noise.co.uk

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Road Noise Impact Assessment

Prepared: 22nd December 2011

Report No	–	**9384C-2 - Traffic**
Client	–	**Linden Wates (West Hampstead) Ltd**
Site	–	**Gondar Gardens, West Hampstead,**

1. Executive summary

1.1.1. Noise.co.uk have been instructed to conduct road noise assessment at the proposed development site at Gondar Gardens, West Hampstead, London NW16 1QF to predict the likely noise impact the development of the site will have on the nearby residential receiver facades on Gondar Gardens, Hillfield Rd and Agamemnon Rd.

1.1.2. The predictions show that there is a minimal sound pressure level impact from the additional predicted traffic noise from the site vehicle movements. The majority of the residential areas at the rear of site benefits from additional screening from the proposed street from development.

2. Contents

3. Introduction

3.1. Site

3.1.1. The proposed development site is an old underground reservoir situated at Gondar Gardens.

3.1.2. The site location is detailed in Fig 1.

Figure 1 - Proposed Site Location Plan

Layout

3.1.3. In order to ensure that best practicable means are employed to develop the site the Client has commissioned a Road Noise impact assessment of the proposed site once completed.

3.1.4. It is intended that this will be presented as part of the environmental assessment package to the planning department at the Local Authority

3.1.5. This report is designed to be submitted for scrutiny by the Local Authority and their Environmental Protection team.

3.2. Nearby Sensitive Premises (NSPs)

3.2.1. The location of site is detailed in Fig 2 below. The site is surrounded on three sides by residential property, namely the side elevation and rear of properties on Gondar Gardens, The rear of residential property on Hillfield Road and Agamemnon Road.

Figure 2 - Nearby Sensitive Premises (NSPs)

Location

3.3. CRTN

3.3.1. The prevailing standard for assessing road noise impact from a proposed scheme is the "Calculation of Road Traffic Noise: 1988"

4. Noise Predictions

4.1. Noise Prediction Model

4.1.1. The model is developed using a proprietary noise prediction package SoundPLAN and it predicts the noise impact using the "before" and "after" road traffic figures contained in the Haskoning UK Ltd Transport Statement dated 20th Jan 2011 which was commissioned by the Client. These are detailed below:

4.1.2. The site has been modelled the traffic flows for the 2012 base, the 2013 base without development, 2013 with the development in progress so this includes the 8 – 10 traffic movements each way (20 movements have been added in total) and 2013 with the traffic flows added by the development (80 extra vehicles).

4.2. SoundPLAN Model

4.2.1. The SoundPLAN noise modelling software has been used, both to assess the position of the activities on site and also to predict contour plots of day (0700-23--) and night time (2300-0700) sound pressure based on average $L_{Aeq,T}$.

Figure 3 - Noise contour plot detailing the base traffic noise levels 0700-2300.

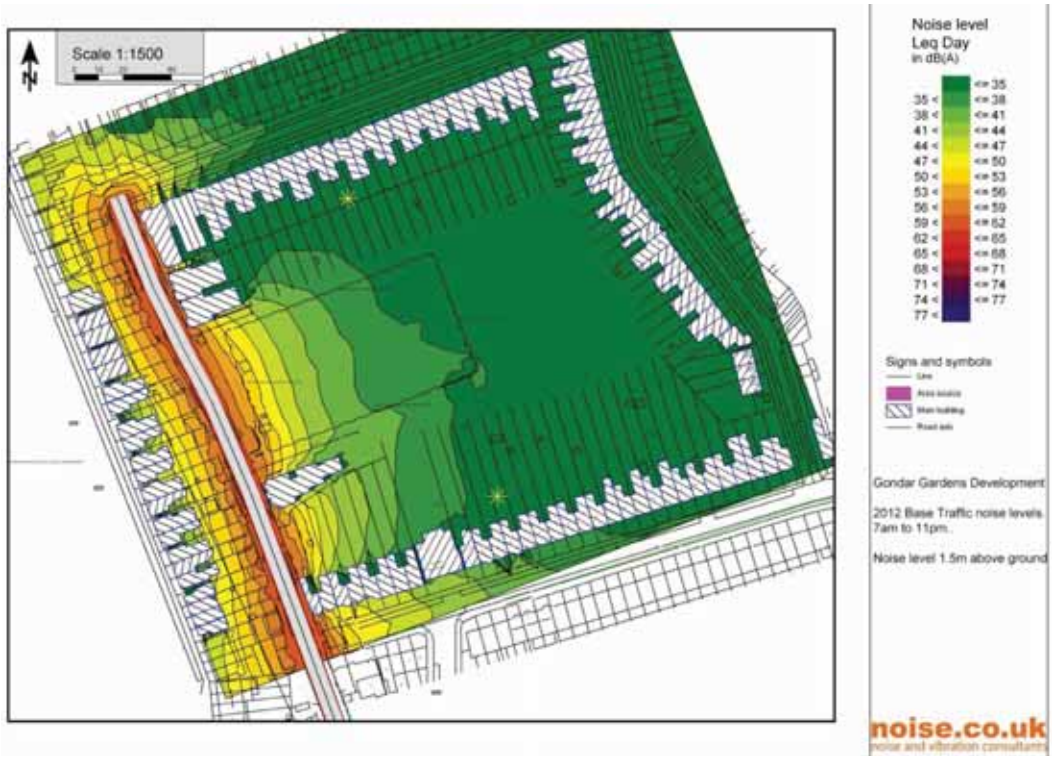


Figure 4 - Noise contour plot detailing the base traffic noise levels 2300-0700.

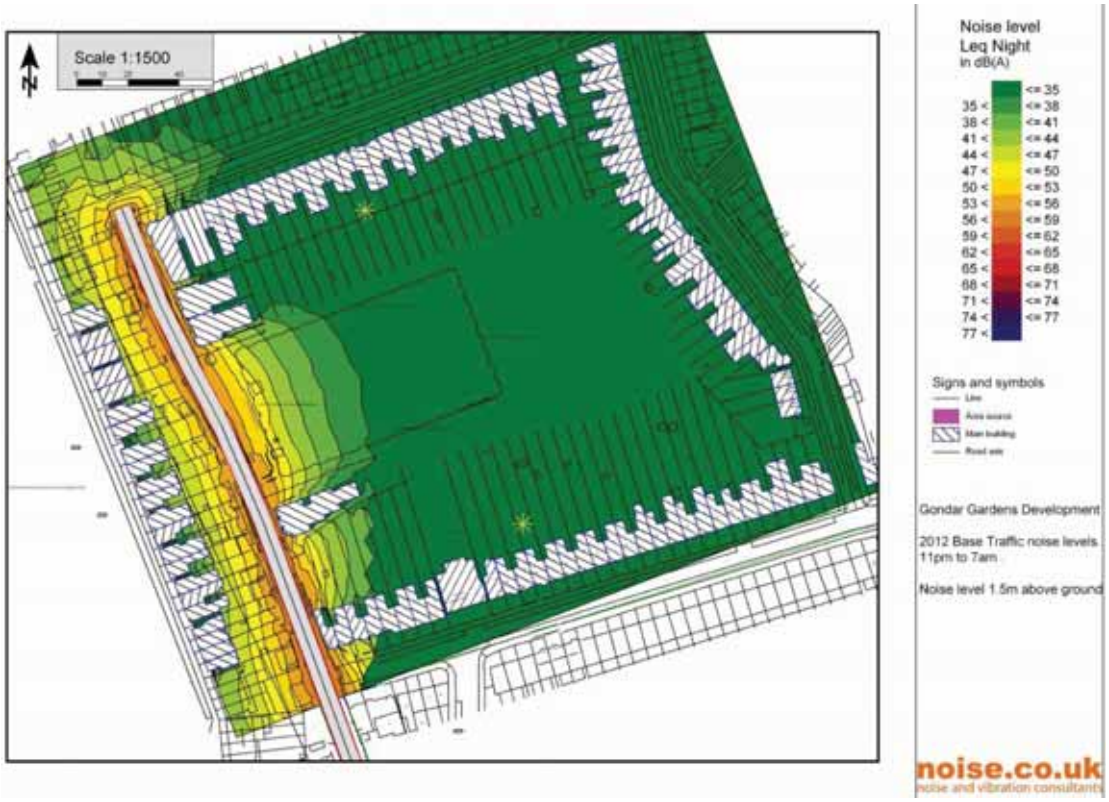


Figure 5 - Noise contour plot detailing the base traffic noise levels with development 0700-2300.

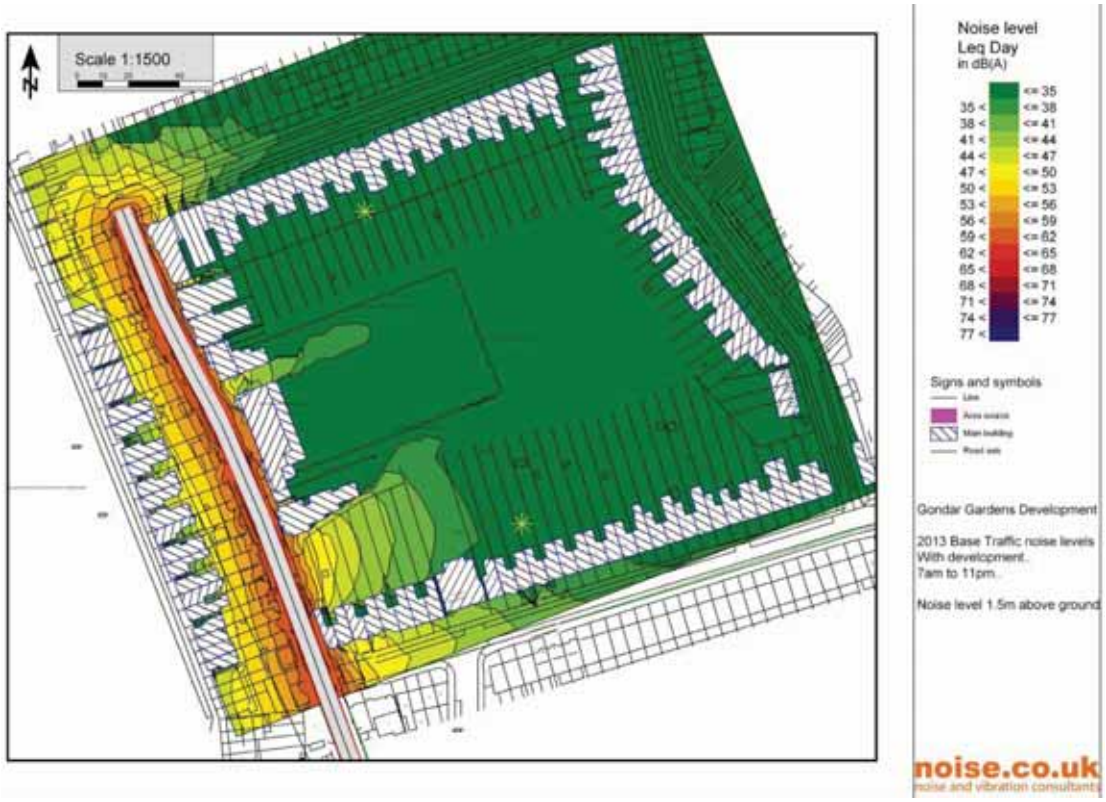
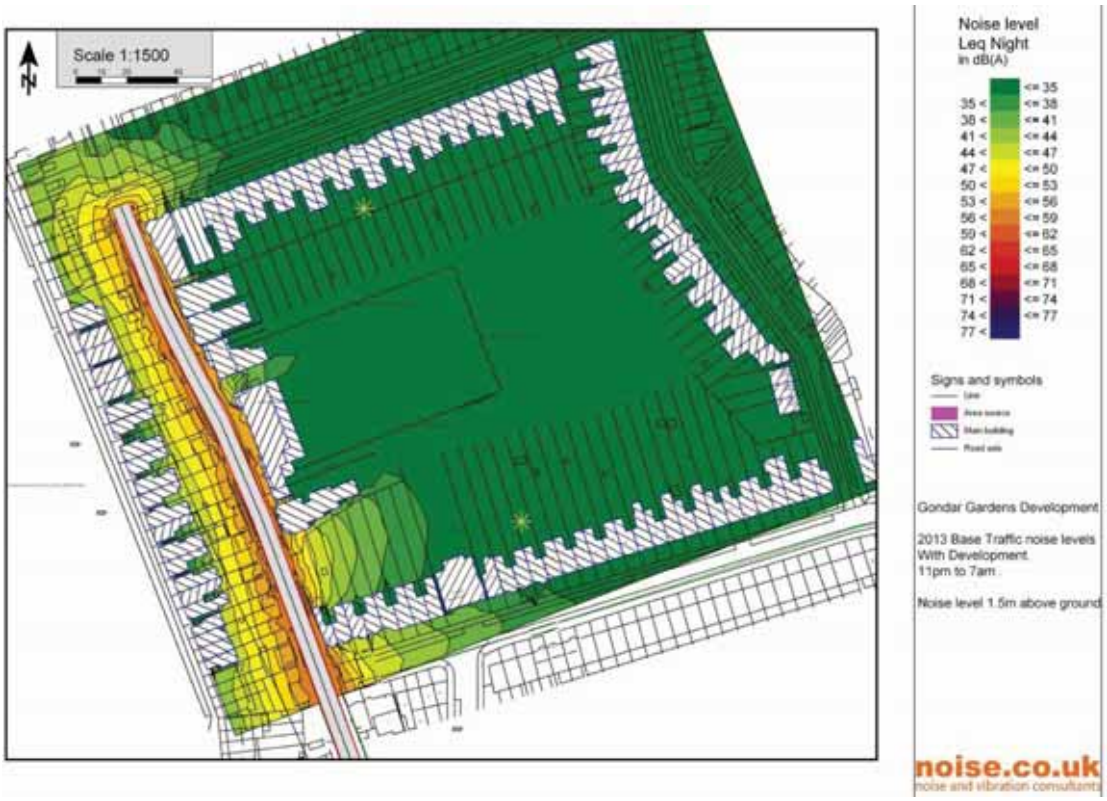


Figure 6 - Noise contour plot detailing the base traffic noise levels with development 2300-0700.



4.2.2. The modelling assumptions are as follows:

1) vehicle source heights are assumed to be at ground datum

2) The vehicle movements are modelled across site i.e. from each of the developed properties.

4) The activity duration is over the day time and night time periods.

4.2.3. The worst case scenario "after" development is detailed below:

Figure 7 - Noise contour plot detailing the increase in traffic noise levels 0700-2300.

Figure 8 - Noise contour plot detailing the increase in traffic noise levels 2300-0700.

4.2.4. There is virtual no increase in the sound pressure level on the Gondor Gardens road frontage to the site entrance (<1dB).

4.2.5. The highest increase in sound pressure level will occur at the foot of the existing gardens backing onto site. At the boundary edge to these gardens it is predicted to be <2dB increase (from the current 2013 road traffic level predicted of approximately 38dB - 41dB, to 41 to 44dB during the period 2300 -0700hrs. A similar maximum increase in the rear gardens is also predicted for the period 0700 - 2300hrs (This is identical to the night time difference as it is assumed the traffic proportional increase are identical) with the contour band raised from 35dB-38dB to 38dB-41dB .

4.2.6. It should also be noted that across a large part of the site the sound pressure levels are reduced by over 4 dB. This is marked as dark green in the difference plots and is due to the screening the new development will have on the traffic running along Gondar Gardens.

5. Conclusions

5.1.1. This report has been commissioned to identify and predict the additional road noise impact associated with the redevelopment of Gondar Gardens reservoir site on the nearby sensitive premises which have a boundary with or overlook site.

5.1.2. The predicted sound pressure levels indicate that noise impact from the additional vehicles associated with the new housing units is less than 3dB based on the worse case scenario at some of the existing residential dwellings front & rear gardens in the SW corner of site.

5.1.3. It is also noted that the additional screening afforded by the proposed development which follows the road frontage with Gondar Gardens means that the majority of existing residential receivers to the rear of site have lower predicted sound pressure levels, in some areas this will be lower by over 4dB.

5.1.4. It is recommended that this report in the first instance, forms the basis for discussions on planning requirements between the Client and the Local Authority.

Bill Whitfield. **BA, MSc, MIOA**

Managing Director

6. Appendix

6.1. Appendix 2: SoundPLAN Noise Contour Plots

1 GROUND LEVEL PLAN
SCALE: 1:200 (A1)

NOTES

1 The Contractor must check and confirm dimensions

2 All discrepancies must be reported and resolved by the Architect before works commence

3 This drawing is not to be scaled

4 All work and materials to be in accordance with current applicable Statutory Legislation and to comply with all relevant Codes of Practice and British Standards.

PRELIMINARY

Rev	Date
A revised layouts	14/12/11

Rolfe Judd
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Client
LINDEN WATES (WEST HAMPSTEAD) LTD.

Project
GONDAR GARDENS

Drawing
PLAN
GROUND LEVEL

Scale	Date	Drawn
1:200 (A1)	NOV 2011	RS

Drawing No
4870 / T(20) P00

Revision
A

CAD Ref No
C:\4870\T_Series\T20\2nd Application\T20P00

This scale is 100mm in length when printed at the size indicated in the title block.

1 FIRST FLOOR LEVEL PLAN
SCALE: 1:200 (A1)

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Project
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Drawing
PLAN
FIRST FLOOR LEVEL

Scale	Date	Drawn
1:200 (A1)	NOV 2011	RS

Drawing No
4870 / T(20) P01

Revision
–

CAD Ref No
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1 SECOND FLOOR LEVEL PLAN
SCALE: 1:200 (A1)

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Drawing
PLAN
SECOND FLOOR LEVEL

Scale	Date	Drawn
1:200 (A1)	NOV 2011	RS

Drawing No
4870 / T(20) P02

Revision
–

CAD Ref No
C:\4870\T_Series\T20\2nd Application\T20P02

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1 THIRD FLOOR LEVEL PLAN
SCALE: 1:200 (A1)

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Project
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Drawing
PLAN
THIRD FLOOR LEVEL

Scale	Date	Drawn
1:200 (A1)	NOV 2011	RS

Drawing No
4870 / T(20) P03

Revision
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CAD Ref No
C:\4870\T_Series\T20\2nd Application\T20P03

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1 LOWER GROUND LEVEL PLAN
SCALE: 1:200 (A1)

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Drawing
PLAN
LOWER GROUND LEVEL

Scale	Date	Drawn
1:200 (A1)	NOV 2011	RS

Drawing No
4870 / T(20) P-1

Revision
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CAD Ref No
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1 LOWER GROUND LEVEL PLAN
SCALE: 1:200 (A1)

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Project
GONDAR GARDENS

Drawing
PLAN
BASEMENT LEVEL

Scale	Date	Drawn
1:200 (A1)	NOV 2011	RS

Drawing No
4870 / T(20) P-2

Revision
A

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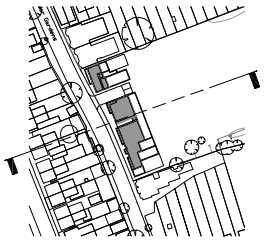

SECTION LOCATION PLAN
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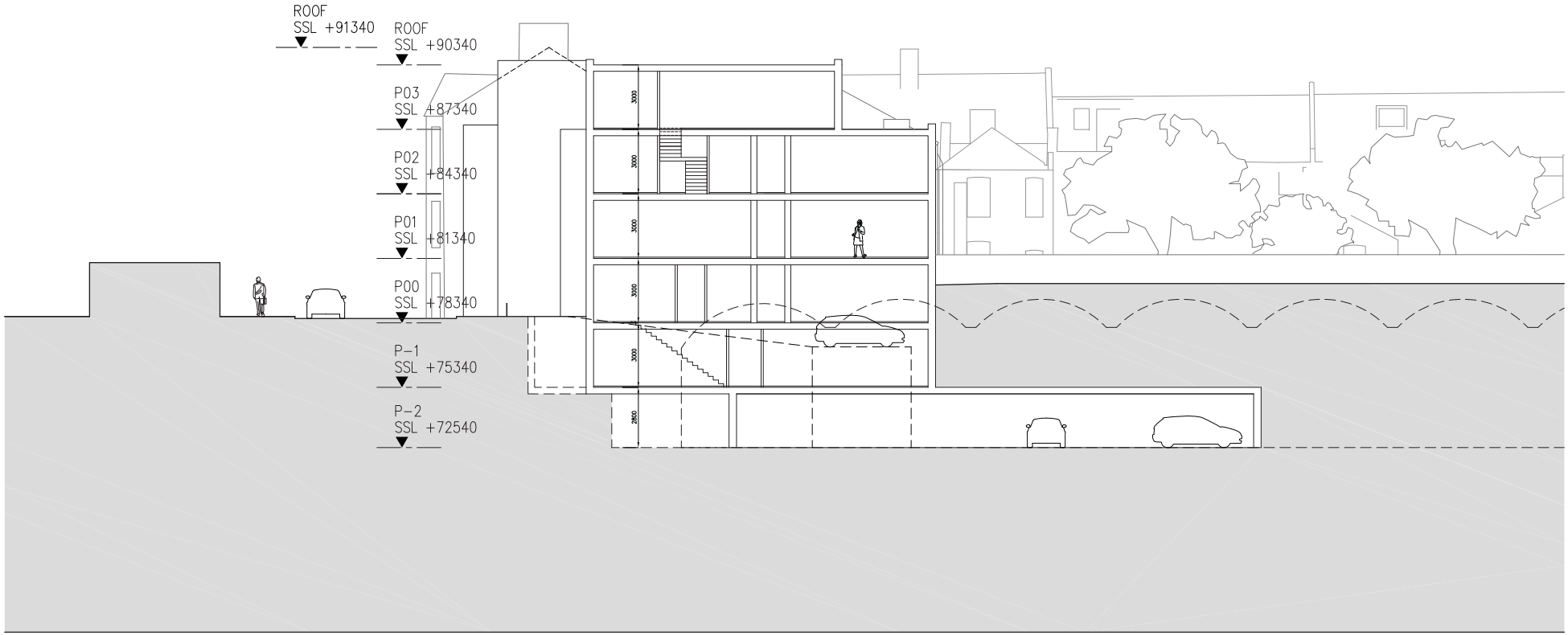

1 SECTION A-A
SCALE: 1:100 (A1)

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Client
LINDEN WATES (WEST HAMPSTEAD) LTD.

Project
GONDAR GARDENS

Drawing
SECTION
A-A

Scale	Date	Drawn
1:100 (A1)	NOV 2011	RS

Drawing No
4870 / T(20) S01

Revision
-

CAD Ref No
C:\4870\T_Series\T20\2nd Application\T20S01

1 ROOF LEVEL PLAN
SCALE: 1:200 (A1)

NOTES

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Client
LINDEN WATES (WEST HAMPSTEAD) LTD.

Project
GONDAR GARDENS

Drawing
PLAN
ROOF LEVEL

Scale	Date	Drawn
1:200 (A1)	NOV 2011	RS

Drawing No
4870 / T(27) P04

Revision
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CAD Ref No
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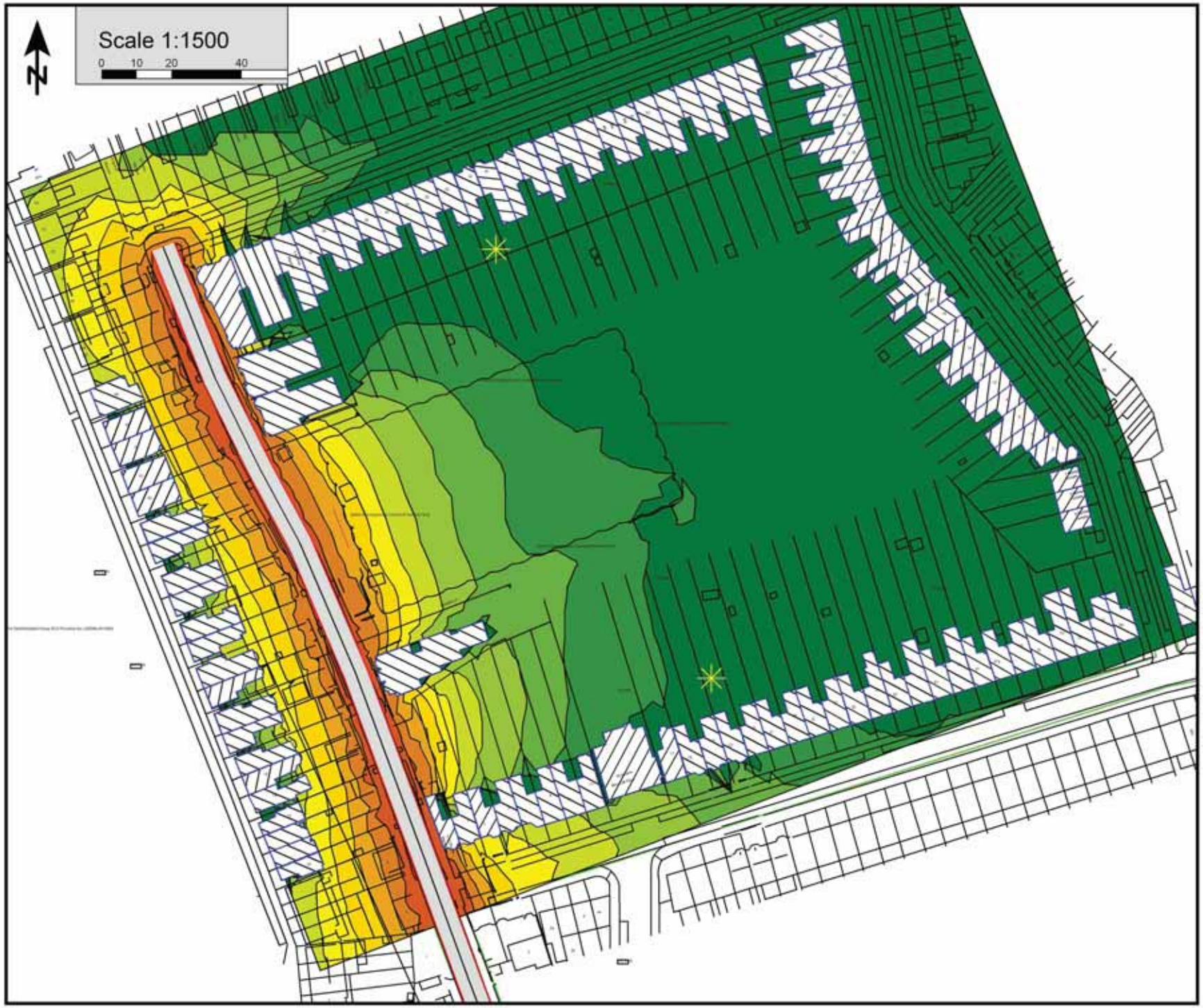


Noise level
Leq Day
in dB(A)

	<= 35
35 <	<= 38
38 <	<= 41
41 <	<= 44
44 <	<= 47
47 <	<= 50
50 <	<= 53
53 <	<= 56
56 <	<= 59
59 <	<= 62
62 <	<= 65
65 <	<= 68
68 <	<= 71
71 <	<= 74
74 <	<= 77
77 <	

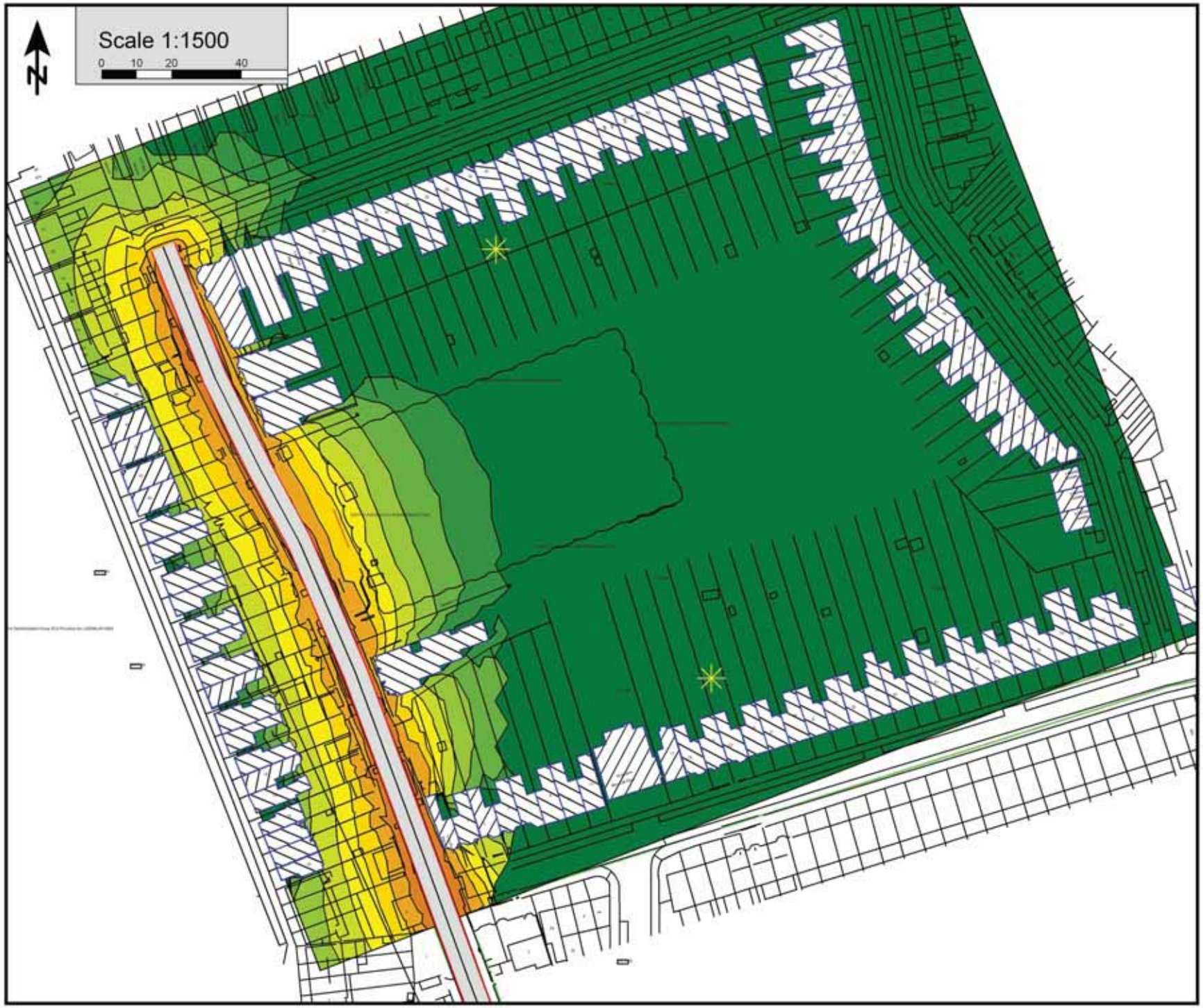
Signs and symbols

- Line
- Area source
- Main building
- Road axis

Gondar Gardens Development

2012 Base Traffic noise levels.
7am to 11pm..

Noise level 1.5m above ground



Noise level
Leq Night
in dB(A)

	<= 35
35 <	<= 38
38 <	<= 41
41 <	<= 44
44 <	<= 47
47 <	<= 50
50 <	<= 53
53 <	<= 56
56 <	<= 59
59 <	<= 62
62 <	<= 65
65 <	<= 68
68 <	<= 71
71 <	<= 74
74 <	<= 77
77 <	

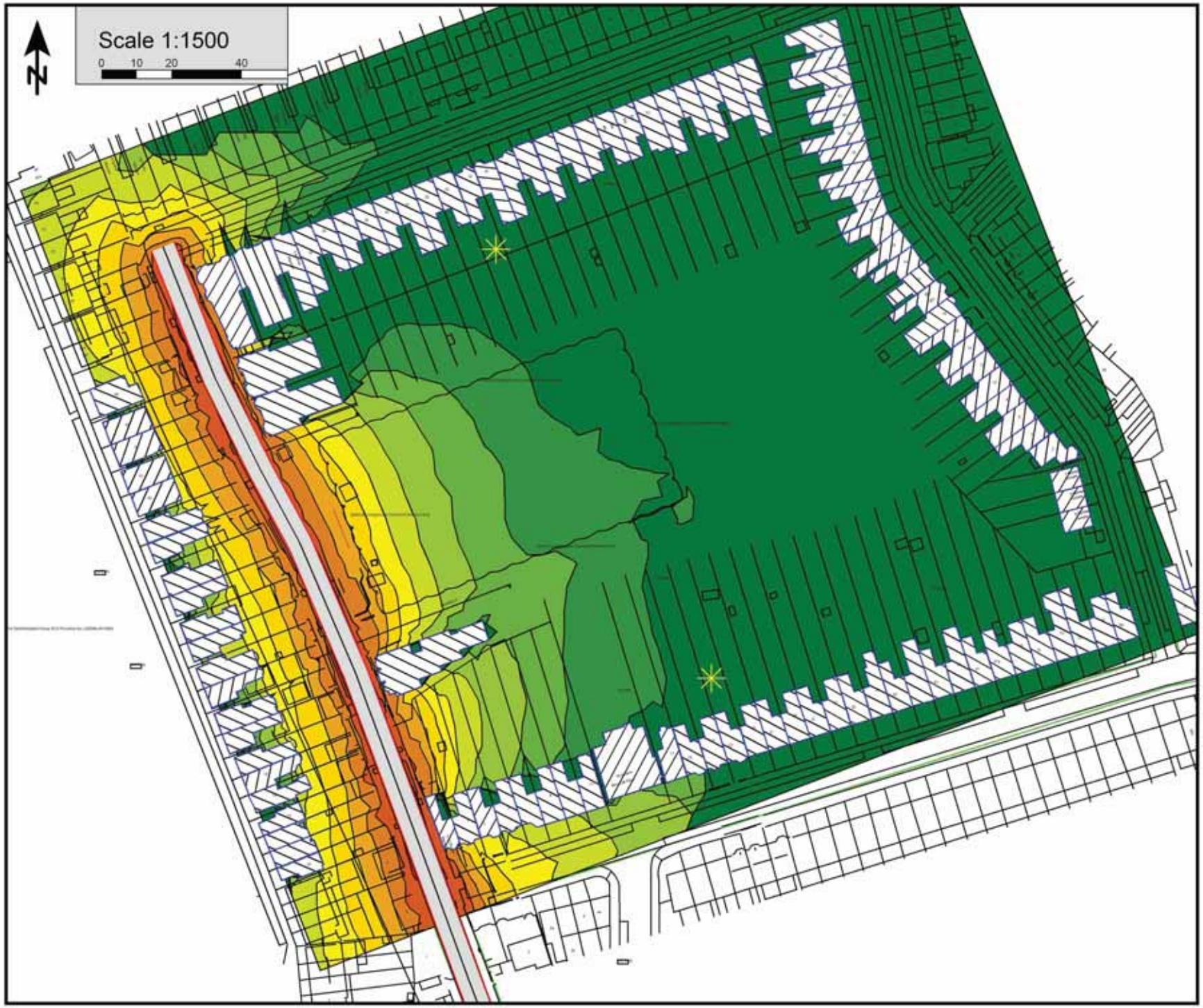
Signs and symbols

- Line
- Area source
- Main building
- Road axis

Gondar Gardens Development

2012 Base Traffic noise levels.
11pm to 7am .

Noise level 1.5m above ground



Noise level
Leq Day
in dB(A)

	<= 35
35 <	<= 38
38 <	<= 41
41 <	<= 44
44 <	<= 47
47 <	<= 50
50 <	<= 53
53 <	<= 56
56 <	<= 59
59 <	<= 62
62 <	<= 65
65 <	<= 68
68 <	<= 71
71 <	<= 74
74 <	<= 77
77 <	

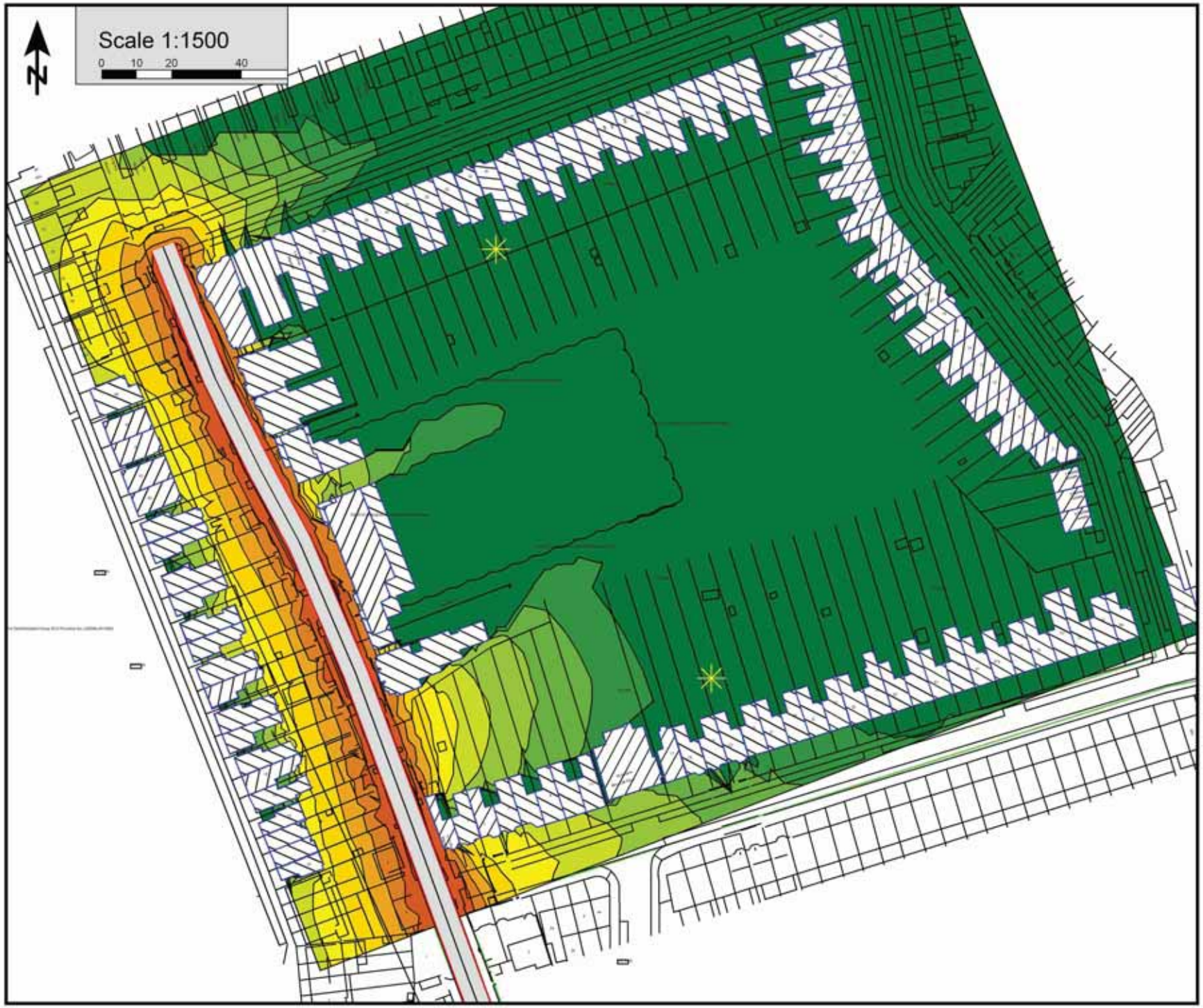
Signs and symbols

- Line
- Area source
- Main building
- Road axis

Gondar Gardens Development

2013 Base Traffic noise levels
Without development..
7am to 11pm..

Noise level 1.5m above ground



Noise level
Leq Day
in dB(A)

	<= 35
35 <	<= 38
38 <	<= 41
41 <	<= 44
44 <	<= 47
47 <	<= 50
50 <	<= 53
53 <	<= 56
56 <	<= 59
59 <	<= 62
62 <	<= 65
65 <	<= 68
68 <	<= 71
71 <	<= 74
74 <	<= 77
77 <	

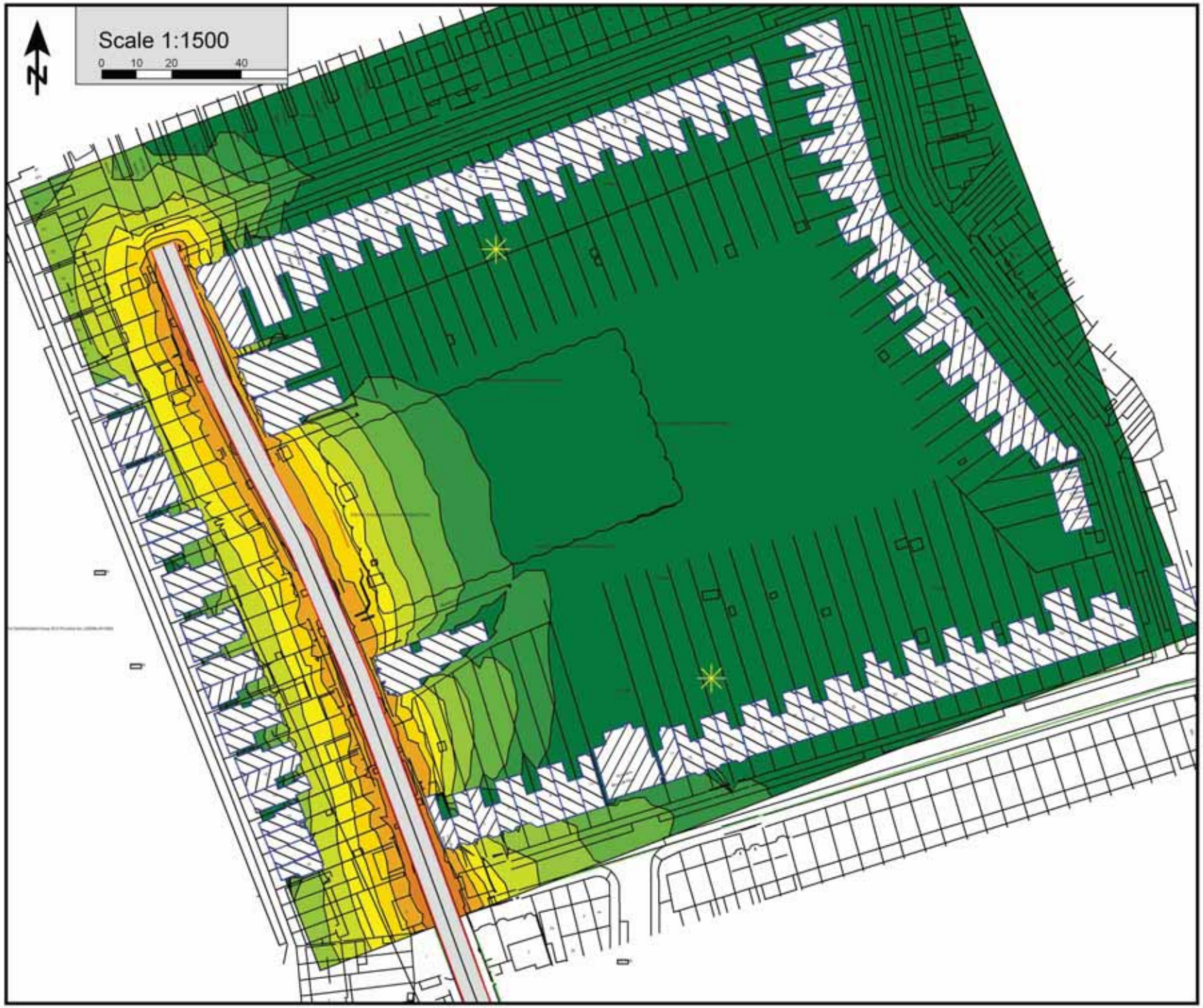
Signs and symbols

- Line
- Area source
- Main building
- Road axis

Gondar Gardens Development

2013 Base Traffic noise levels
With development..
7am to 11pm..

Noise level 1.5m above ground



Noise level
Leq Night
in dB(A)

	<= 35
35 <	<= 38
38 <	<= 41
41 <	<= 44
44 <	<= 47
47 <	<= 50
50 <	<= 53
53 <	<= 56
56 <	<= 59
59 <	<= 62
62 <	<= 65
65 <	<= 68
68 <	<= 71
71 <	<= 74
74 <	<= 77
77 <	

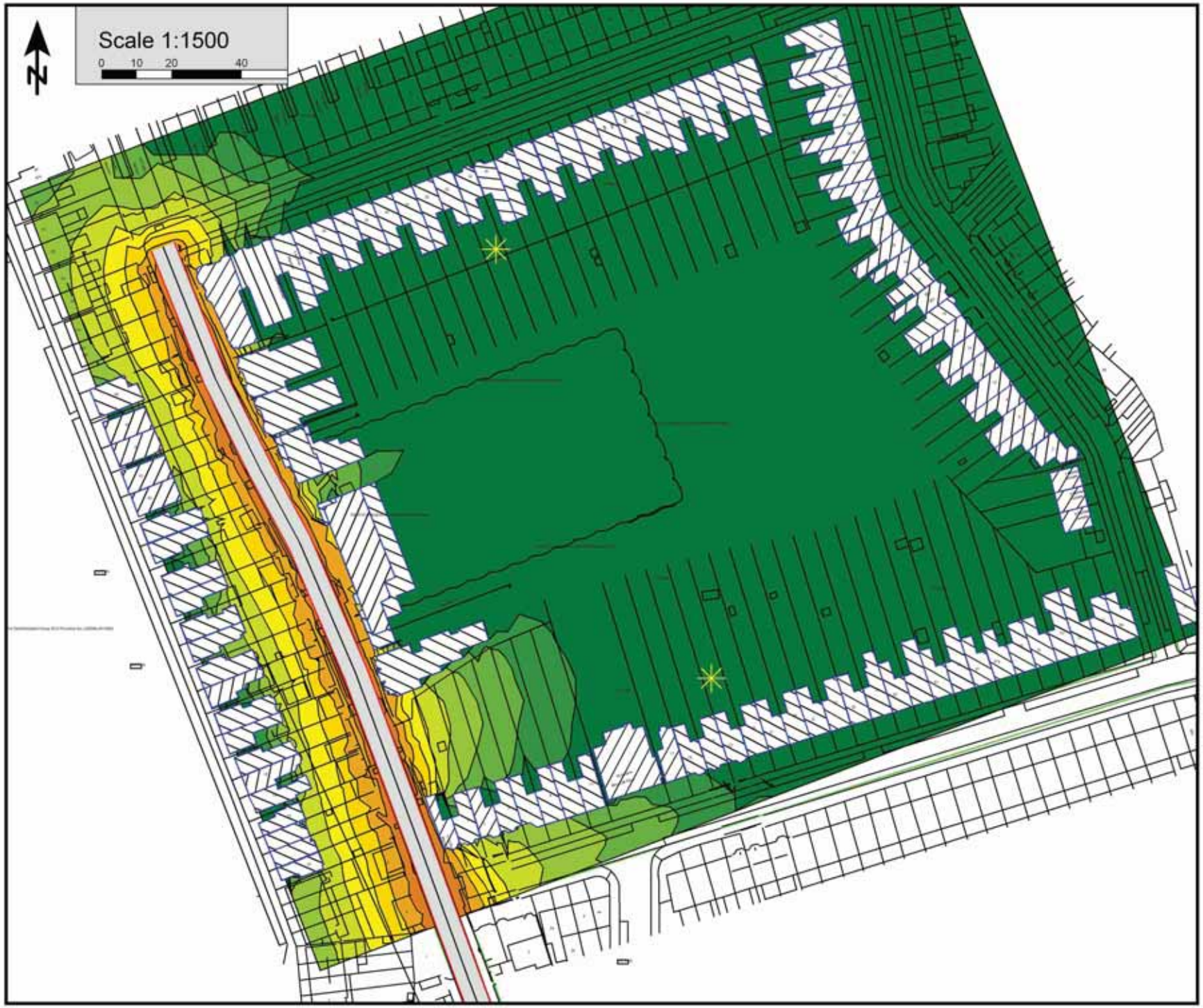
Signs and symbols

- Line
- Area source
- Main building
- Road axis

Gondar Gardens Development

2013 Base Traffic noise levels
Without Development.
11pm to 7am .

Noise level 1.5m above ground



Noise level
Leq Night
in dB(A)

	<= 35
35 <	<= 38
38 <	<= 41
41 <	<= 44
44 <	<= 47
47 <	<= 50
50 <	<= 53
53 <	<= 56
56 <	<= 59
59 <	<= 62
62 <	<= 65
65 <	<= 68
68 <	<= 71
71 <	<= 74
74 <	<= 77
77 <	

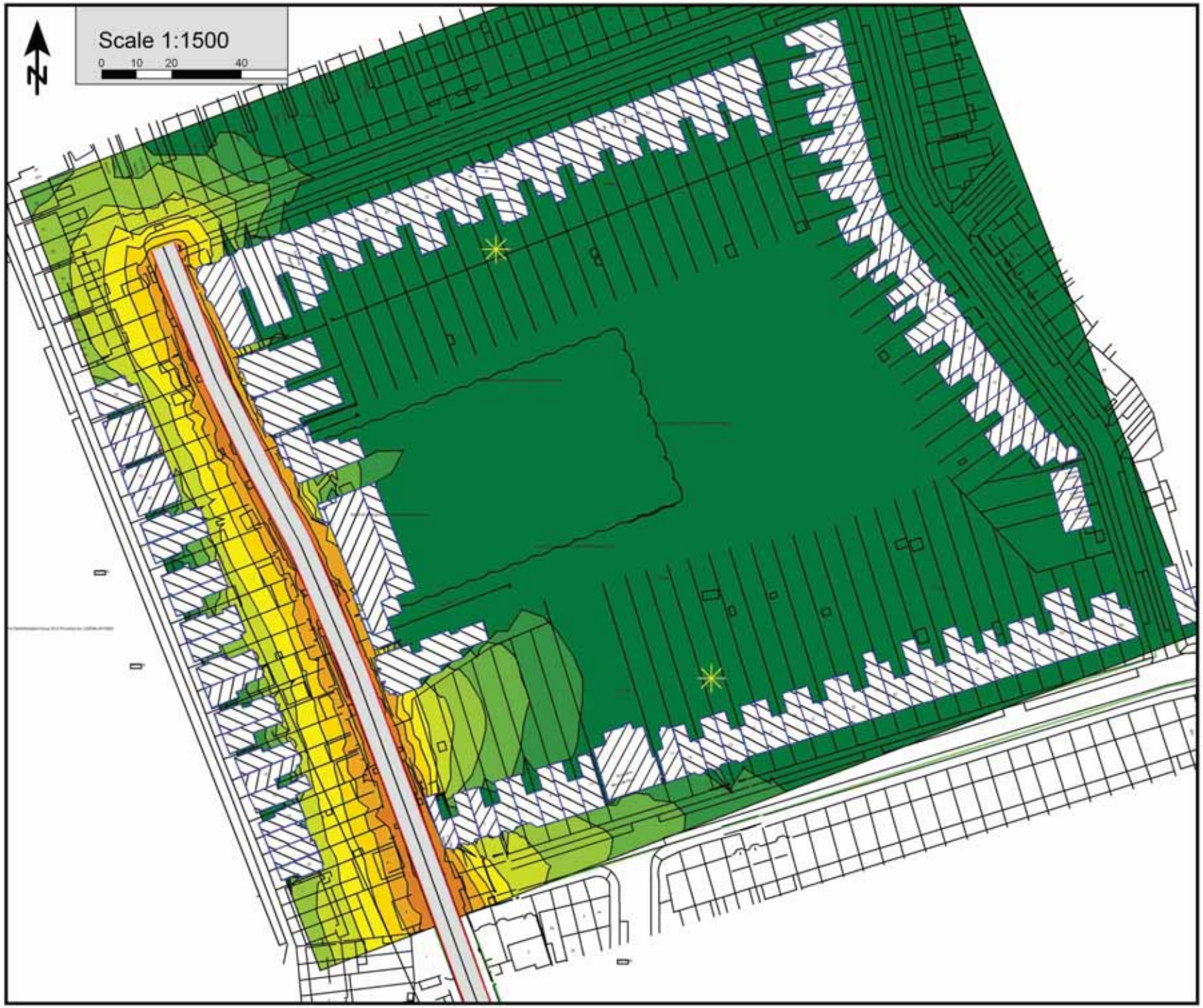
Signs and symbols

- Line
- Area source
- Main building
- Road axis

Gondar Gardens Development

2013 Traffic noise levels
With Developer traffic.
11pm to 7am .

Noise level 1.5m above ground



Noise level
Leq Night
in dB(A)

	<= 35
35 <	<= 38
38 <	<= 41
41 <	<= 44
44 <	<= 47
47 <	<= 50
50 <	<= 53
53 <	<= 56
56 <	<= 59
59 <	<= 62
62 <	<= 65
65 <	<= 68
68 <	<= 71
71 <	<= 74
74 <	<= 77
77 <	

Signs and symbols

- Line
- Area source
- Main building
- Road axis

Gondar Gardens Development

2013 Base Traffic noise levels
With Development.
11pm to 7am .

Noise level 1.5m above ground

Increase in Noise level in dB(A)

	< -4.0
-4.0 <=	< -3.5
-3.5 <=	< -3.0
-3.0 <=	< -2.5
-2.5 <=	< -2.0
-2.0 <=	< -1.5
-1.5 <=	< -1.0
-1.0 <=	< -0.5
-0.5 <=	< 0.0
0.0 <=	< 0.5
0.5 <=	< 1.0
1.0 <=	< 1.5
1.5 <=	< 2.0
2.0 <=	< 2.5
2.5 <=	< 3.0
3.0 <=	

Signs and symbols

- Line
- Area source
- Main building
- Road axis

Gondar Gardens Development

Increase in traffic noise levels with the proposed development 11pm to 7am.

Noise level 1.5m above ground

Increase in Noise level in dB(A)

	< -4.0
-4.0 <=	< -3.5
-3.5 <=	< -3.0
-3.0 <=	< -2.5
-2.5 <=	< -2.0
-2.0 <=	< -1.5
-1.5 <=	< -1.0
-1.0 <=	< -0.5
-0.5 <=	< 0.0
0.0 <=	< 0.5
0.5 <=	< 1.0
1.0 <=	< 1.5
1.5 <=	< 2.0
2.0 <=	< 2.5
2.5 <=	< 3.0
3.0 <=	

Signs and symbols

- Line
- Area source
- Main building
- Road axis

Gondar Gardens Development

Increase in traffic noise levels with the proposed development 7am - 11pm.

Noise level 1.5m above ground