site processing plant, excavator and two light vehicles were observed during the recording periods. At the time of monitoring a number of heavy vehicles arrived onsite to deliver waste and one light vehicle entered and exited the site. Background noises included bird activity. The  $L_{Aeq}$  (15 min) for the monitoring period was 46.3dB, which was above the 35  $L_{Aeq}$  (15 min) assessment criterion but lower than the morning  $L_{Aeq}$  (15 min) recorded for receivers 1, 2, 4 and 5.



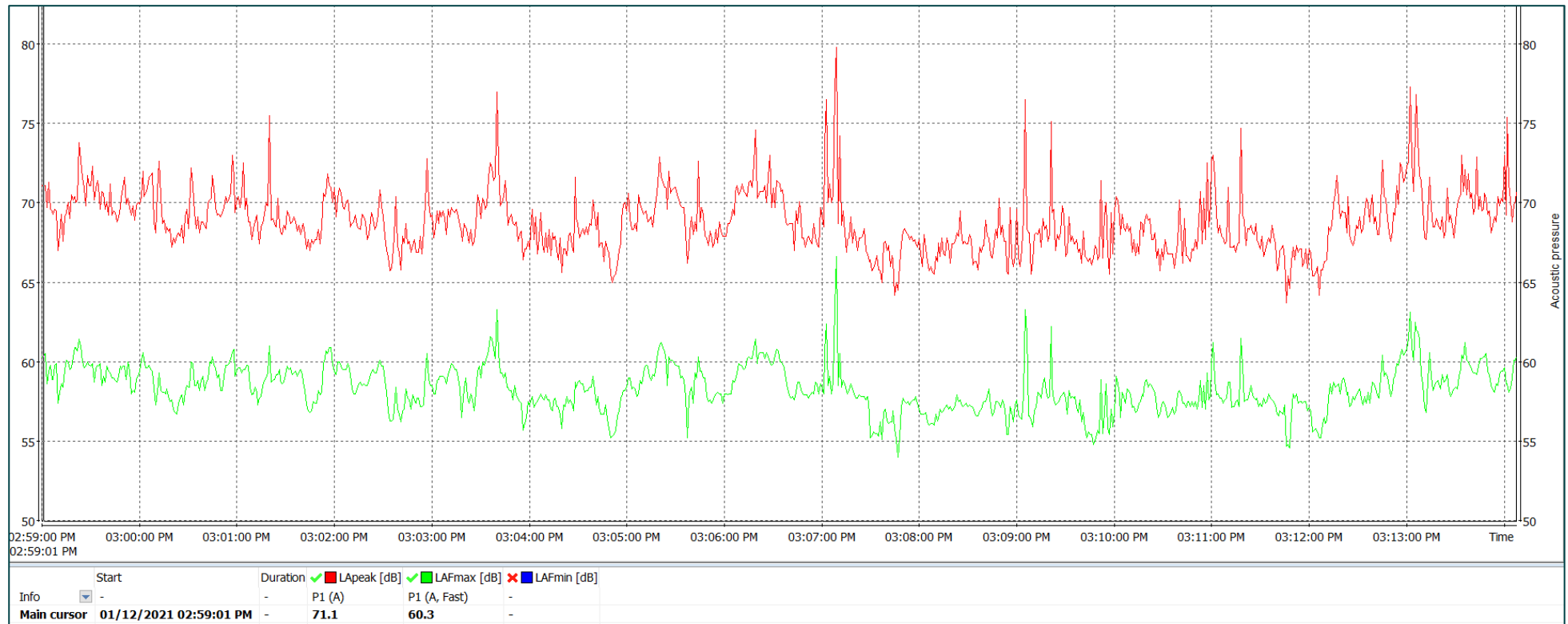
## Midday

An on-site processing plant, excavator and two light vehicles were observed during the recording period. At the time of monitoring a number of heavy vehicles arrived onsite to deliver waste. Background noises included bird activity. The  $L_{Aeq}$  (15 min) for the monitoring period was 59.7dB, which was above the 35  $L_{Aeq}$  (15 min) assessment criterion but lower than the midday  $L_{Aeq}$  (15 min) recorded for receiver 1.



## Afternoon

An on-site processing plant, front end loader and two light vehicles were observed during the recording periods. At the time of monitoring one heavy vehicle arrived onsite to deliver waste and one light vehicle entered and exited the site. Background noises included bird activity. The  $L_{Aeq}$  (15 min) for the monitoring period was 60.3dB, which was above the 35  $L_{Aeq}$  (15 min) assessment criterion but lower than the afternoon  $L_{Aeq}$  (15 min) recorded for receiver 1.





## Quarry Monitoring Location 2

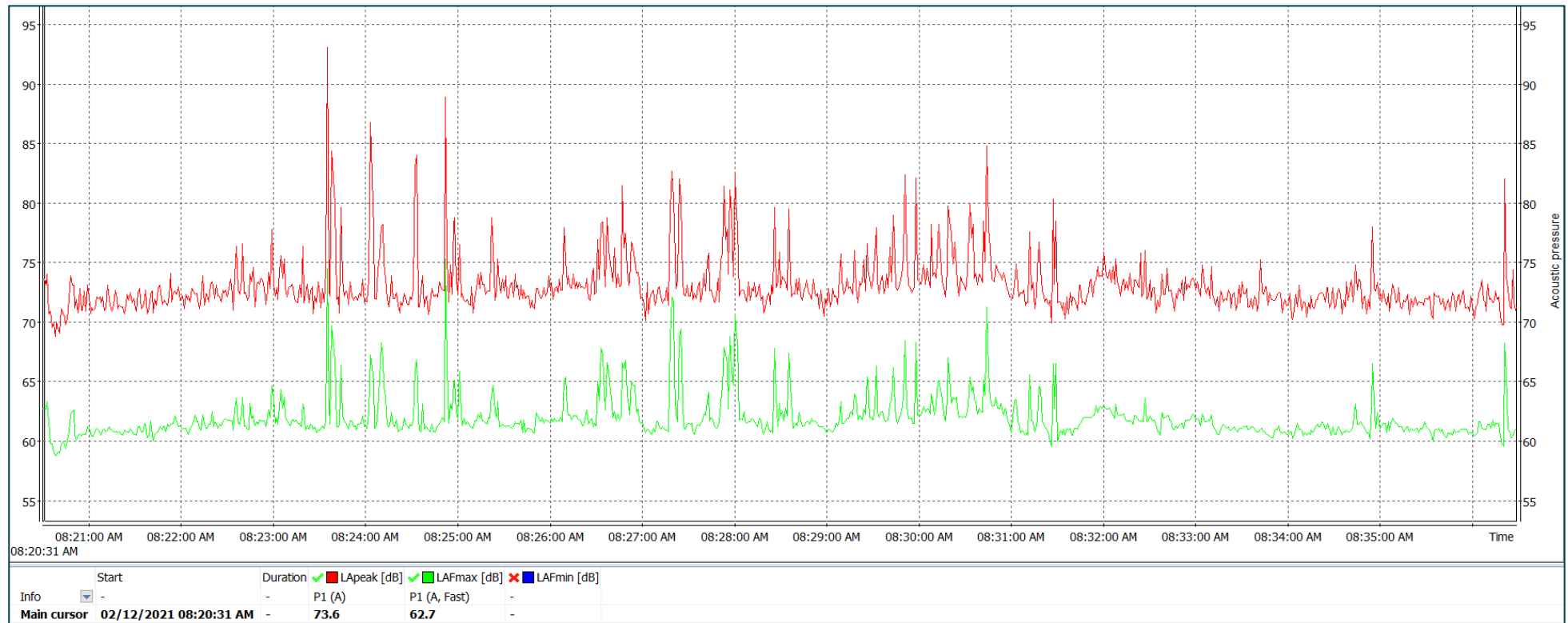
The noise logger was positioned facing into the quarry, in an easterly direction, approximately 60m from the edge of the quarry (Figure 2-8).



Figure 2-8 Noise monitoring location for Quarry location 2

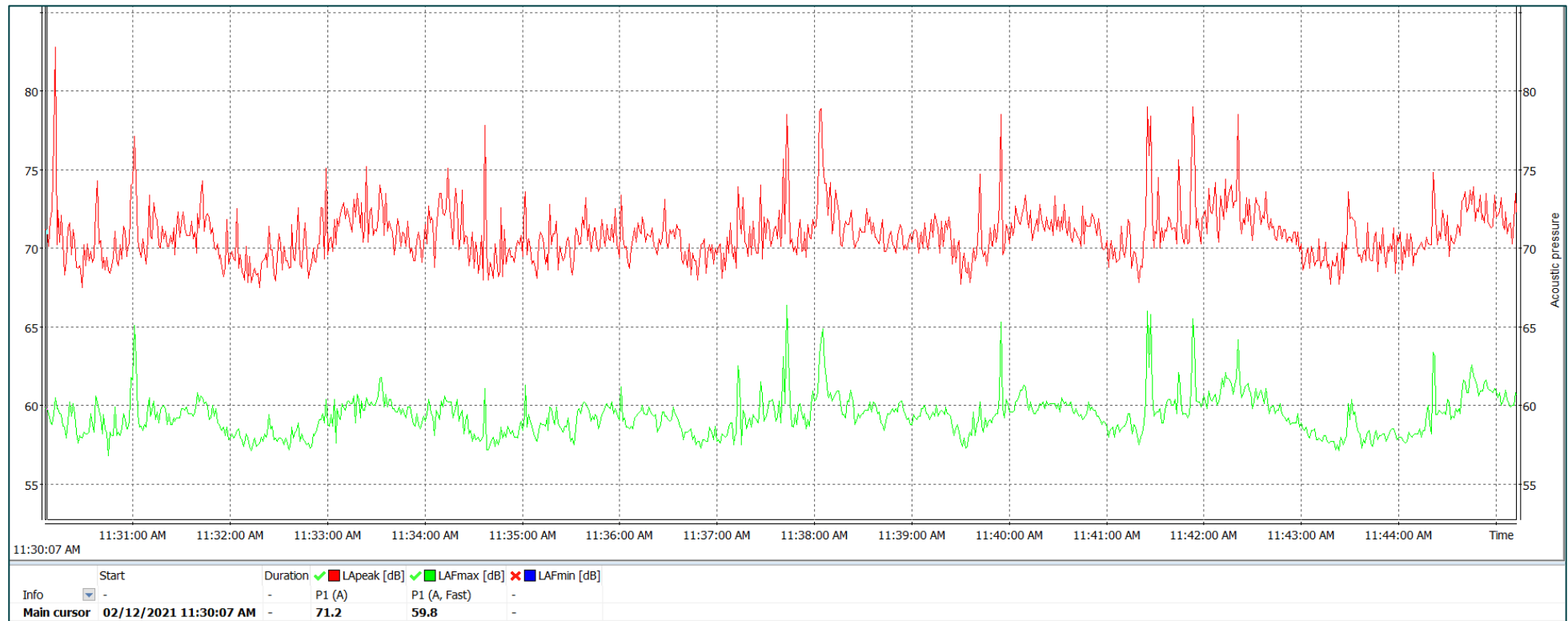
## Morning

An on-site processing plant, excavator and two light vehicles were observed during the recording periods. At the time of monitoring a number of heavy vehicles arrived onsite to deliver waste and one light vehicle entered and exited the site. Background noises included bird activity. The  $L_{Aeq}$  (15 min) for the monitoring period was 62.7dB, which was above the 35  $L_{Aeq}$  (15 min) assessment criterion.



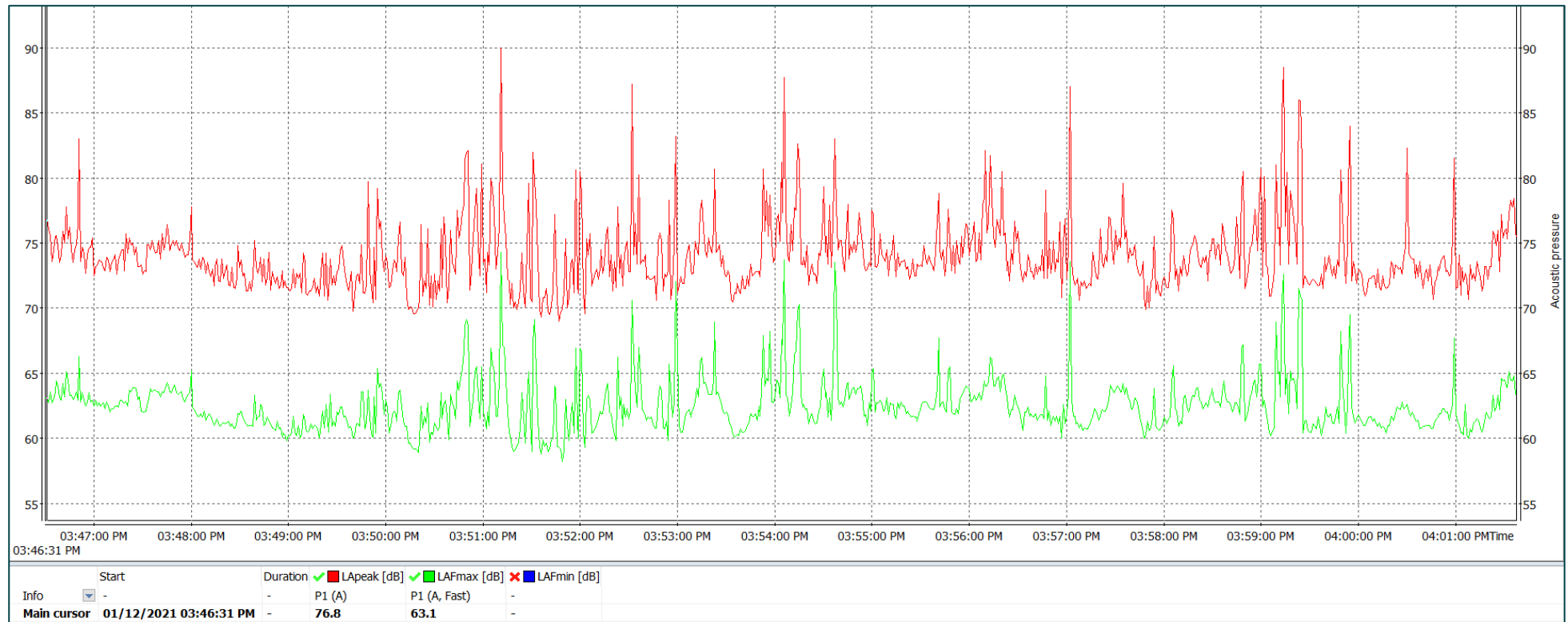
## Midday

An on-site processing plant, excavator and two light vehicles were observed during the recording periods. At the time of monitoring a number of heavy vehicles arrived onsite to deliver waste. Background noises included bird activity. The  $L_{Aeq}$  (15 min) for the monitoring period was 59.8dB, which was above the 35  $L_{Aeq}$  (15 min) assessment criterion but lower than the midday  $L_{Aeq}$  (15 min) recorded for receiver 1.



## Afternoon

An on-site processing plant, front end loader and two light vehicles were observed during the recording periods. At the time of monitoring one heavy vehicle arrived onsite to deliver waste and one light vehicle entered and exited the site. Background noises included bird activity. The  $L_{Aeq}$  (15 min) for the monitoring period was 63.1dB, which was above the 35  $L_{Aeq}$  (15 min) assessment criterion but lower than the afternoon  $L_{Aeq}$  (15 min) recorded for receiver 1.



## **Appendix B Noise monitoring records**



# Noise Monitoring Report

Report No.: 111-68  
calibration.  
3rd 111-73

Monitoring Location: Quarry Site 1

Monitoring Date: 1-12-21 Monitoring Time: 3pm Officer: Alyce Gill

Noise Generating Activity: Quarry - trucks, machinery

General Conditions: Sunny

Wind Speed (estimate): 9km/h Wind Direction: ESE Temperature (°C): 30.1°C

Cloud Cover (%): 15% Fog / Rain fall: N/A Ground conditions: Rocky - quarry, road base

SLM Make/Model: SVAN-959 Calibration Date: 18.5.21

Calibrator Make/Model: #C30914 Calibration Date: 25.10.21  
SVantec SV33B

Test Procedure: AS1055.2 Acoustics - Description and measurement of environmental noise - General Procedures

1-12 2-12 2-12

Measurement No.:	1	2	3	4	5	6	7	8
Measurement time:	<u>3pm</u>	<u>8.02</u>	<u>11.13</u>					
Measurement duration:	<u>15mins</u>	<u>15mins</u>	<u>15mins</u>					
L <sub>Aeq</sub>		<u>24.1°C</u>	<u>30.1°C</u>					
L <sub>A10</sub>		<u>calm</u>	<u>Sunny</u> <u>no cloud</u>					
L <sub>A90</sub>		<u>0km/hr</u>	<u>6km/hr</u>					
L <sub>AMax</sub>		<u>Sunny.</u> <u>0% cloud</u>	<u>East</u>					

Measurement Results Table (dB(A))

Predicted L<sub>A10</sub> from activity (Refer to Management Plan). \_\_\_\_\_ dB(A)

Estimated contribution Noise Generating Activity: \_\_\_\_\_ dB(A)

Comments / Observations (Including a description of dominant noise source(s).)

① Birds, machinery

② Birds, trucks, light vehicles

③ Birds, machinery

Site diagram over page: Show monitoring location, buildings, other noise sources, north arrow, distances etc.

## Noise Monitoring Report

Report No.: \_\_\_\_\_

Monitoring Location: Quarry - Site 2 -

Monitoring Date: 1.12.21 Monitoring Time: 3.24 Officer: Alice Gill

Noise Generating Activity: Trucks and machinery

General Conditions: sunny

Wind Speed (estimate): 6km/h Wind Direction: ESE Temperature (°C): 30.1°C

Cloud Cover (%): 15% Fog / Rain fall: N/A Ground conditions: Bare earth, some gravel cover

SLM Make/Model: SVAN-959 Calibration Date: 18.5.21

Calibrator Make/Model: SVANTEC SV33B Calibration Date: 25.10.21

Test Procedure: AS1055.2 Acoustics - Description and measurement of environmental noise - General Procedures
1.12 2.12 2.12

Measurement No.:	1	2	3	4	5	6	7	8
Measurement time:	3.24	8.23	11.32					
Measurement duration:	15mins	15mins	15mins					
L <sub>Aeq</sub>		23.8°C	29.7°C					
L <sub>A10</sub>		Sunny no cloud	Sunny 5% cloud					
L <sub>A90</sub>		11 km/hr wind	7 km/hr wind					
L <sub>AMax</sub>		ESE	NNW					

Measurement Results Table (dB(A))

Predicted L<sub>A10</sub> from activity (Refer to Management Plan). \_\_\_\_\_ dB(A)

Estimated contribution Noise Generating Activity: \_\_\_\_\_ dB(A)

Comments / Observations (Including a description of dominant noise source(s).)

① Birds, quarry machinery

② Birds, quarry machinery

③ Birds, machinery, car starting.

Site diagram over page: Show monitoring location, buildings, other noise sources, north arrow, distances etc.



## Noise Monitoring Report

Report No.: \_\_\_\_\_

Monitoring Location: R1

Monitoring Date: 1.12.21 Monitoring Time: 4.15 Officer: Alyce GVI

Noise Generating Activity: Quarry and landfill

General Conditions: Sunny

Wind Speed (estimate): 9km/hr Wind Direction: ESE Temperature (°C): 29.2°C

Cloud Cover (%): 15 Fog / Rain fall: N/A Ground conditions: Dirt

SLM Make/Model: SVAN-959 SN: 21293 Calibration Date: 18.05.21.

Calibrator Make/Model: SVANTEC SV33B Calibration Date: 25.10.21  
SN: 109919

Test Procedure: AS1055.2 Acoustics - Description and measurement of environmental noise - General Procedures
1.12 2.12 2.12

Measurement No.:	1	2	3	4	5	6	7	8
Measurement time:	4.15	8.45	11.58					
Measurement duration:	15mins	15mins	15mins					
L <sub>Aeq</sub>		24.5sec	30.5sec					
L <sub>A10</sub>		sunny	sunny					
L <sub>A90</sub>		wind 9km/h	7km/h wind					
L <sub>AMax</sub>		SE	ESE					

Measurement Results Table (dB(A))

Predicted L<sub>A10</sub> from activity (Refer to Management Plan). \_\_\_\_\_ dB(A)

Estimated contribution Noise Generating Activity: \_\_\_\_\_ dB(A)

Comments / Observations (Including a description of dominant noise source(s).)

① Dogs barking, birds, traffic from nearby road.

② Dogs barking, birds, road traffic, landholder calling to dog.

③ Dogs, road traffic, Birds.

Site diagram over page: Show monitoring location, buildings, other noise sources, north arrow, distances etc.

## Noise Monitoring Report

Report No.: \_\_\_\_\_

Monitoring Location: R2

Monitoring Date: 1.12.21 Monitoring Time: 4.35 Officer: Alice Gill

Noise Generating Activity: Landfill / Quarry

General Conditions: Sunny

Wind Speed (estimate): 0 km/h Wind Direction: NA Temperature (°C): 30.3

Cloud Cover (%): 15% Fog / Rain fall: NA Ground conditions: Tarmac / grass

SLM Make/Model: SVAN-959 Calibration Date: 18.5.21

Calibrator Make/Model: SVANTEC SV33B Calibration Date: 25.10.21

Test Procedure: AS1055.2 Acoustics - Description and measurement of environmental noise - General Procedures

1.12    2.12    2.12

Measurement No.:	1	2	3	4	5	6	7	8
Measurement time:	<u>4.35</u>	<u>9.08</u>	<u>12.19</u>					
Measurement duration:	<u>15mins</u>	<u>15mins</u>	<u>15mins</u>					
L <sub>Aeq</sub>		<u>25.9 dBC</u>	<u>30.9 dBC</u>					
L <sub>A10</sub>		<u>Sunny</u>	<u>Sunny</u>					
L <sub>A90</sub>		<u>no cloud</u>	<u>5% cloud</u>					
L <sub>AMax</sub>	<u>wind =</u>	<u>11 km/hr</u>	<u>11 km/hr</u>					
		<u>NE</u>	<u>SE</u>					

Measurement Results Table (dB(A))

Predicted L<sub>A10</sub> from activity (Refer to Management Plan). \_\_\_\_\_ dB(A)

Estimated contribution Noise Generating Activity: \_\_\_\_\_ dB(A)

Comments / Observations (Including a description of dominant noise source(s).)

- ① Birds, generator (in shed), landholder vehicle.
- ② Birds, generator, vehicles (orange farm), large truck (~~B~~ B-Double).
- ③ Birds, generator, vehicles.

Site diagram over page: Show monitoring location, buildings, other noise sources, north arrow, distances etc.



## Noise Monitoring Report

Report No.: \_\_\_\_\_

Monitoring Location: R3

Monitoring Date: 4.5.12.21 Monitoring Time: 4.55 5.10 Officer: Alyce Gill

Noise Generating Activity: Quarry land fill

General Conditions: Sunny

Wind Speed (estimate): 0 km/h Wind Direction: NA Temperature (°C): 30.5°C

Cloud Cover (%): 15 Fog / Rain fall: NA Ground conditions: Tarmac / Grass

SLM Make/Model: SVAN-959 Calibration Date: 18.5.21

Calibrator Make/Model: SVANTEC SV33B Calibration Date: 25.10.21

Test Procedure: AS1055.2 Acoustics - Description and measurement of environmental noise - General Procedures

**1.12    2.12    2.12**

Measurement No.:	1	2	3	4	5	6	7	8
Measurement time:	4.55	9.32	12.39					
Measurement duration:	15mins	15mins	15mins					
L <sub>Aeq</sub>		26.1dB	31.3dB					
L <sub>A10</sub>		Sunny no cloud	Sunny 20% cloud					
L <sub>A90</sub>		13 km/h	24 km/h SW					
L <sub>AMax</sub>		ESE						

Measurement Results Table (dB(A))

Predicted L<sub>A10</sub> from activity (Refer to Management Plan). \_\_\_\_\_ dB(A)

Estimated contribution Noise Generating Activity: \_\_\_\_\_ dB(A)

Comments / Observations (Including a description of dominant noise source(s).)

① Birds, landholder vehicle, garage door.

② Birds, car engine idling, truck from neighbouring property.  
car driving past noise meter.

③ Birds, road traffic, wind rustling in trees, air conditioning motor.

Site diagram over page: Show monitoring location, buildings, other noise sources, north arrow, distances etc.



## Noise Monitoring Report

Report No.: \_\_\_\_\_

Monitoring Location: Ry.

Monitoring Date: 1.12.21 Monitoring Time: 5.27pm Officer: Alyce Gill

Noise Generating Activity: Quarry / landfill.

General Conditions: Sunny

Wind Speed (estimate): 0 km/h Wind Direction: NA Temperature (°C): 30.3°C

Cloud Cover (%): 15 Fog / Rain fall: NA Ground conditions: concrete/grass.

SLM Make/Model: SVAN-959 Calibration Date: 18.5.21

Calibrator Make/Model: SVANTEC SV33B Calibration Date: 25.10.21

Test Procedure: AS1055.2 Acoustics - Description and measurement of environmental noise - General Procedures

1.12    2.12    2.12

Measurement No.:	1	2	3	4	5	6	7	8
Measurement time:	<u>5.27</u>	<u>9.58</u>	<u>12.59</u>					
Measurement duration:	<u>15min</u>	<u>15min</u>	<u>15min.</u>					
L <sub>Aeq</sub>		<u>27.10C</u>	<u>31.3C</u>					
L <sub>A10</sub>		<u>17km/h</u>	<u>sunny 10% cloud</u>					
L <sub>A90</sub>		<u>EAST</u>	<u>13km/hr</u>					
L <sub>AMax</sub>		<u>sunny no cloud</u>	<u>WNW.</u>					

Measurement Results Table (dB(A))

Predicted L<sub>A10</sub> from activity (Refer to Management Plan). \_\_\_\_\_ dB(A)

Estimated contribution Noise Generating Activity: \_\_\_\_\_ dB(A)

Comments / Observations (Including a description of dominant noise source(s).)

① Birds, traffic, air conditioning unit.

② Birds, people talking, road traffic.

③ Birds, people gardening, road traffic.

Site diagram over page: Show monitoring location, buildings, other noise sources, north arrow, distances etc.

## Noise Monitoring Report

Report No.: \_\_\_\_\_

Monitoring Location: R5

Monitoring Date: 1.12.21 Monitoring Time: 5.45pm Officer: Alice Gell

Noise Generating Activity: Quarry / landfill

General Conditions: Sunny

Wind Speed (estimate): 14km/hr 4km/hr Wind Direction: NA Temperature (°C): 30.3°C

Cloud Cover (%): 5 Fog / Rain fall: NA Ground conditions: Dirt

SLM Make/Model: SVAN-959 Calibration Date: 18.5.21

Calibrator Make/Model: SVANTEC SV33B Calibration Date: 25.10.21

Test Procedure: AS1055.2 Acoustics - Description and measurement of environmental noise - General Procedures

1.12 2.12 2.12

Measurement No.:	1	2	3	4	5	6	7	8
Measurement time:	5.45	10.22	1.20					
Measurement duration:	15min	15min	15min.					
L <sub>Aeq</sub>		27.9dB	32.0C					
L <sub>A10</sub>		Sunny no cloud	Sunny 15% cloud					
L <sub>A90</sub>		13.4km/hr	17.6km/hr					
L <sub>AMax</sub>		NE.	WSW.					

Measurement Results Table (dB(A))

Predicted L<sub>A10</sub> from activity (Refer to Management Plan). \_\_\_\_\_ dB(A)

Estimated contribution Noise Generating Activity: \_\_\_\_\_ dB(A)

Comments / Observations (Including a description of dominant noise source(s).)

- ① Birds, road traffic, trees rustling.
- ② Birds, road traffic, trees (wind), landholders talking.
- ③ Birds, road traffic, wind in trees, landholder accessing property.

Site diagram over page: Show monitoring location, buildings, other noise sources, north arrow, distances etc.



## Noise Monitoring Report

Report No.: \_\_\_\_\_

Monitoring Location: R6

Monitoring Date: 1.12.21 Monitoring Time: 6.10pm Officer: Alyce Gill

Noise Generating Activity: Landfill/quarry

General Conditions: Sunny

Wind Speed (estimate): 4km/hr Wind Direction: calm NA Temperature (°C): 30.1 °C

Cloud Cover (%): 15 Fog / Rain fall: NA Ground conditions: bitumen

SLM Make/Model: SVAN-959 Calibration Date: 18.5.21

Calibrator Make/Model: Svantec SV33B Calibration Date: 25.10.21

Test Procedure: AS1055.2 Acoustics - Description and measurement of environmental noise - General Procedures

**1.12 2.12 2.12**

Measurement No.:	1	2	3	4	5	6	7	8
Measurement time:	6.10	10.45	<del>2.45</del> 1.40					
Measurement duration:	15mins	15mins	15mins					
L <sub>Aeq</sub>		29°C	32.6°C					
L <sub>A10</sub>		106mlh	136mlh					
L <sub>A90</sub>		East	NNE					
L <sub>AMax</sub>		Sunny no cloud	Sunny 15% cloud					

Measurement Results Table (dB(A))

Predicted L<sub>A10</sub> from activity (Refer to Management Plan). \_\_\_\_\_ dB(A)

Estimated contribution Noise Generating Activity: \_\_\_\_\_ dB(A)

Comments / Observations (Including a description of dominant noise source(s).)

① Birds, road noise.

② Birds, wind in the trees,

③ Birds, nearby road traffic.

Site diagram over page: Show monitoring location, buildings, other noise sources, north arrow, distances etc.