noise.co.uk

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BS5228 Noise Impact Assessment

Prepared: 22nd December 2011

Report No	–	**9384D-2 BS5228 noise**
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 a BS5228 construction and demolition 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 receivers on Gondar Gardens, Hillfield Rd and Agamemnon Rd.

1.1.2. Where possible the report draws on current group standards & protocols and utilises prediction methods and proprietary software where appropriate in order to demonstrate the predicted impact at the local receivers facades.

1.1.3. This report covers all required parts of the BS5228 Noise Impact Assessment, including identifying:

- proposed work schedule including activities & operations
- plant & machinery to be used
- prospective duration of works
- plant predicted on-times
- Sound Power/Sound Pressure levels for plant types & operations.

1.1.4. It is noted that at this stage no direct demands for noise or vibration assessments have been received with respect to the requirements of the Local Planning Authority.

1.1.5. The predictions show that there are some activities and operations associated with the development of the site which will give rise to sound pressure levels exceeding 70dB LAeq,T during the daytime period for a short period involving the demolition and groundworks phase of the contract.

1.1.6. It is recommended that the Client discusses the potential for environmental noise impact with the appropriate parties involved in the planning and construction phases in order to arrive at an agreed mitigation and control strategy.

2. Contents

3. Introduction

3.1. Site

3.1.1. The proposed development site is an old underground reservoir situated at Gondar Gardens. The intention is to reuse the site to create 16 family homes with off street parking.

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 BS5228 Noise assessment of the proposed groundworks required which will form the basis for the construction and building phase of the project.

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. (Referred to as NSPs in BS5228; "noise sensitive premises[1]").

Figure 2 - Nearby Sensitive Premises (NSPs)

Location

3.3. BS5228: 2009

3.3.1. The prevailing standard for assessing the noise impact from a construction or demolition site is BS5228-1: 2009 "Code of practice for noise and vibration control on construction and open sites: Part 1 Noise."

[1]para 3.9 BS5228: 1-2009 any occupied premises outside a site used as a dwelling (including gardens), place of worship, educational establishment, hospital or similar institution, or any other property likely to be adversely affected by an increase in noise level

3.3.2. The standard states:

3.3.3. ***"This British Standard refers to the need for the protection against noise and vibration of persons living and working in the vicinity of, and those working on, construction and open sites. It recommends procedures for noise and vibration control in respect of construction operations and aims to assist architects, contractors and site operatives, designers, developers, engineers, local authority environmental health officers and planners."***

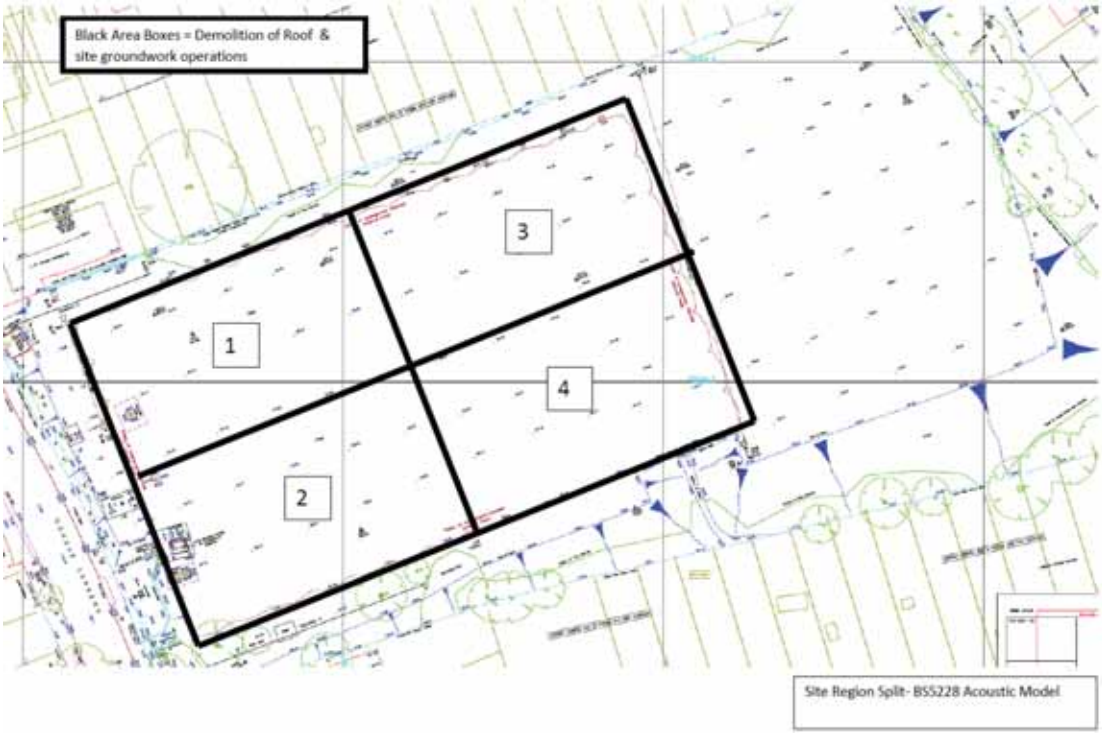
3.3.4. In order to predict the noise impact due consideration has to be given to the location of site and the surrounding noise sensitive receivers In this location there are noise sensitive premises on all four sides of the rectangular development site and each are given due consideration in the prediction model.

3.4. Noise Prediction Model

3.4.1. The model is developed around the construction area of site which is basically divided into four sections. See below:

Figure 3 - Proposed Site Operational area Plan

Operational Area of Site

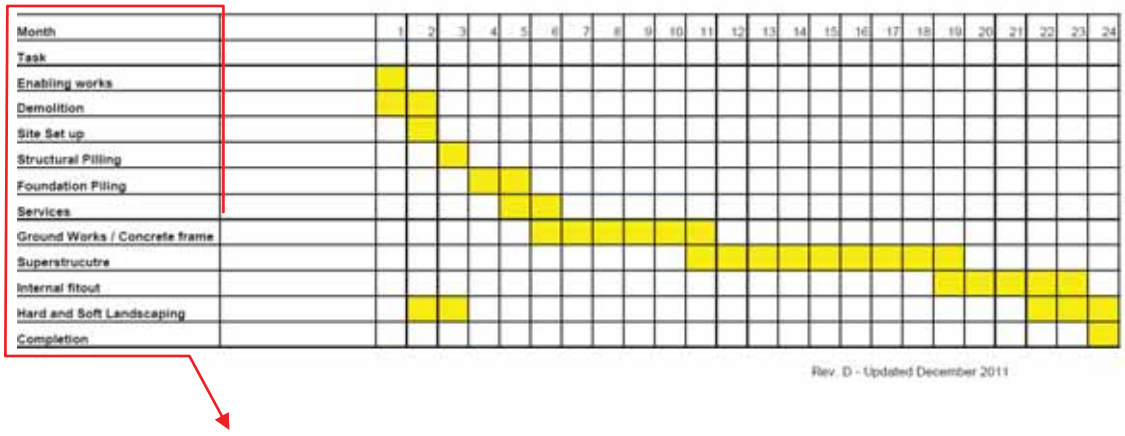


3.4.2. The operations that occur on the site are detailed in the Client's document " Gondar Gardens Programme" which is detailed in the Appendix and shown below for ease of reference:

Figure 4 - Proposed Site Programme

Operational Area of Site Programme

Gondar Garden Programme



Task
Enabling works
Demolition
Site Set up
Structural Pilling
Foundation Piling
Services
Ground Works / Concrete frame
Superstrucutre
Internal fitout
Hard and Soft Landscaping

Site activity schedule

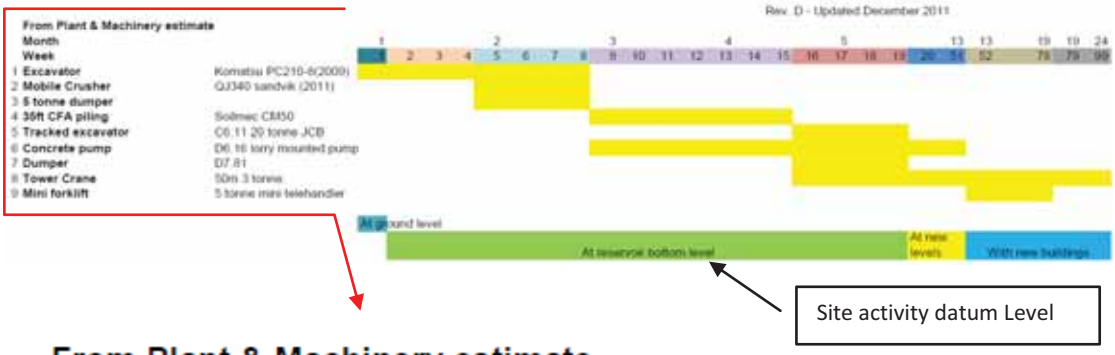
3.4.3. Nominally the hours of work are assumed to be 0800 - 1800 hrs Monday to Friday and 0800 - 1300 Saturday with no work on Sundays or Bank Holidays.

3.4.4. The individual construction & demolition activities and operations are scheduled to occur during a project timeline which is subdivided into 24

months and which is sub-divided into weeks for the main demolition and ground works phase. The Gondar Gardens Programme which details this (Fig 4) is also broken down further to identify the type of plant to be used. This is detailed in Fig 5:

Figure 5 - Proposed Site Plant (type & model where possible) & usage

Plant



From Plant & Machinery estimate	
Month	
Week	
1 **Excavator**	Komatsu PC210-8(2009)
2 **Mobile Crusher**	QJ340 sandvik (2011)
3 **5 tonne dumper**	
4 **35ft CFA piling**	Soilmec CM50
5 **Tracked excavator**	C6.11 20 tonne JCB
6 **Concrete pump**	D6.16 lorry mounted pump
7 **Dumper**	D7.81
8 **Tower Crane**	50m 3 tonne
9 **Mini forklift**	5 tonne mini telehandler

3.4.5. As the method of calculation detailed in BS5228-1: 2009 section F.2.1 (b) will be used this is cross referenced with the plant noise level tables in the BS5228 section (Annex C (informative)) which covers "Current sound level data on site equipment and site activities." Each item or plant or activity is cross referenced with this source for prediction purposes. Apart from the obvious need to have a site road (haul road) all the plant and operations are treated as quasi-static sources i.e. they operate in one place at a time but can be moved around site.

3.4.6. The progressive activity schedule means that some of the first activities take place at ground level i.e. on top of the roof, but as works progress the demolition of the roof means that the site activities will be based at the bottom of the reservoir approximately 7m below initial site level. In

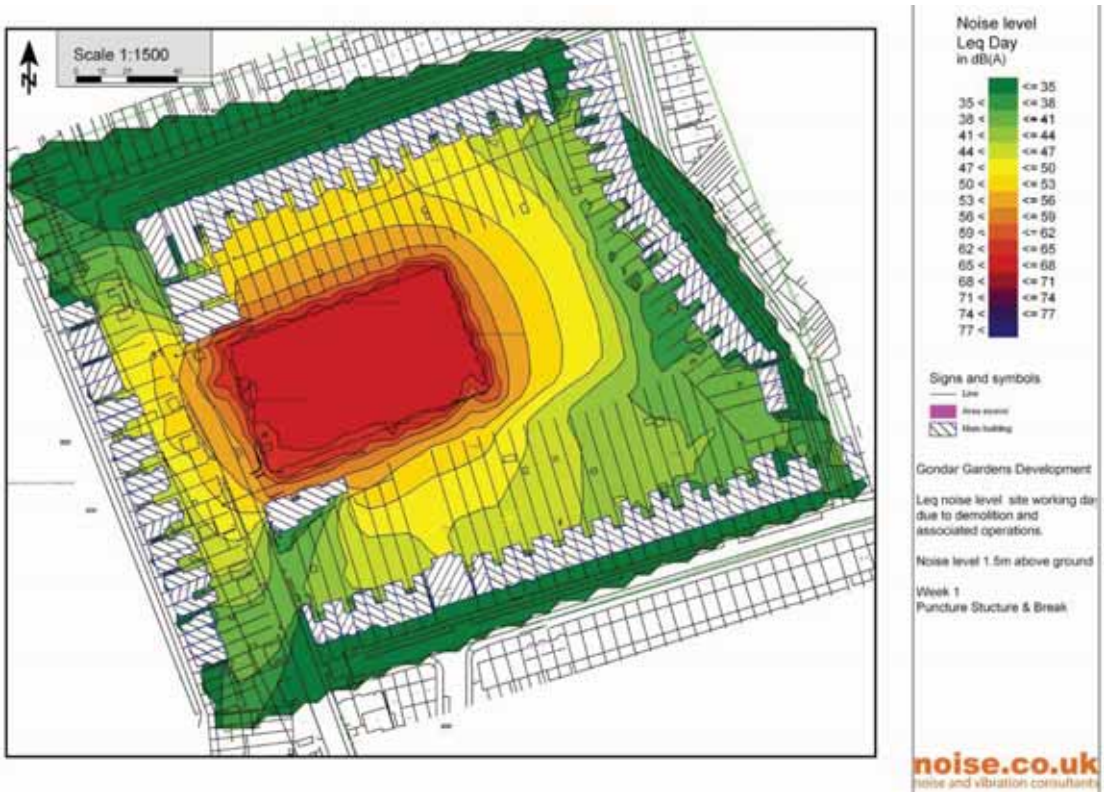
this case the operations will be partially screened from some of the nearest sensitive premises and this needs to be taken into account in the model.

3.5. SoundPLAN Model

3.5.1. 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 time sound pressure based on average $L_{Aeq,T}$ (T in this case is the day time operational period which is 10hrs for Mon-Fri and 5 hrs on Saturday) levels at the nearest sensitive premises facades.

3.5.2. As an example the topsoil removal activity which occurs on site work schedule Week 1 is detailed below. The full operational schedule is detailed in the Appendix - SoundPLAN Model section

Figure 6 - Noise contour plot detailing the puncture slab & break in week 1.



3.5.3. The modelling assumptions are as follows:

1) Plant source heights are assumed to be 1.5m from ground datum (the position on which they sit on site i.e. the datum may change).

2) The plant type and numbers are taken from the Clients "Gondar Garden Programme".

3) The plant typical on-times are assumed below.

4) The activity duration and commencement is taken from the Clients "Gondar Garden Programme".

5) the access road runs down the middle of site and mobile plant runs on it.

6) the site operations move to reservoir floor slab level after week 1:

3.5.4. The assumed on-times for the plant & machinery are as follows.

- 50% for the tracked excavator weeks 1 to 8
- 80% for the concrete pump
- 80% for the demolition crusher
- 80% for the Dumper working with the demolition crusher
- 80% for the Dumper working on the ground beams
- 50% each for the two excavators working on demolition
- 50% for the pile driver
- 30% for the lorry mounted concrete pump in the superstructure build
- 30% for the mini forklift
- 30% for the tower crane

4. Noise Predictions

4.1. Worst Case Scenario

4.1.1. The worst case scenarios are dealt with for each of the modelling contour plots and are summarised below:

4.1.2. It is assumed that there may be more than one activity/operation in play during the worst case scenario based on the proposed work schedule. i.e. several items of plant may operate at once.

4.1.3. This may mean that short duration $L_{Aeq,T}$ levels may peak during these operations but over the space of the daytime period they will average

out. The average daytime level is the one reported in the summary table below.

Summary Table - Daytime $L_{Aeq,T}$ Levels

Figure 7 - Modelled Worst case impacts during contract timeline

Week	Datum Level	Activity	Nearest Sensitive Premises: Worst Case Predicted $L_{Aeq,T}$
1	Roof	Puncture Structure & Break	59dB
2-4	Roof	Demolition	59dB
5-8	Roof	Demolition & Crush	71dB
9-15	Roof	Ground Works	68dB
16-19	Roof	Ground Beams	71dB
20-51	Base Slab	Superstructure with concrete	71dB
52-78	Base Slab	Superstructure with forklift working	68dB
79-99	Base Slab	Superstructure with tower crane only	62dB

5. Results

5.1. Noise Impact

5.1.1. The predicted noise impact from the site operations during the demolition and construction phases of the contract are likely to give rise to average sound pressure levels of 71dB $L_{Aeq,T}$ at a small number of properties closest to site i.e. the nearest sensitive premises. As may be expected the noise levels are predicted to peak when the demolition works are being carried out at roof level during week 5-8 and also some periods of weeks 16-19 and 20-51 when the predicted facade sound pressure levels at the nearest sensitive premises are predicted to be between 68 - 71dB $L_{Aeq,T}$. This is not unusual for relatively large scale demolition activity in this case this is because:

5.1.2. Firstly the nearest sensitive premises are close to the operations. They are located just beyond the site boundary i.e. the distance between source and receiver is sometimes relatively small circa 10m. Hence there is very little distance correction applied to the levels produced and virtually no soft ground attenuation or atmospheric/air absorption to reduce levels.

5.1.3. Secondly, the nearest sensitive premises on the site boundary overlook site i.e. there is a reduced benefit from the potential screening offered

by, for instance, a site boundary fence and also the screening offered because operations will be working upto 7m below existing site level.

6. Recommendations

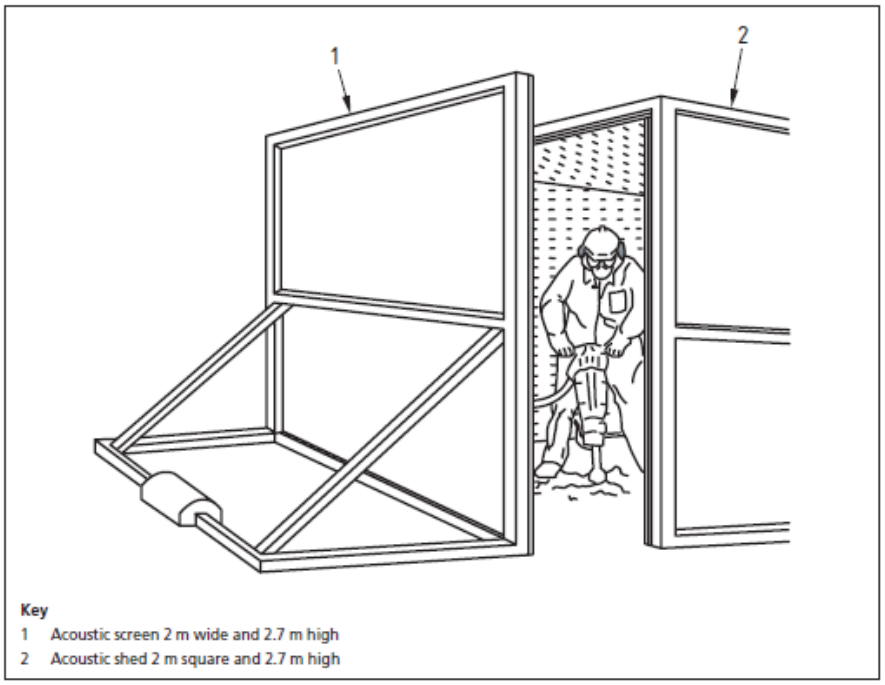
6.1. Mitigation

6.1.1. A pragmatic approach needs to be taken when assessing the noise effects of any construction project. Due consideration needs to be given to the disturbing effects of noise on the local community. These may include, interference with speech, disturbance of work or leisure activities, disturbance of sleep, annoyance and possible health effects on local receivers. Given the predicted sound pressure levels from the proposed activities, which are baseline levels for operations occurring without mitigation, there are several options to reduce the impact on the nearby receivers:

6.1.2. **direct mitigation** (to reduce sound pressure levels may include)

- ensuring all plant is switched off when not in use.
- Plant location; positioning plant to direct noise away from the nearest sensitive premises. This is especially important when only a few metres from a residential receiver.
- The use of earth stockpiles and bunding to protect nearby receivers.
- Introducing temporary enclosures around high intensity activity. See fig B2 from BS 5228-1: 2009 p41.

Figure B.2 **Typical acoustic shed**



- Introducing acoustic barriers/screens to protect source or receiver. See B4 from BS 5228-1: 2009 p43.
- Ensure the equipment has EC sound power certification (L_{WA})[2] and that it is properly maintained.
- Ensure the equipment operators are properly trained and briefed in minimising noise emissions from their activity. i.e. remove clogged clay from a back actors bucket with a spade rather than banging it on the floor to clear debris.

6.1.3. **Indirect mitigation** These are the issues associated with noise affects and community reaction see section 6.3 of BS5228-1: 2009. (These may not necessarily reduce the noise level emitted but can reduce the disturbance to local receivers. They are designed to reduce the impact on the receivers and may include):

- Hours of work: high level noise activity can be scheduled to occur in the middle of the day/afternoon rather than early morning.
- Public relations: close consultation with the Local Community can reduce anxiety of nearby receivers if they are aware of the type of operation due to be performed, the fact that it is being controlled and it will be of limited duration i.e. there is a proposed end date.

[2] There are maximum permitted sound power levels of the plant under EC Directive 2000/14/EC

7. Conclusions

7.1.1. This report has been commissioned to identify and predict the environmental noise impact of the proposed demolition and construction activity associated with the redevelopment of Gondar Gardens on the nearby sensitive premises.

7.1.2. The predicted sound pressure levels indicate that noise mitigation measures will be required in order to control and limit the noise emissions from site and activities and timeframes have been identified when the sound pressure level at the nearest receivers facade is likely to be in excess of 70dB $L_{Aeq.T}$.

7.1.3. The practical direct measures for noise control have been listed as well as the indirect mitigation procedures for minimising noise impact on the neighbouring residential areas.

7.1.4. It is recommended that this report in the first instance, forms the basis for discussions on methods of reducing environmental noise and its impact with both the demolition/construction sub-contractors and the Local Authority.

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

Managing Director

8. Appendix

Gondar Garden Programme

Month		1	2			5	6	7	8		10	11	12	1	1	15	16	17	18	1	20	21	22	2	2
Task																									
Enabling works																									
Demolition																									
Site Set up																									
Structural Pilling																									
Foundation Piling																									
Services																									
Ground Works / Concrete frame																									
Superstrucutre																									
Internal fitout																									
Hard and Soft Landscaping																									
Completion																									

Rev. - dated ece er 2011

From Plant & Machinery estimate

	Month		1			2									5						1	1			1	1	2	
	Week		1	2		5	6	7	8		10	11	12	1	1	15	16	17	18	1	20	51	52		78	7		SWL
1	**Excavator**	o atsu C210-8 200																										
2	**Mobile Crusher**	0 sandv k 2011																										
	5 tonne dumper																											
	35ft CFA piling	So l ec C 50																										
5	**Tracked excavator**	C6.11 20 tonne C																										
6	**Concrete pump**	6.16 lorry ounted u																										
7	**Dumper**	7.81																										
8	**Tower Crane**	50 tonne																										
	Mini forklift	5 tonne n telehandler																										

t round level

t reservo r otto level

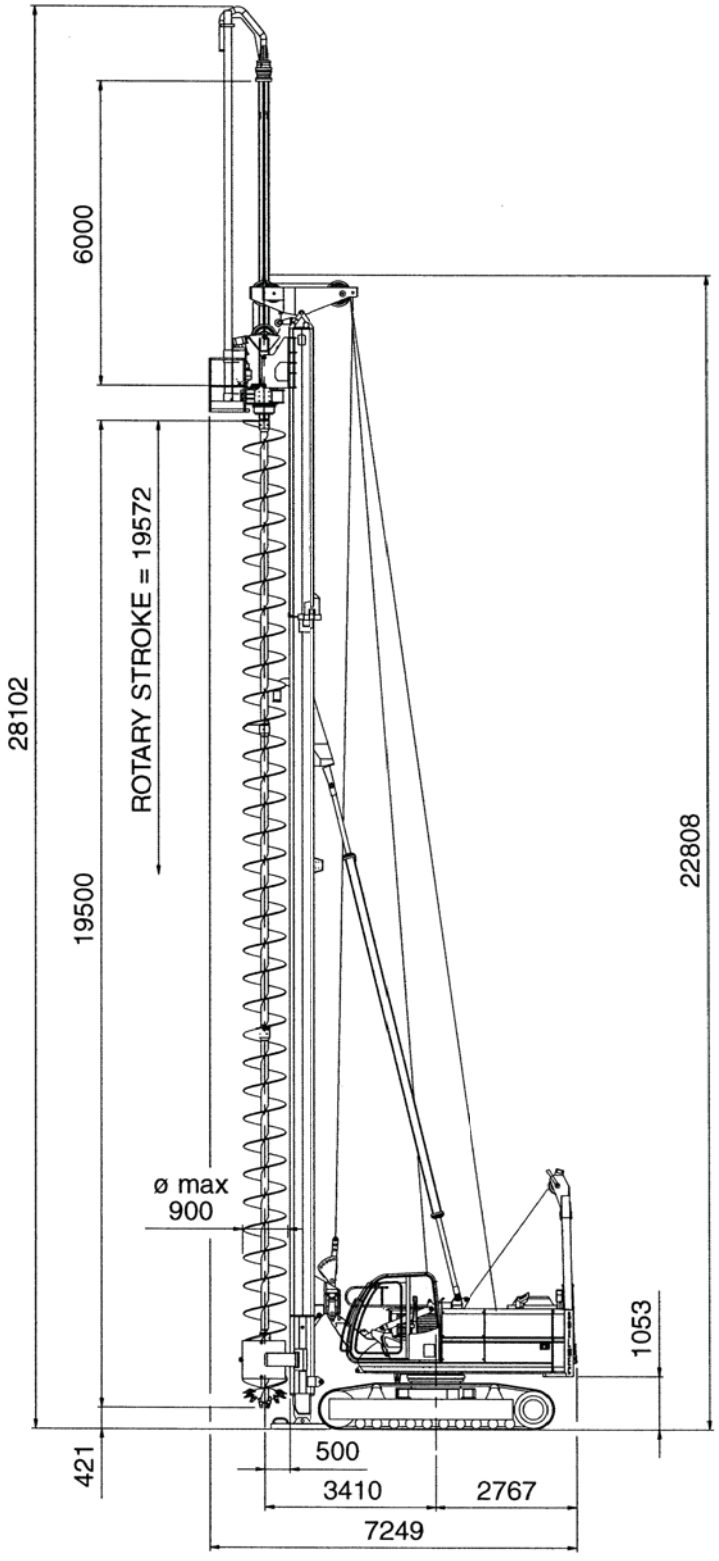
t new levels

W th new u ld n s

A-4 TECHNICAL FEATURES

A-4.1 DIMENSIONS AND WEIGHT

A-4.1.1 MACHINE IN WORKING POSITION



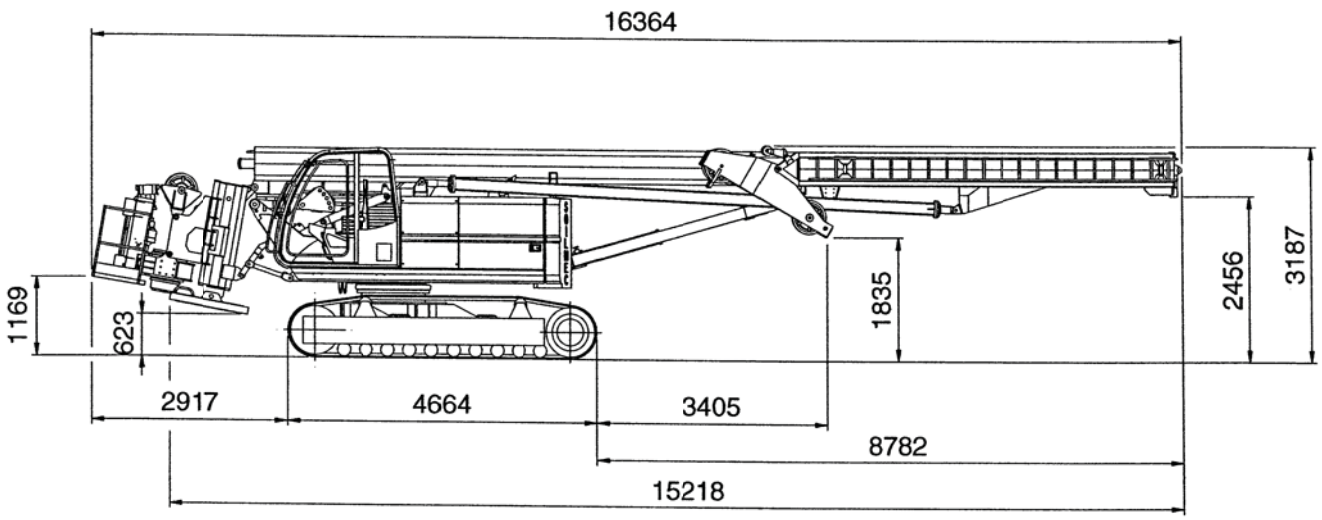
Weight in working configuration (c/w 6 m auger extension - w/o auger and auger cleaner) .. ~ **34200 kg**

SM164040.008Aft

Fig. A-4.1

A-4.1.2 MACHINE IN TRANSFER POSITION

- Configuration with rotary table

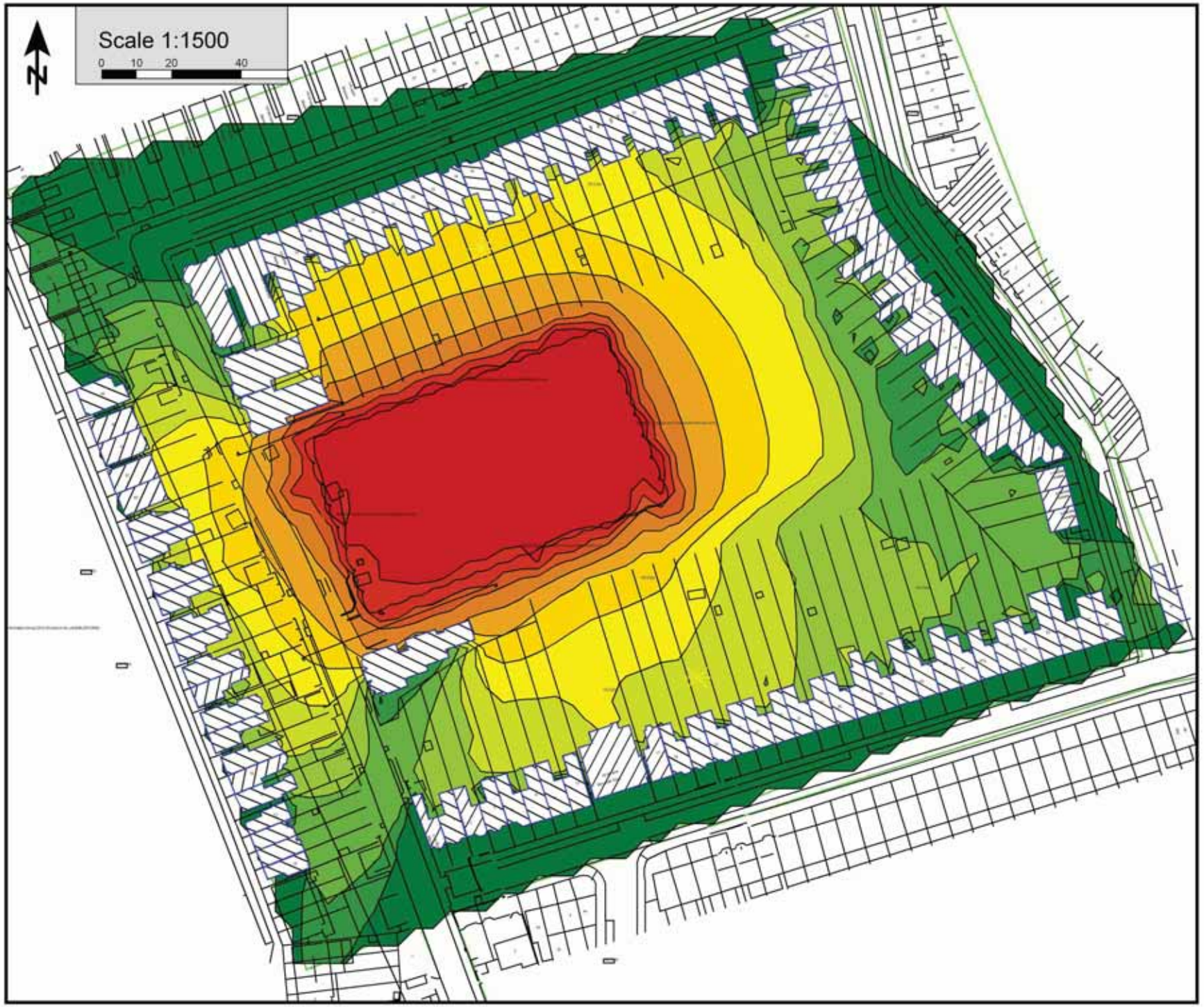


Weight in transport configuration ..... **~ 32500 kg**

SM164040.009Aft

Fig. A-4.3

8.1. Appendix 2: SoundPLAN Noise Contour Plots - Construction Demolition



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

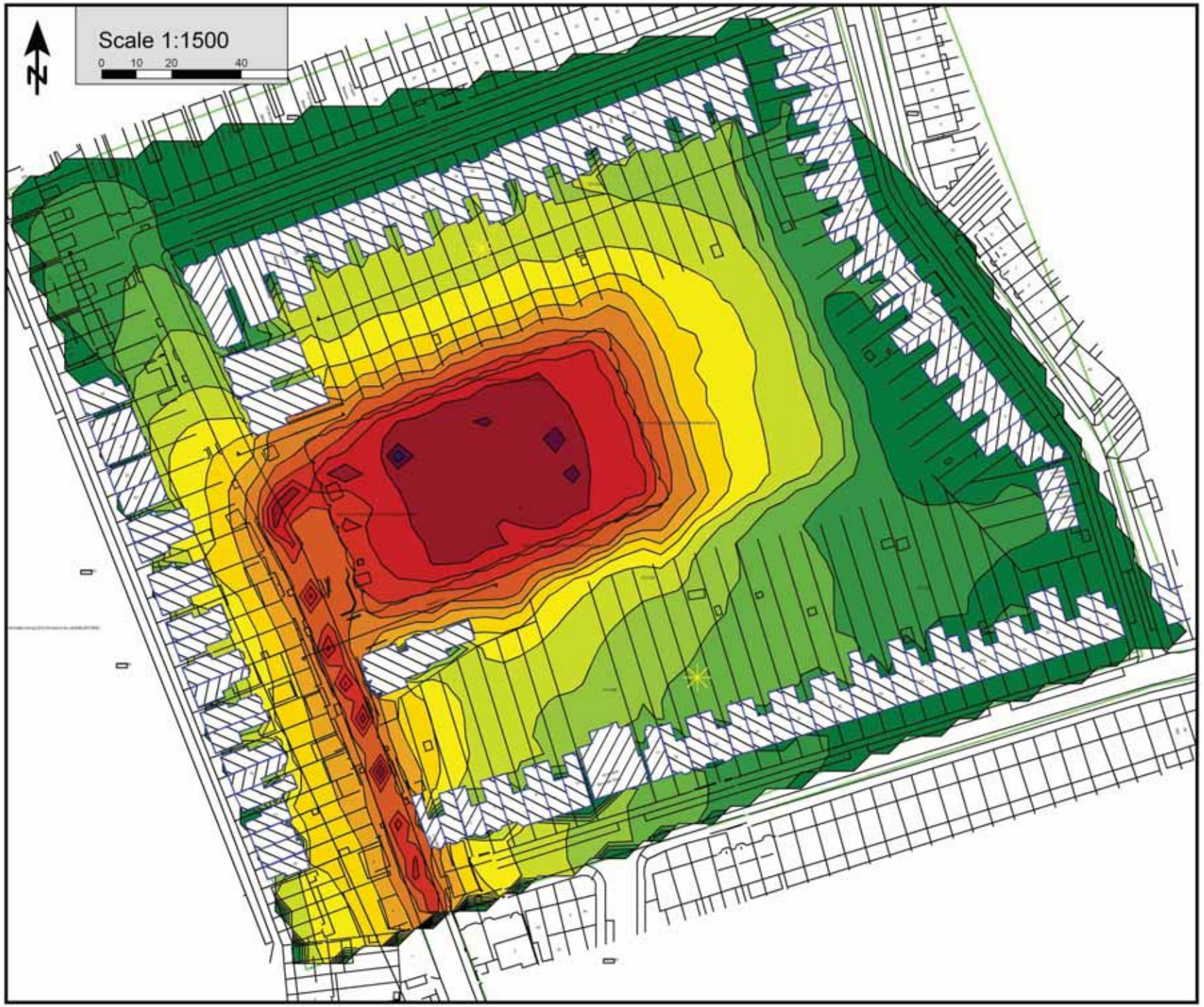
Main building

Gondar Gardens Development

Leq noise level site working day due to demolition and associated operations.

Noise level 1.5m above ground

Week 1
Puncture Stucture & Break



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

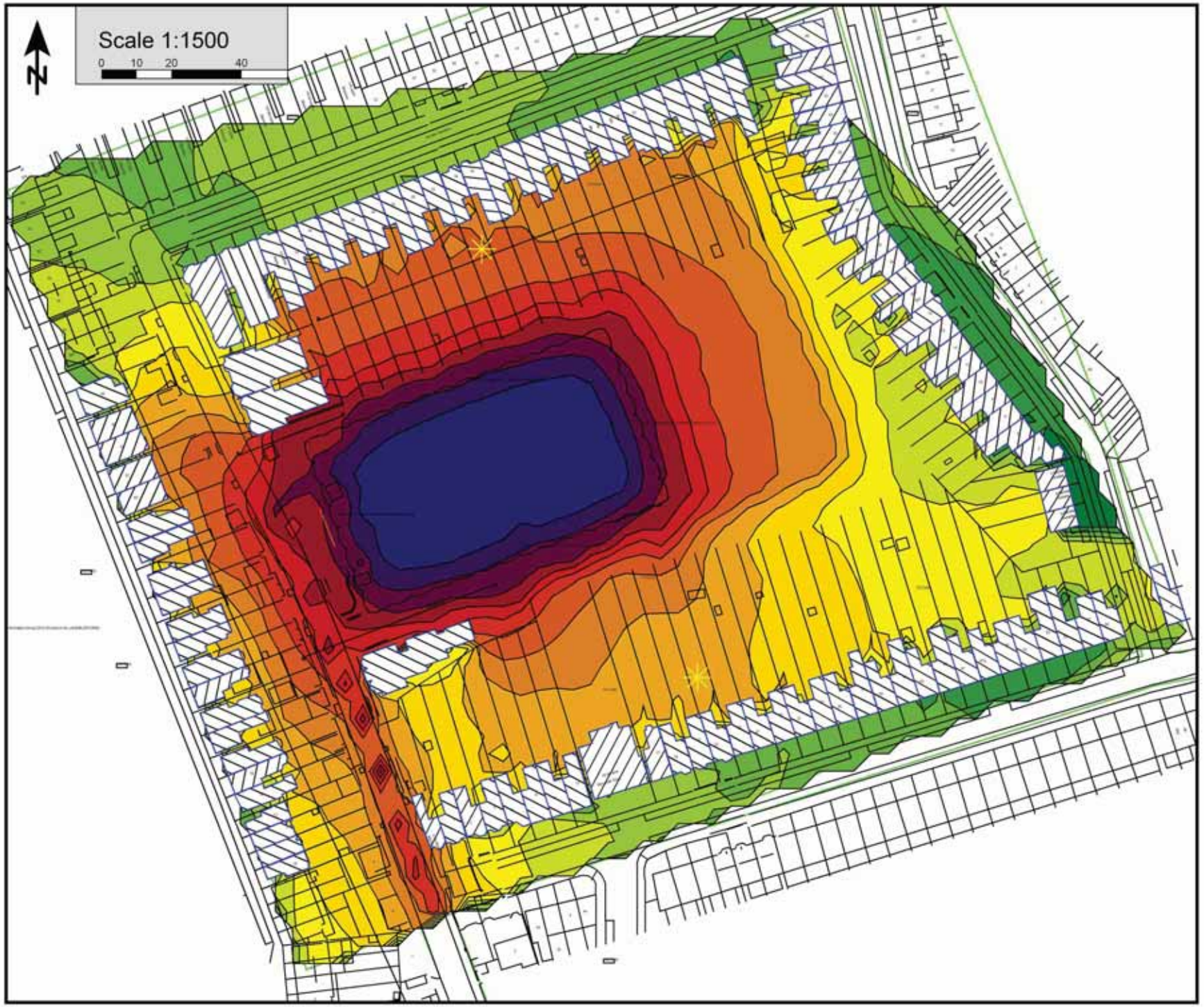
Main building

Gondar Gardens Development

Leq noise level site working day due to demolition and associated operations.

Noise level 1.5m above ground

Weeks 2 to 4
Demolition



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

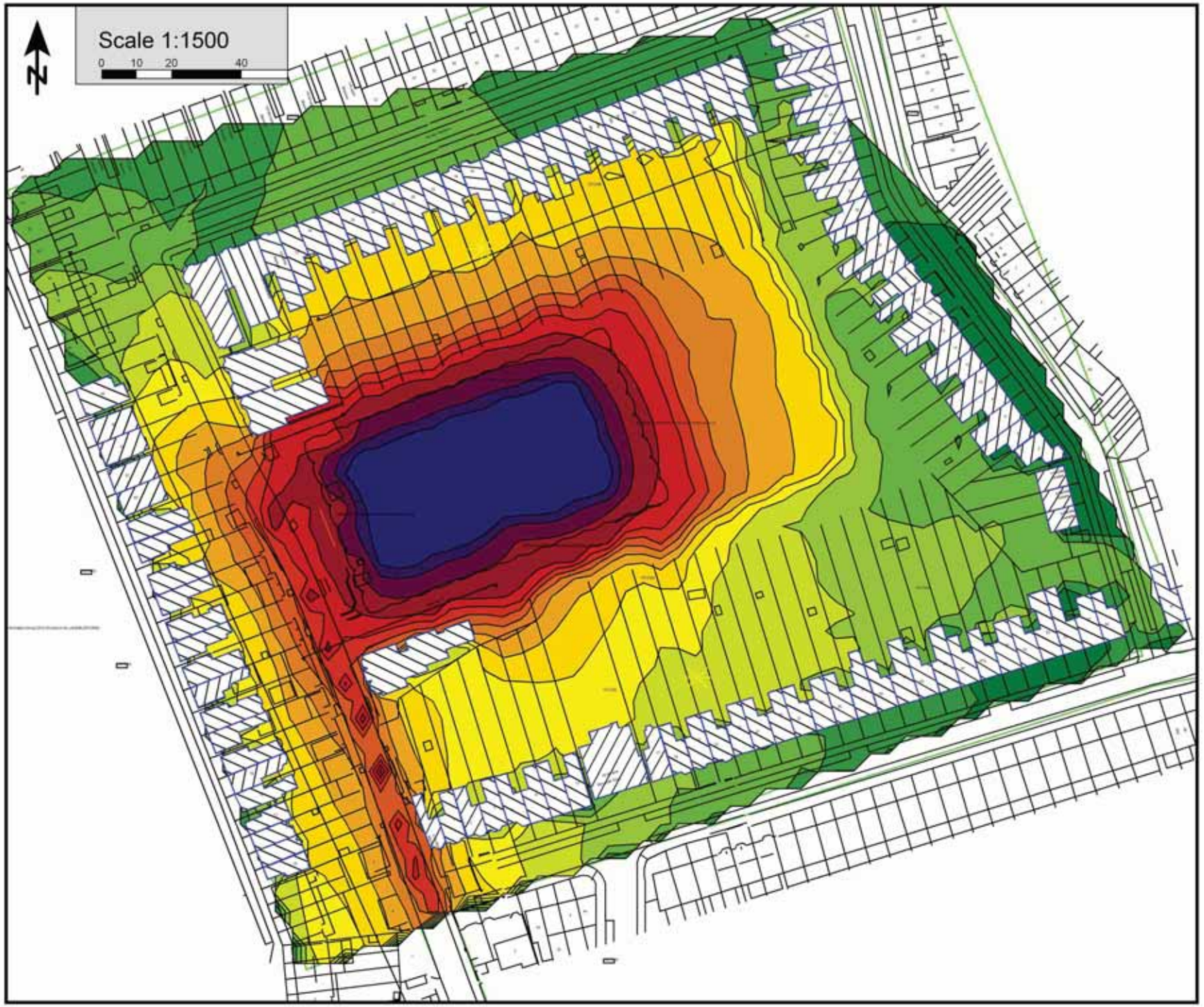
- Line
- Area source
- Main building

Gondar Gardens Development

Leq noise level site working day due to demolition and associated operations.

Noise level 1.5m above ground

Weeks 5 to 8
Demolition & Crush



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

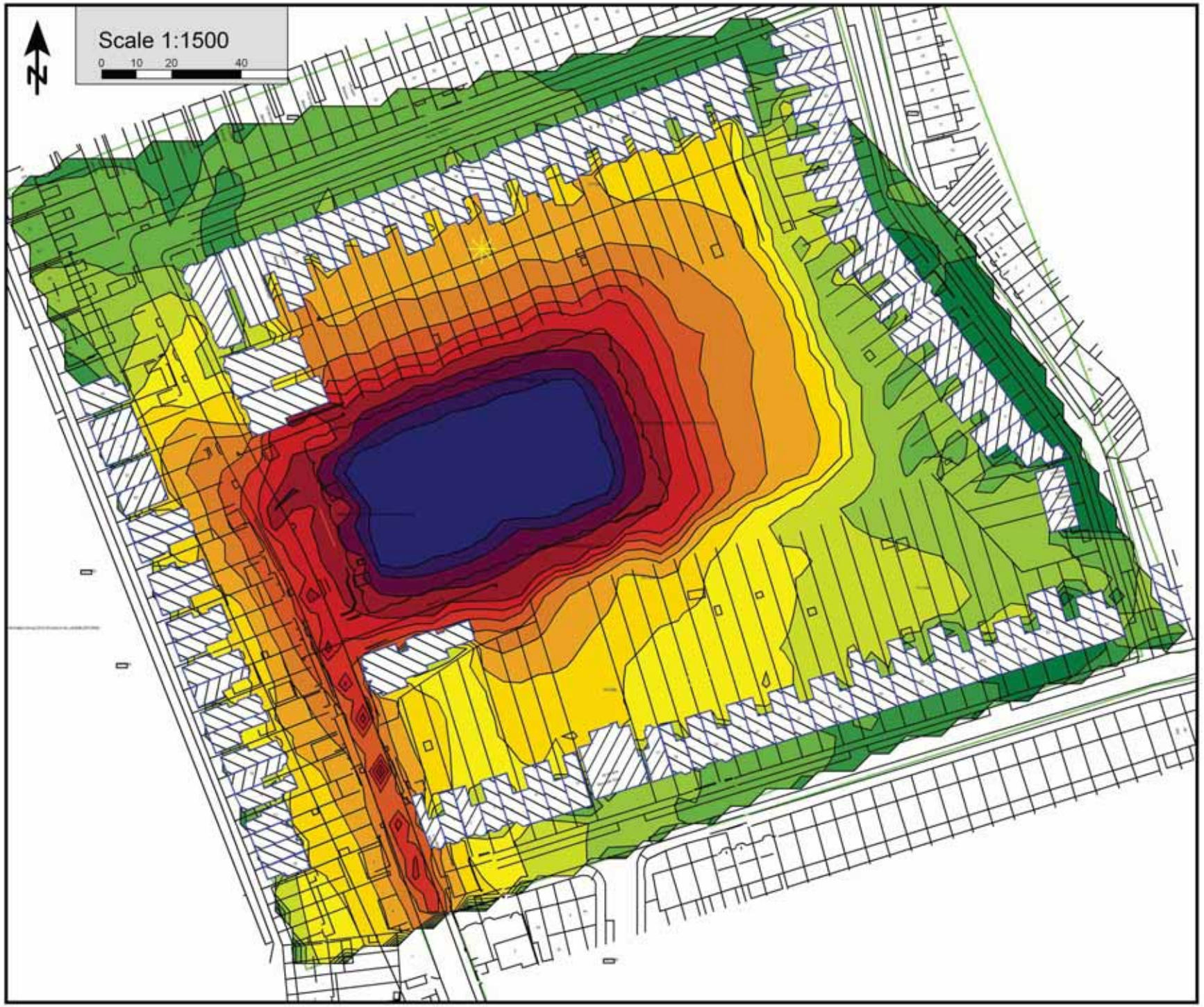
- Line
- Area source
- Main building

Gondar Gardens Development

Leq noise level site working day due to demolition and associated operations.

Noise level 1.5m above ground

Weeks 9 to 15
Ground Works



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

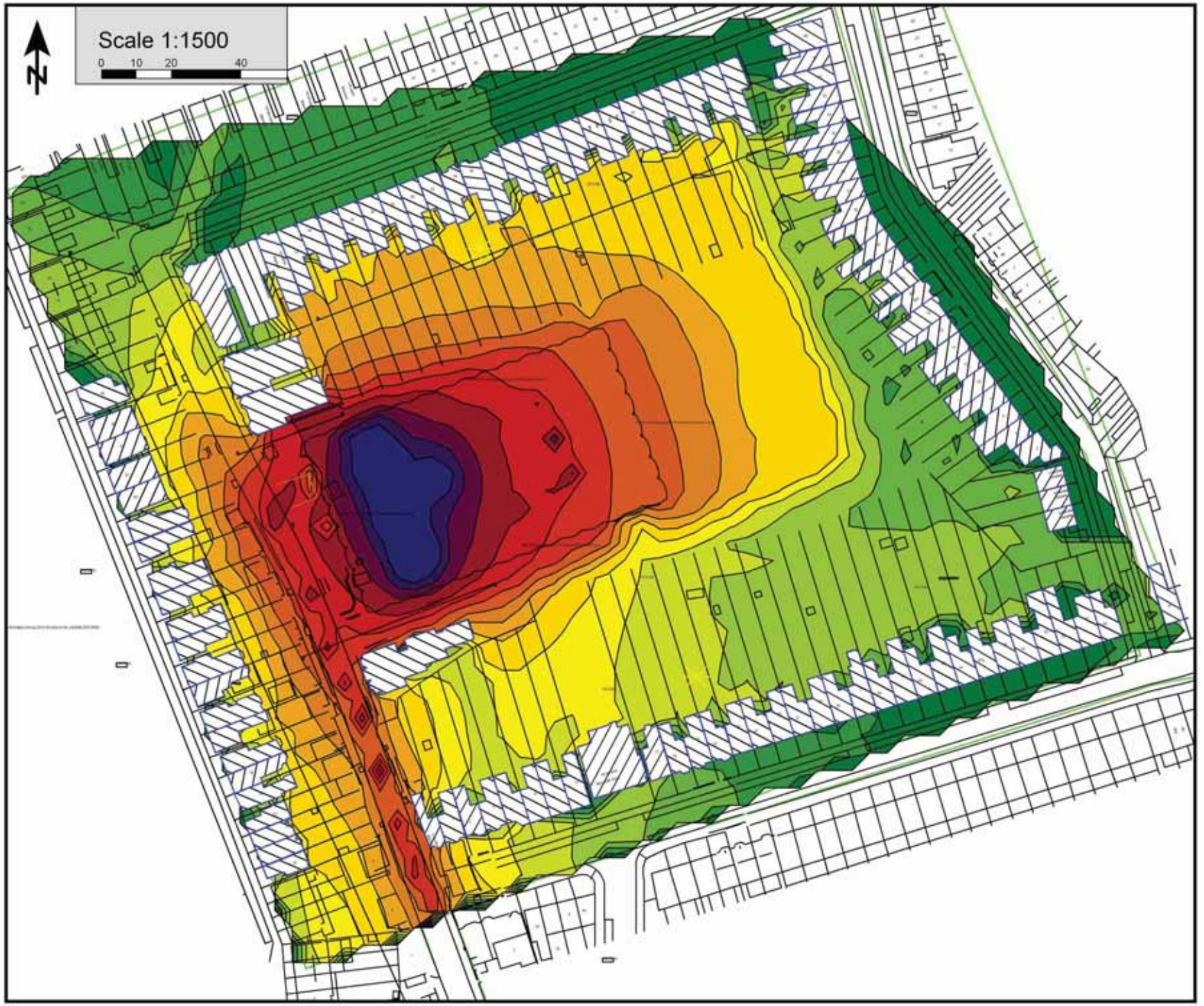
Main building

Gondar Gardens Development

Leq noise level site working day due to demolition and associated operations.

Noise level 1.5m above ground

Weeks 16 to 19
Ground Beams



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

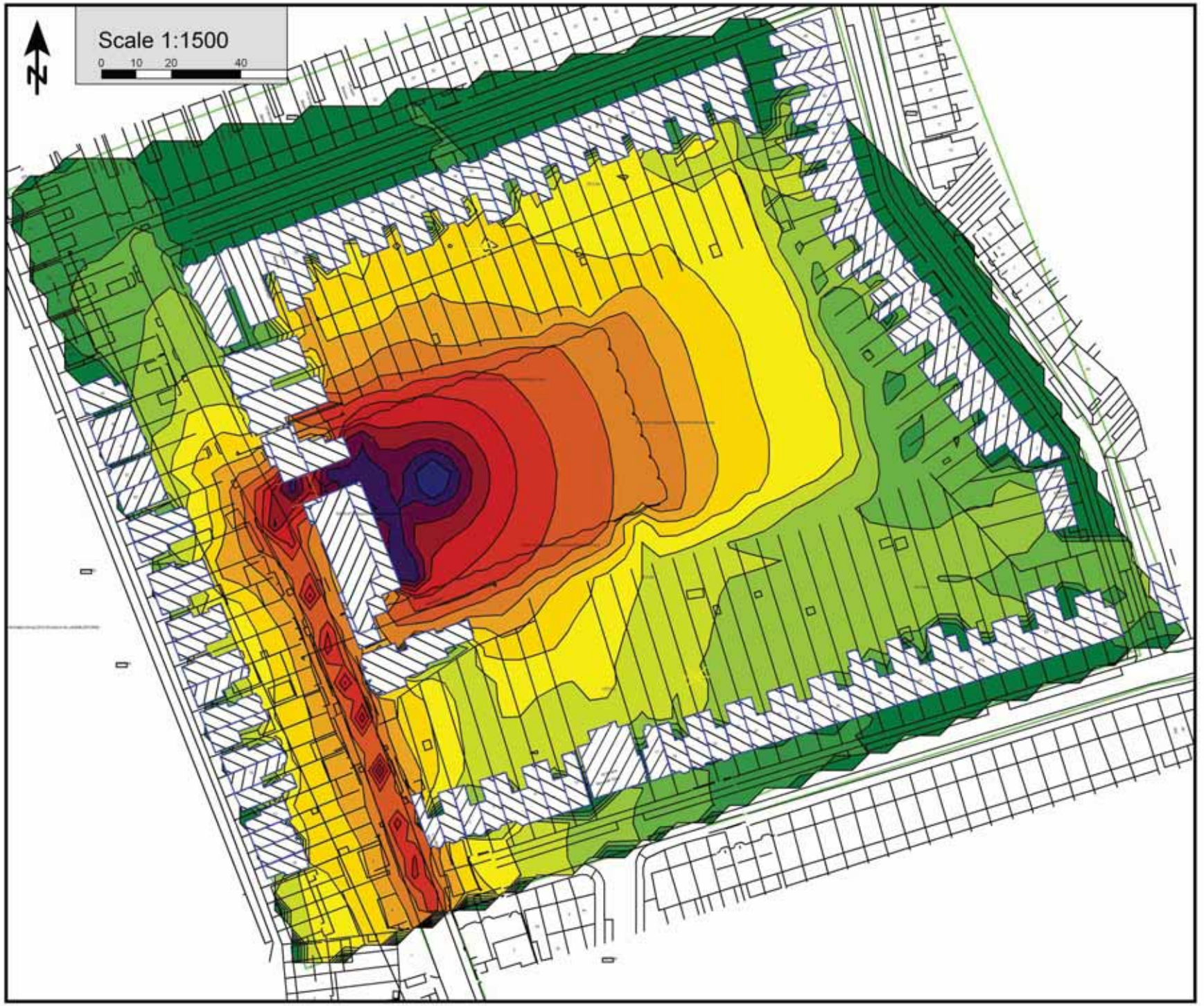
Main building

Gondar Gardens Development

Leq noise level site working day due to demolition and associated operations.

Noise level 1.5m above ground

Weeks 20 to 51
Superstructure with Concrete



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

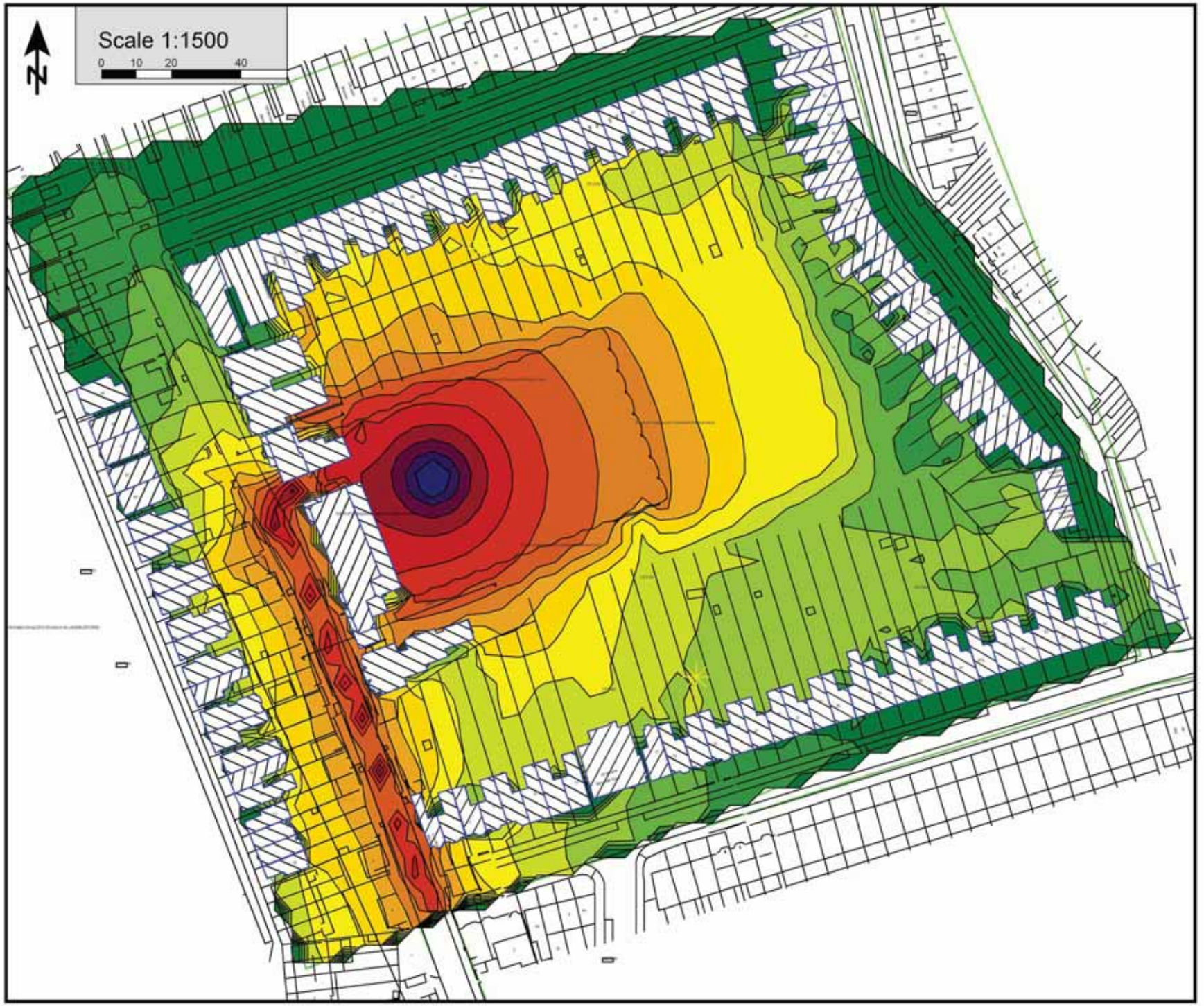
Main building

Gondar Gardens Development

Leq noise level site working day due to demolition and associated operations.

Noise level 1.5m above ground

Weeks 52 to 78
Superstructure with Forklift working.



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

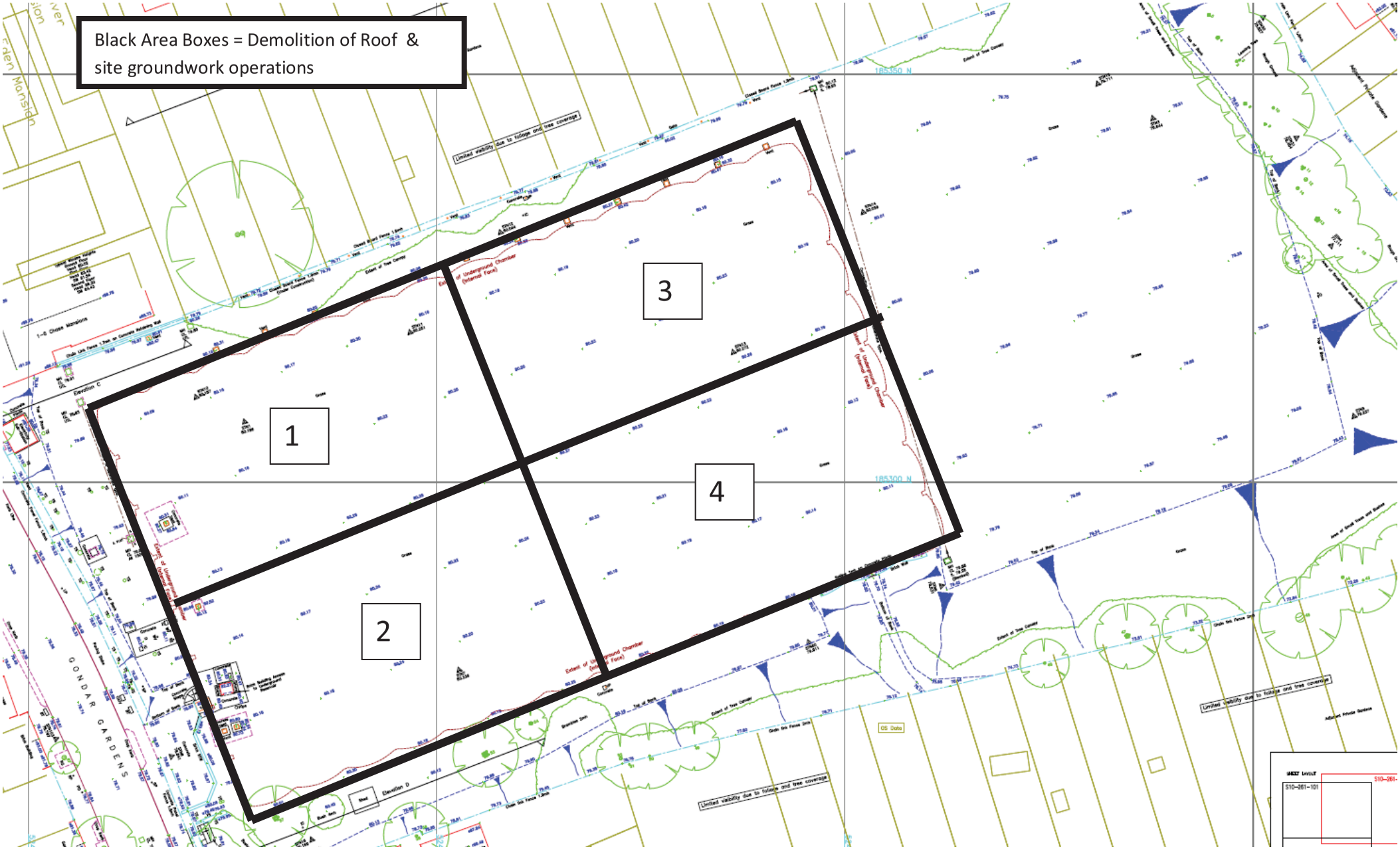
Gondar Gardens Development

Leq noise level site working day due to demolition and associated operations.

Noise level 1.5m above ground

Weeks 79 to 99
Superstructure with Tower Crane only.

8.2. Appendix 3: Site Layout Prediction Areas



Site Region Split- BS5228 Acoustic Model

8.3. Appendix 4: Drawings

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

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www.rolfe-judd.co.uk

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)

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

Rolfe Judd
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Old Church Court, Claylands Road, The Oval, London SW8 1NZ
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www.rolfe-judd.co.uk

Client
LINDEN WATES (WEST HAMPSTEAD) LTD.

Project
GONDAR GARDENS

Drawing
PLAN
FIRST FLOOR LEVEL

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

Drawing No
4870 / T(20) P01

Revision
–

CAD Ref No
C:\4870\T_Series\T20\2nd Application\T20P01

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

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

NOTES

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Client
LINDEN WATES (WEST HAMPSTEAD) LTD.

Project
GONDAR GARDENS

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

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

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

NOTES

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PRELIMINARY

Rev | | Date

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Project
GONDAR GARDENS

Drawing
PLAN
THIRD FLOOR LEVEL

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

Drawing No
4870 / T(20) P03

Revision
–

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

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

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

NOTES

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PRELIMINARY

Rev	Date
A Drawings developed	14/12/11

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Client
LINDEN WATES (WEST HAMPSTEAD) LTD.

Project
GONDAR GARDENS

Drawing
PLAN
LOWER GROUND LEVEL

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

Drawing No
4870 / T(20) P-1

Revision
A

CAD Ref No
C:\4870\T_Series\T20\2nd Application\T20P-1

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

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

NOTES

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PRELIMINARY

Rev	Date
A Drawings developed	14/12/11

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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

CAD Ref No
C:\4870\T_Series\T20\2nd Application\T20P-2

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

NOTES

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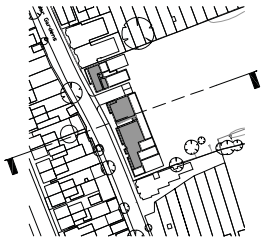
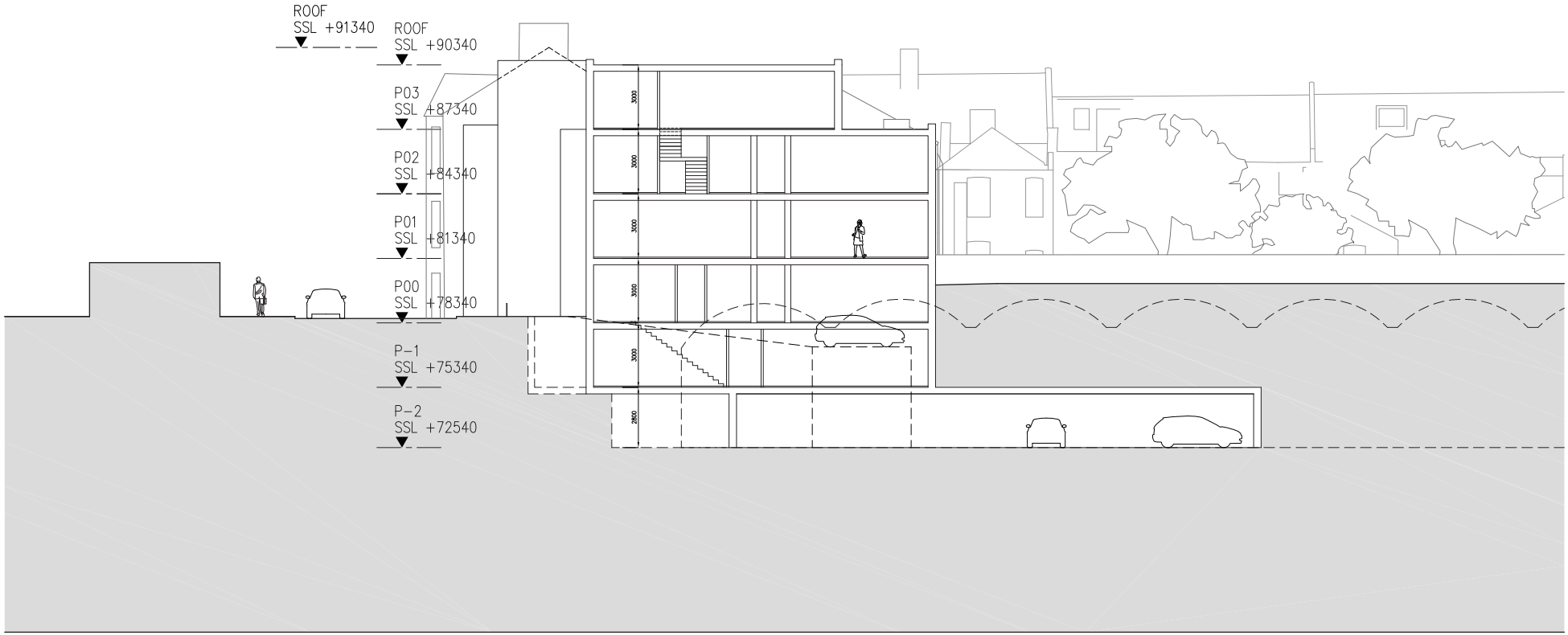


SECTION LOCATION PLAN
Scale: 1:1500 (A1)



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

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

PRELIMINARY

Rev | | Date

Rolfe Judd
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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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Rev	Date

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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
–

CAD Ref No
C:\4870\T_Series\T20\2nd Application\T27P04

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