richardjackson

REPORT

Garden House, Vale of Health, Hampstead

Client: Mr A Vlachos

January 2013

Job no: 34891

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REPORT

Garden House, Vale of Heath, Hampstead

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Date:- 30/1/2013

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Signature:-

Date:- 30/1/2013

Revision Status

Issue	Date	Description	Author	Approved

CONTENTS:-

APPENDICES

1. INTRODUCTION

1.1. Richard Jackson Ltd received instruction from Mr Alex Vlachos to prepare a report in support of a Planning Application to be made to the London Borough of Camden for works carried out in connection with the Garden House, Vale of Health.

1.2. The report is to assess the Engineering implications of the proposals, and in particular give consideration to the potential impact to the neighbouring properties and how the works may be implemented without any adverse effects on the properties and boundary features.

1.3. The works being carried out are those as shown on the drawings prepared by James Gorst Architects Limited and essentially consist of the remodelling of the internal areas to the property, installation of a light well within the existing raised terrace on the eastern side to provide natural light to the room below, along with the installation of a further light well, also on the eastern elevation, towards its southern end to provide natural light to the basement.

1.4. As noted above the light wells are for the purposes of allowing natural light to enter a room at ground floor level and the basement, the basement having been previously consented under permitted development rights, as have other works to the western elevation.

1.5. A copy of drawings prepared by James Gorst Architects Limited referred to in the preparation of this report are enclosed within Appendix A to this report.

1.6. The lightwell serving the ground floor involves no construction / building works to be undertaken below ground level, all the works are to be carried out within the depth of the existing terrace construction. Therefore this lightwell has no potential to, and does not, impact on the neighbouring properties or the nearby Hampstead pond. Its construction is considered in this report for completeness but it is not assessed in the same detail as for the lightwell to the basement, which is in effect a below ground structure.

2. ADDITIONAL INFORMATION

2.1. In support of previous Planning Applications a ground investigation has been carried out and a comprehensive report subsequently provided. The prevailing geotechnical conditions have not changed and the findings of that investigation are therefore used in the preparation of this report, and a copy of the Ground Investigation Report prepared by Listers Geotechnical Consultants is contained within Appendix D.

2.2. Also in support of previous Planning Applications reports have been prepared by INGealtoir supported by RPS Design considering the engineering aspects of the previous planning proposals along with the hydrology, again copies of the reports are included within the Appendices, in Appendix D. The general information / discussion within that report remains relevant to the current proposals as it considers conditions which have not changed since its preparation (the geology remains as before as does the ground water regime and the presence of the adjacent properties along with their relationship to the Garden House), and is therefore not repeated. However, the depth of basement referred to in that report is approximately 6m and its layout differs. The proposed basement light well, the subject of this report, being approximately 4m depth.

2.3. Historical maps have been obtained for the Vale of Health and the information provided by those maps has been used in assessing the presence of any features and any impact they may consequently have on the proposals. A copy of the historical maps which have been obtained from the Landmark Information Group are included in Appendix B to this report.

2.4. Reference has also been made to the London Borough of Camden Planning Guidance document 'CPG4' and the London Borough of Camden Document 'Camden Geotechnical, hydrogeological and hydrological study; Guidance for subterranean development', along with information provided by the British Geological Survey and Environment Agency.

2.5. As part of this report specific reference is made to the screening flow charts as presented as figures 1, 2 and 3 on pages 17, 19 and 21 of 'CPG4'. This information being contained in Part 2, Part 1 being the detailed assessment.

3. PART 1 - ASSESSMENT

3.1 INVESTIGATION

3.1.2 Additional investigation has been undertaken to supplement the previous geotechnical investigation by means of trial holes. Their purpose being to expose the foundations, both of the Garden House and to the boundary walls, to obtain information for use in the assessment of the impact of the proposals on the boundary conditions and the engineering aspects of the works being undertaken.

3.1.3 A copy of the findings of the trial hole investigations are again included within the Appendix E to this report, as is the findings of a site walkover and photographs taken.

3.2 DISCUSSION

Historical Maps

3.2.1 Available historical maps have been reviewed for the area of the Vale of Health dating back to the 1850 Historical Town Plan. The 1850 map does not show any development in the vicinity of the Garden House and also does not show the pond that currently exists to the southeast of the property, although other historical data (British History on Line) suggests the Hampstead Ponds in general exist at this time.

3.2.2 By 1871 the pond is shown along with limited development in the Vale of Health itself. The properties referred to as Health Villas have been constructed and extend as far to the east as where the current point of access exists off Vale of Health to the Garden House. The area currently occupied by the Garden House is shown to consist of grottoes. Grottoes are small timber buildings understood to have been used for recreational purposes.

3.2.3 By 1896 the Historical Town plan shows further development to the east having taken place with the properties to the east of the access being constructed, and the outhouse which currently exists within the curtiledge of the Garden House is shown. The site of the Garden House, other than the outhouse, is unoccupied with the grottoes no longer being indicated.

3.2.4 The 1896 1:2500 Ordnance Survey map shows a single stream existing on the south western boundary of the plot of land currently occupied by the Garden House, and a similar stream running along part of the north western boundary, with its source being shown as further to the northwest.

3.2.5 An aerial photograph taken some time between 1946/1949 shows the site of the Garden House to be generally tree covered. The photograph also shows Athenaeum Hall which is also shown on maps dating back to 1871, and although the name remains the original historic structure has been replaced by a modern block of flats. Athenaeum Hall being located immediately adjacent to the northeast corner of the Garden House.

3.2.6 The Garden House is first shown on the 1954 Ordnance Survey maps, at which time Athenaeum Hall continues to exist in its original form. The remaining area of the Vale of Health is not dissimilar to that which currently exists. The 1:2500 scale map (scale believed to be in error) shows the single stream to the northeast following the north eastern boundary of the Garden House, and with a further single stream to the northeast. The latter appears to connect to the source of the single stream shown on the 1896 map.

3.2.7 There is no significant change between 1954 and the present day with the exception that the maps after 1954 no longer identify the streams on either boundary, or elsewhere.

3.2.8 Throughout the series of maps viewed the Vale of Health is shown as being located within Healthland and other than the 1880 map the pond to the southeast of the Garden House is shown and appears to remain generally unaltered.

Geology, Hydrogeology and Hydrology

3.2.9 Information provided by the British Geological Survey show the site to be underlain by Claygate member beds. These beds are made up of clay, silt and sand, greater detail is provided within the Lister Geotechnical report. The same anticipated geology is identified in London Borough of Camden Publications.

3.2.10 The hydrogeological conditions are again referred to in the Lister Geotechnical report. Information also obtained from the Environment Agency identify the Claygate members as now being classified as a Secondary A Aquifer, this being equivalent to the former Minor Aquifer. This is also identified in the London Borough of Camden information. The site remains outside of any groundwater source protection zone. A Secondary A Aquifer is defined as being permeable layers capable of supporting water supplies at local rather than strategic scale, and in some cases forming an important source of base flows to rivers.

3.2.11 Throughout the period of historical maps viewed there are no watercourses passing through the site, the nearest being those shown to have previously existed on the site boundary, again this is supported by the information contained within the London Borough of Camden publications.

3.2.12 The British Geological Survey records also confirm that no wells were / are present in the locality and there are no springs shown on the information examined from all sources. The site inspection did, however record 'issues' within the curtiledge of the Garden House, and these are considered to represent the high ground water table in the vicinity (see below).

3.2.13 Within the Ground Investigation Report prepared by Lister Geotechnical the groundwater is recorded to be between 0.38m and 0.83m below ground level. This was confirmed to remain the current condition by the further investigation carried out for the purposes of this report, both in the trial holes excavated and by dipping of one of the boreholes installed by Lister Geotechnical, BH1, in which water was recorded at 0.6m below ground level.

3.2.14 Again as is stated in the Lister Geotechnical report the groundwater is considered to flow generally in an easterly direction towards the pond and is also considered very likely to be in hydraulic continuity with the water level within the pond itself. The Garden House is also shown as being in the Hampstead Heath Extension Chain Catchment Zone.

3.2.15 The trial holes excavated identified the foundations to the property forming the Garden House to be conventional concrete strip footings founded at various levels on the naturally occurring soils. The soils being constituents of the Claygate beds. Where levels have been raised, such as the existing terrace to the east of the property, the pond side, Made Ground was recorded above the natural soils as would be expected.

3.2.16 The foundations to the boundary walls were found to vary from concrete strip footings to the buttresses to the retaining walls to the rear of Heath Villas and to the northern boundary wall, with the retaining wall to Heath Villas itself being founded on compacted hardcore (crushed brick).

3.2.17 The slope of the ground surface is generally in a west to east direction, and other than where ground levels have been raised, possibly with the exception of the area adjacent to the eastern boundary where the mature trees exist, and localised areas around the property itself which have been terraced, the slope is less than 8° which is considered to be a stable slope for Claygate beds.

Proposals

3.2.18 As referred to above it is proposed to install a light well within the terrace to the eastern, pond side, the terrace consisting of fill above natural ground level retained by a brick retaining wall to the south and a terraced slope to the east.

3.2.19 It is also proposed to install a light well to the basement, the light well being located on the south eastern corner of the property, the pond (eastern) side. Previous proposals are understood to have included the light well to the southern side of the property, adjacent to the gable wall. This is no longer the case with the light well now being proposed to be located as noted above, to the south east corner, on the eastern side.

3.2.20 As part of the above there are also remodelling works being carried out to the internal configuration of the property.

3.2.21 With regard to the western area, between the property and the retaining wall to the rear of Heath Villas, the ground adjacent to the retaining wall is proposed to be lowered such that it is the same

across its full width i.e. at the level of the existing concrete path / strip as currently exists around the upper level of the property.

3.2.22 With regard to the light well to the basement, its depth reflects that of the consented basement, which is with the top of base slab approximately 4m below existing ground floor level. As previously identified this is some 2m, approximately, above the depth of basement in the INGealtoir report enclosed within the Appendix which refers to dimensions of a previous proposal, and which was deeper.

3.3 ASSESSMENT

Upper Terrace Area

3.3.1 The investigations carried out have identified that the underside of foundation level to the retaining wall to the rear of Heath Villas is at a level of approximately 49.03m. The proposed level for the terrace at this location is at a level of 50.00m. The ground level behind the retaining wall, on the Heath Villas side being some 4.7m (level of 49.63m) below top of wall, and below the level of the proposed terrace.

3.3.2 The retaining wall therefore currently acts to support pressures generated by the ground on the side of the Garden House. The ground level against the wall being between a level of approximately 51.2m and 52.0m. This will continue to be the case but with the retained height being considerably less. Thus the stability of that wall will be improved as the earth pressures are reduced.

3.3.3 With regard to the wall along the northern boundary, the underside of foundation was found to be 0.9m below existing ground level. Therefore in the vicinity of the northwest corner the foundation has the potential to be slightly above (0.1m) the proposed general terrace level. This is easily able to be accommodated by simply underpinning the existing foundation i.e. extending the wall downwards, or alternatively constructing a new retaining wall in front of the existing, on the Garden House side, either partial or full height, removing the need to undertake any works to the existing wall whatsoever. Both solutions will result in the proposed terrace having no effect on the boundary wall in terms of its stability, or appearance, to the neighbouring properties.

3.3.4 The top of existing foundations to the property, over the area of the proposed increase in ground floor, are above the internal level of that floor. This is, however, considered to be of no consequence. There will be the need to incorporate within the remodelled internal layout appropriate framing to support the external walls in the vicinity of the extended ground floor, as the external walls will be acting as

retaining walls. The framing easily being accommodated within the remodelled internal wall / floor configuration.

3.3.5 The foundations will also be reconstructed to take into account the construction of the light well to the basement, further comment is provided below. The consequence of these works to the existing property will be in effect to increase its robustness.

3.3.6 With regard to the lightwell that is proposed to serve the ground floor, the opening to the lightwell being at terrace level, as noted above its construction does not extend below that of the ground floor level and therefore has no consequence when considering the below ground conditions i.e. those which are associated with London Borough of Camdens Planning Guidance document CPG4.

3.3.7 The installation of the lightwell simply involves it being constructed within the footprint of the existing terrace by excavation down to 'ground level' and using conventional building construction processes.

Basement - Lightwell

3.3.8 The basement lightwell, as previously noted above, extends to some 4m below existing ground floor level. It is, to all intents and purposes an extension to permitted basement construction to the east.

3.3.9 The existing foundations to the property found at an approximate level of 45.29m, ground floor level being 47.50m approximately and proposed basement floor level 43.36m, therefore being 1.93m below foundation. The basement lightwell, and basement construction will, in effect, underpin the existing wall / foundations.

3.3.10 With regard to the construction of the basement lightwell, as for the basement this will need to incorporate a retaining wall utilising bored piles in the form of a secant wall, although the basement lightwell / basement proposals are different in terms of usage to that for which the INGealtoir and RPS Design Ltd reports were prepared, as previously noted the principles as identified in the reports remain the same and are not repeated here.

3.3.11 The geological sequence is described in the INGealtoir / RPS reports, with the superficial element being confirmed by the further investigation carried out. However, the ground water level has been determined to be at a higher level than referred to in these reports. Groundwater level exists at 0.6m below ground level. This may, and is suggested as likely to be, perched groundwater above the impermeable bands within the Claygate beds again as referred to in the previous reports.

3.3.12 Again as previously stated the principles of the construction remain the same, the use of a Cofferdam construction constructed by secant piling techniques (hard and soft piles alternating to form to all intents and purposes a water excluding structure) with the Cofferdam piling being designed such that water may easily be controlled within the excavation itself and removing the need for external dewatering which has the potential to introduce settlement where groundwater levels are reduced due to the nature of the prevailing ground conditions.

3.3.13 Besides the proposed construction techniques allowing the works to be carried out without external dewatering and the potential consequential effects on the adjacent properties being avoided, the design of the piles / Cofferdam structurally can be undertaken to ensure they are of sufficient stiffness to limit deflection and again prevent settlement to the perimeter of the works. Framing will need to be incorporated within the Cofferdam, and this can remain as part of the permanent works preventing any relaxation of the piles and further reducing the potential for deflection. The internal floors are considered likely and able to provide this framing. The piles forming the Cofferdam would also be incorporated into the permanent works as set out in the previous reports.

3.3.14 With regard to the location of the basement lightwell, this is on the eastern side of the property, with boundary walls etc being on the western side of the property. The distance to any piled wall from existing retaining walls / neighbouring properties therefore being maintained at the 7.2m shown on the James Gorst Architects drawings within Appendix A.

3.3.15 Given the 7.2m in distance, and depth of excavation to underside of slab being approximately 4.5m below existing ground level allowing for construction make up i.e. basement slab, this distance is beyond the limit required for the loads from the wall to contribute with any significance to the pressures required to be resisted by the basement structure, and for the basement structure to have any effect on the boundary wall. The underside of foundation to the wall has been established as being at a level of approximately 47.01m, which is approximately 0.5m below ground floor slab level which improves matters further. There is reference in the previous reports to possible settlement within 6m of the proposed excavation of 6m depth. As noted the basement is 7.2m away from the retaining wall and the properties front onto Heath Villas, and the excavation depth is less, approximately 4.5m to underside of construction. Therefore the concern expressed has been removed. Also the width of the basement has reduced, with where the basement lightwell exists it is of overall width of approximately 7.5mm maximum and generally of approximately 5m width.

3.3.16 Within their report RPS Design Ltd comment on the effects of the proposed completed construction on groundwater levels and groundwater flows. They concluded that groundwater flows will be unaffected, which is agreed with particularly in respect of quality and catchment contribution. If the basement / light well construction did cause a localised increase in groundwater level to the upstream side, and consequential localised reduction in groundwater level to the downstream side, this would have no consequences on the neighbouring properties as any effects would be limited to within close proximity to the structure and not within the zone of influence of adjoining properties, and in any event, the potential for reduction of groundwater levels is more critical. This and any settlement effects would occur downstream, again in close proximity to the property, and there are no properties / third parties in such an area. Given the likely continuity of groundwater within water levels in the pond, and the contribution to the pond from the surrounding area, it is considered that there will be no effect on the pond water levels or quality as noted above.

3.3.17 Considering the proposals overall, the surface water run-off generated is to all intents and purposes the same as currently exists, and there will be no increase in flood risk as a result. The area of development not currently being subject to flooding and third parties being unaffected.

4. PART 2 – SCREENING FLOW CHARTS

4.1. This section of the report has been prepared to give specific consideration to the screening flow charts as presented as figures 1, 2 and 3 on pages 17, 19 and 21 of the Camden Planning Guidance Documents 'Basements and Lightwells – CPG4'.

4.2. The lightwell that is referred to throughout this section is that associated with the basement and not that providing light to ground floor from the terrace. The latter not having any influence on the matters relating to CPG4.

4.3. Consideration of Screening Flow Charts.

4.3.1 SUBTERRANEAN (GROUNDWATER) FLOW – FIGURE 1 PAGE 17 CPG4

4.3.1.1 The questions that form the flow chart are set out below, along with the appropriate response, cross referenced to Part 1 of this report.

4.3.1.2 Question 1a: "Is the site located directly above an aquifer?"

4.3.1.3 The site is located above the Claygate member beds, reference paragraphs 3.2.9 and 3.2.10 of Part 1, the Claygate member beds

are classified as a secondary A aquifer, this being equivalent to the former minor aquifer. An aquifer of this nature is suggested as being capable of supporting water supplies at local rather than strategic level and in some cases provide base flows to rivers. The proposed works by their nature will have no impact on the aquifer and will not affect any of the criteria associated with such an aquifer in terms of flow and water quality.

4.3.1.4 Question 1b: "Will the proposed basement *(lightwell)* extend beneath the water table surface?

4.3.1.5 The proposed construction will extend below the water table, the water table being approximately 0.6m below the existing ground level, as identified in Part 1. (The existing constructions of the Garden House also currently extending below the water table). The fact that the works will not impact on the groundwater, its flow or the neighbouring properties as a consequence of being constructed below the water table is set out in paragraphs 3.4.1 to 3.4.9 of Part 1, and also the reports previously prepared by INGealtoir, and RPS, which are included within the Appendix.

4.3.1.6 Question 2: "Is the site within 100m of a watercourse, well (used/disused) or potential spring line"?.

4.3.1.7 The site is not within any of the features listed in Question 2 as identified in 3.2.12.

4.3.1.8 Question 3: "Is the site within the catchment of the pond chains on Hampstead Heath?"

4.3.1.9 The site is within the catchment of the pond located to the immediate south of the property and is also within the Hampstead Heath extension chain catchment zone. The proposed works will, however, have no effect on the catchments zones referred to above, as set out in paragraph 3.3.4. of Part 1 and the RPS report enclosed in the Appendix.

4.3.1.10 Question 4: "Will the proposed basement *(lightwell)* development result in a change in the proportion of hard surfaced paved areas?"

4.3.1.11 The proposed lightwell will very marginally increase the area of hard surfacing above that which currently exists, by the insignificant area of $4m^2$.

4.3.1.12 Question 5: "As part of the site drainage, will more surface water (e.g. rainfall and run off) than at present be discharged to the ground e.g. via soakaways and/or SUDS?"

4.3.1.13 The surface water drainage will remain unaltered as a result of the proposed works, and as noted above in the response to Question 4 the area of hard paving, and hence run off from the site, will not be changed by any significant amount.

4.3.1.14 Question 6: "Is the lowest point of the proposed excavation (allowing for any drainage and foundation space under the basement floor) close to, or lower than, the mean water level in any local pond (not just the pond chains on Hampstead Heath) or spring line?"

4.3.1.15 Yes. The proposed underside of the lightwell construction will be approximately 1m below the surface water level of the adjacent pond to the south of the property. The proposed works will, however, have no effect on the adjacent pond as set out in the response provided to the questions above, included in paragraph 3.4.9 of the Part 1 and the RPS report contained within the appendices.

4.3.2 SLOPE STABILITY – FIGURE 2 PAGE 19 OF CPG4

4.3.2.1 Questions 1: "Does the existing site include slope, natural or manmade greater than 7° (approximately 1 in 8)?"

4.3.2.2 No. The existing slope is approximately at 7° (1 in 8)

4.3.2.3 Question 2: "Will proposed re-profiling of landscaping at the site change slopes at the property value to more than 7° (approximately 1 in 8)?

4.3.2.4 There is no proposed re-profiling of landscaping at the site.

4.3.2.5 Question 3: "Does the development neighbour land, including railway cuttings and the like with a slope greater that 7° (approximately 1 in 8)?"

4.3.2.6 The site is not known to neighbour any such land.

4.3.2.7 Question 5: "Is the London Clay the shallow strata at the site?"

4.3.2.8 London Clay is not the shallow strata. The site is underlain by Alluvium/Claygate member beds with boreholes installed on the site penetrating to 12m below ground level and not encountering London clay. Refer to the report by Lister Geotechnical Consultants contained within the Appendices of the April 2012 report. The bedrock geology is also recorded by the British Geological Survey as being Claygate beds.

4.3.2.9 Question 6: "Will any trees be felled as part of the proposed development and/or are any works proposed within any tree protection zones where trees are to be retained?"

4.3.2.10 It is understood that no trees are proposed to be felled as part of the proposed works, or works carried out within tree protection zones.

4.3.2.11 Question 7: "Is there a history of shrinkage/swell subsidence in the local area and/or evidence of such effects on the site?"

4.3.2.12 There are no records of there being any such shrinkage / swelling subsidence associated with the property, or within the curtiledge of the property. Within the local area individual cases of shrinkage / swelling subsidence potentially associated with poor management of vegetation cannot be totally ruled out wherever clay soils exist, although there are no public records of such subsidence in the locality and given the presence of the high ground water levels and nature of the prevailing soils, i.e. not pure clays such as London Clay where shrinkage / swelling is common.

4.3.2.13 Question 8: "Is the site within 100m of watercourse or potential spring line?"

4.3.2.14 As referred to above the site does not lie within any of the features listed as identified in 3.2.12.

4.3.2.15 Question 9: "Is the site within an area of previously worked ground?"

4.3.2.16 Other than made ground associated with the construction of the existing property, which is minor in nature and directly associated with its construction make up, the site does not lie within such an area.

4.3.2.17 Question 10: "Is the site within an aquifer? If so, will the proposed basement extend beneath the water table such that dewatering may be required during construction."

4.3.2.18 The site does lie above an aquifer, see 4.3.1.3 above, and there will be no dewatering outside the proposed area of excavation, refer to paragraphs 3.4.1 to 3.4.8 of this report where full consideration is given to the construction process.

4.3.2.19 Question 11: "Is the site within 50m of the Hampstead Heath Ponds?"

4.3.2.20 The site is located within 50m of the pond to the south, the effects of the proposals on this pond are set out in the responses given above.

4.3.2.21 Question 12: "Is the site within 5m of a highway or pedestrian right of way?"

4.3.2.22 The site does not lie within 5m of any such feature.

4.3.2.23 Question 13: "Will the proposed basement significantly increase the differential depth of the foundation relative to neighbouring properties?"

4.3.2.24 There will be an increase in the differential depth of foundation, but given the proximity of the proposed works to the neighbouring properties i.e. the boundary walls, the increase is not considered significant and is reviewed within paragraphs 3.3.1 to 3.4.8 of Part 1 of this report and within those considerations it identified that the proposed works can be constructed such that they will have no detrimental effect on neighbouring properties.

4.3.2.25 Question 14: "Is the site over (or within the exclusion zone of) any tunnels e.g. railway lines?

4.3.2.26 The site is not located within any such exclusion zone.

4.3.3 SURFACE FLOW AND FLOODING – FIGURE 3 PAGE 21 CPG4

4.3.3.1 Question 1: "Is the site within the catchment of the pond chains on Hampstead Heath?"

4.3.3.2 The site is within the catchment of the pond located to the immediate south of the property and is also within the Hampstead Heath extension chain catchment zone. The proposed works will, however, have no effect on the catchments zones referred to above, as set out in paragraph 3.3.4. of Part 1 and the RPS report enclosed in the Appendix.

4.3.3.3 Question 2: "As part of the proposed site drainage, will surface water flows (e.g. volume of rainfall and peak run off) be materially changed from the existing route?"

4.3.3.4 There will be no material change to the surface water flows from the site both in terms of magnitude and route of discharge.

4.3.3.5 Question 3: "Will the proposed basement development result in a change in the proportion of hard surface/paved external areas?"

4.3.3.6 The proposed lightwell will very marginally increase the area of hard surfacing above that which currently exists, by the insignificant area of $4m^2$.

4.3.3.7 Question 4: "Will the proposed basement result in changes of the profile of inflows (instantaneous and long term) of surface water being received by adjacent properties or downstream watercourses?"

4.3.3.8 There will be no change to the surface water inflows, either instantaneous or long term or routes of disposal, etc. The existing conditions will remain unaltered.

4.3.3.9 Question 5: "Will the proposed basement result in changes to the quality of surface water being received by adjacent properties or downstream watercourses?"

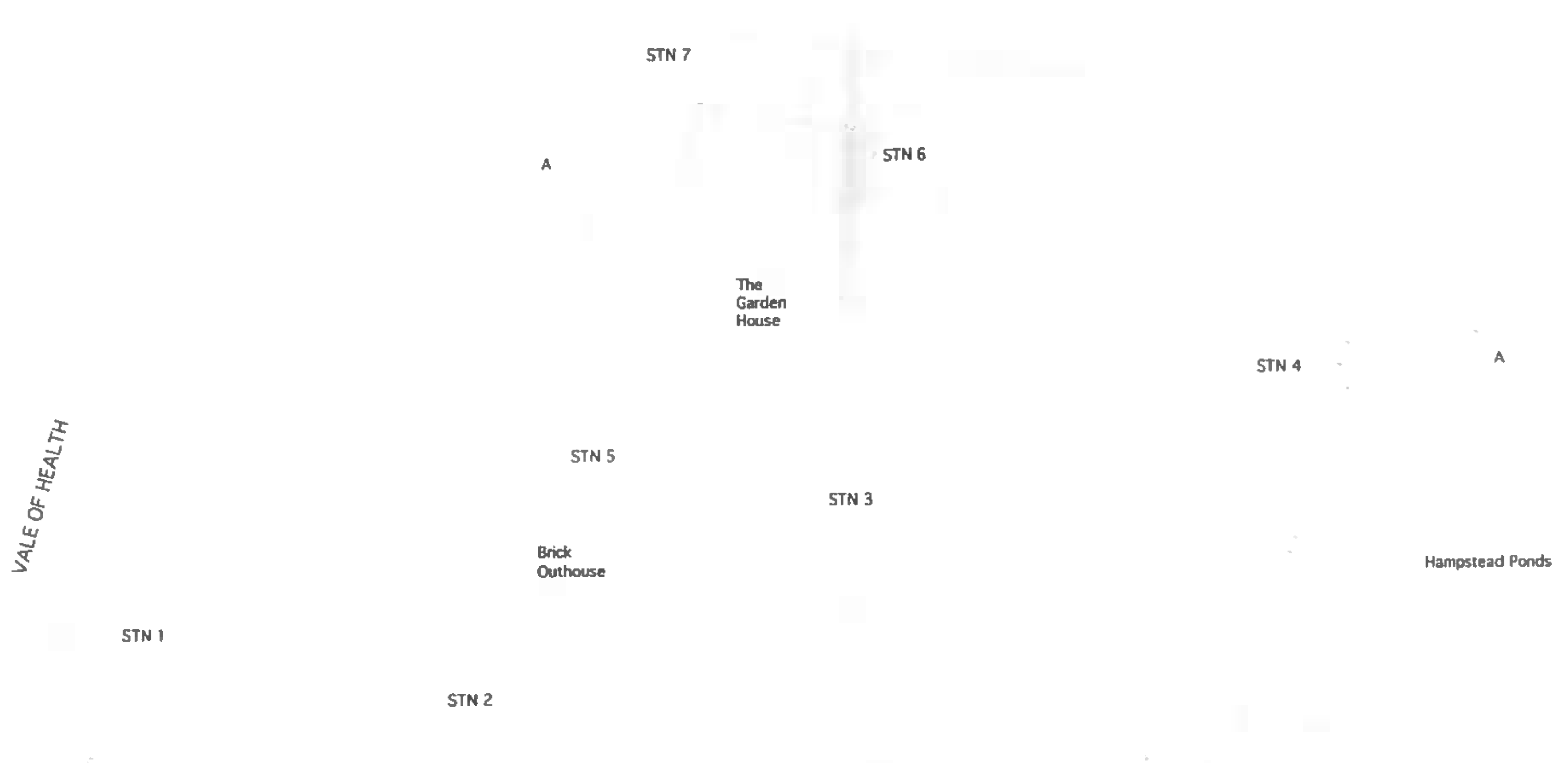
4.3.3.10 There will be no change in the existing conditions as a result of the proposed works.

4.3.3.11 Question 6: "Is the site an area known to be at risk from surface water flooding such as South Hampstead, West Hampstead, Gospel Oak and Kings Cross, or is at risk from flooding from for example because of a proposed basement below static water?"

4.3.3.12 The site is not at risk from surface water flooding. Within the Vale of Health, not the site itself, as a result of exceptional rainfall, flooding occurred in 1975. However following similar events in 2002 flooding did not occur (reference Camden Floods & Scrutiny Panel Report). The site is not identified as being at risk by the Environment Agency, nor is the Vale of Health included on Camden's schedule of Streets at Risk of Flooding, included in Camden Planning Guidance; Basements and Light Wells. The proposals at the Garden House will not increase the risk of flooding in any event to either the occupants of the Garden House or neighbouring properties.

APPENDIX A

James Gorst Architects Drawings



REVISIONS
29.11.11 Issued for Planning

HIGH LEVEL TERRACE

HOUSE AND OUTHOUSE

NOTES

PROJECT
THE GARDEN HOUSE

DRAWING TITLE
EXISTING SITE PLAN

STATUS
PLANNING

NOTE

JAMES GORST
ARCHITECTS Ltd

SCALE	DRAWING NUMBER	REVISION
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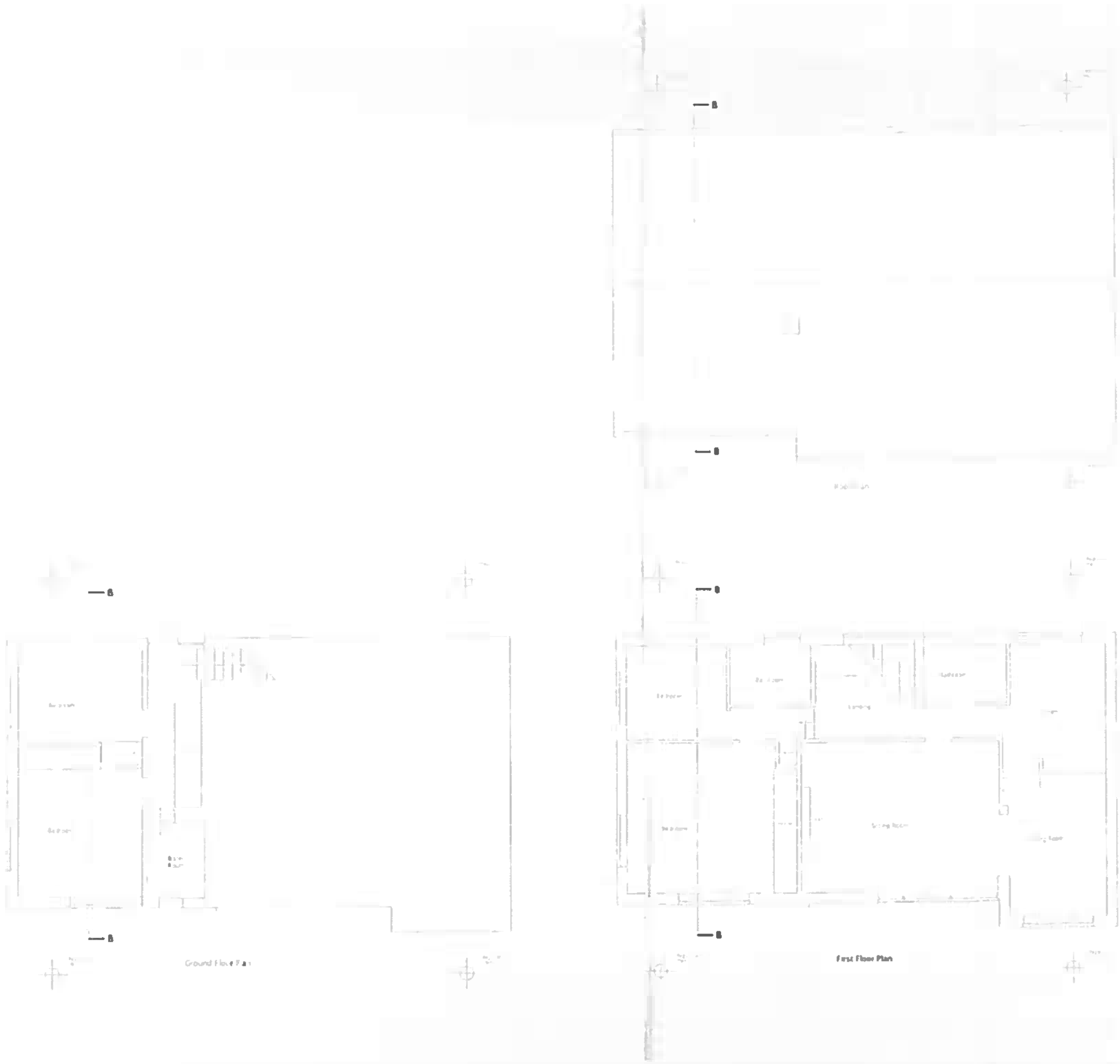


REVISIONS

- 29.11.11 Issued for Planning

A 15.12.11 Existing Roof Plan added

PROJECT
THE GARDEN HOUSE

DRAWING TITLE
EXISTING PLANS

STATUS
PLANNING

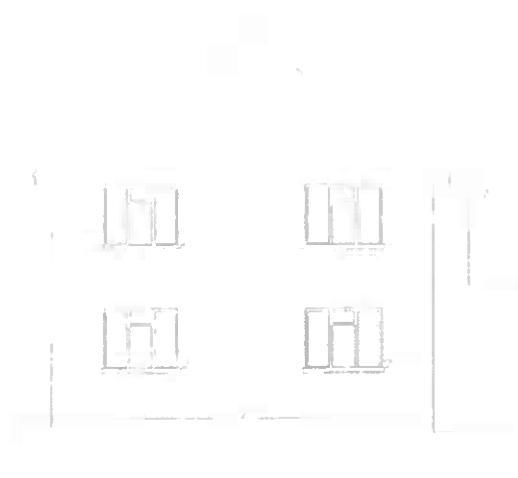
NOTE

JAMES GORST
ARCHITECTS Ltd

SCALE 1:100@A3
DRAWING NUMBER GH18 50
REVISION A

North East Elevation

North West Elevation



South West Elevation

South East Elevation

REVISIONS

29.11.11 Issued for Planning

NOTES

PROJECT
THE GARDEN HOUSE

DRAWING TITLE
EXISTING ELEVATIONS

STATUS
PLANNING

NOTE
[illegible]

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ARCHITECTS Ltd

[illegible]

SCALE	DRAWING NUMBER	REVISION
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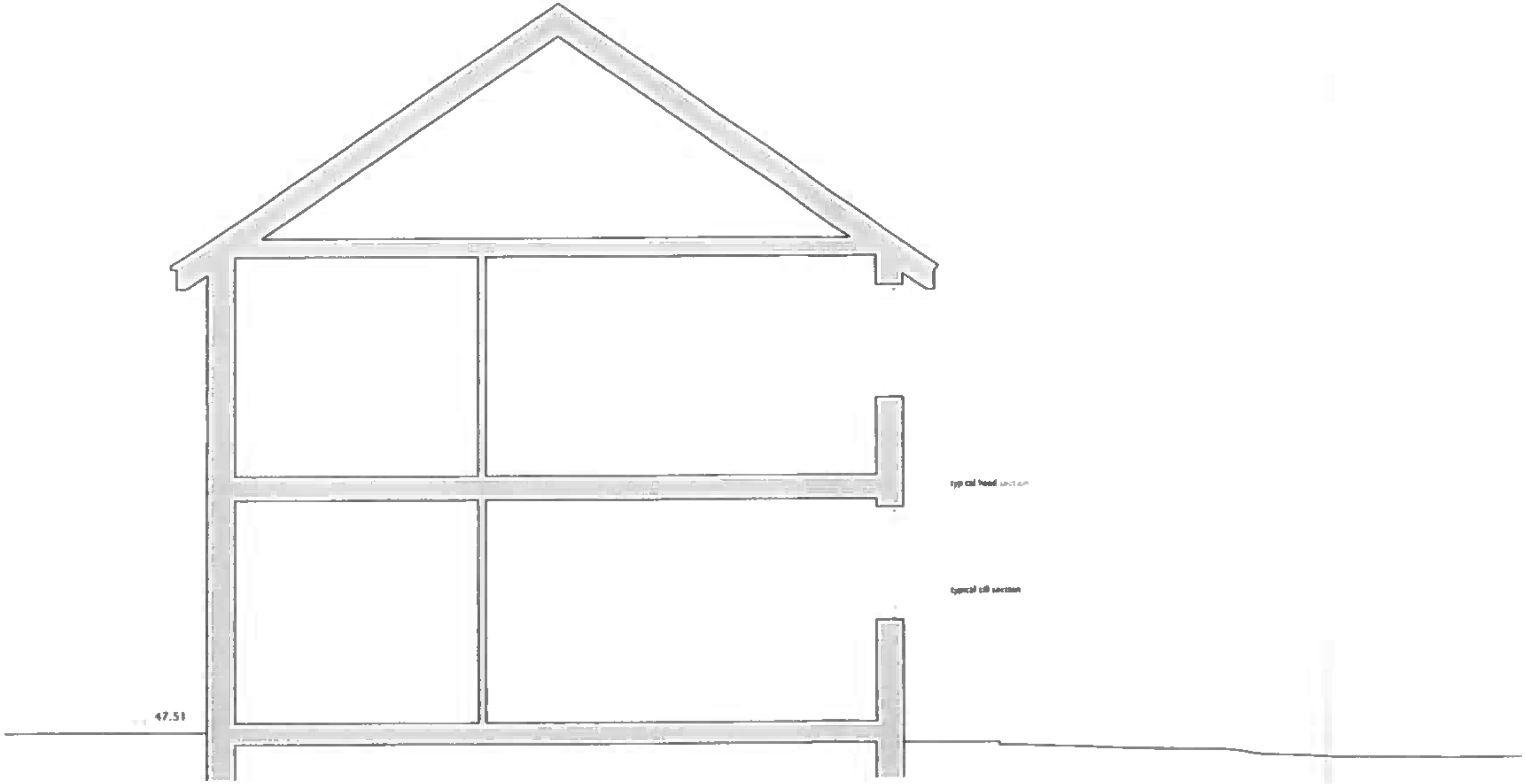
REVISIONS

- 15.12.11 Issued for Planning
A 06.04.12 Front retaining wall updated

not issued to planners



Existing Section B - B @ 1:50

PROJECT
THE GARDEN HOUSE

DRAWING TITLE
EXISTING SECTION B - B

STATUS
PLANNING

NOTE

JAMES GORST
ARCHITECTS Ltd

SCALE	DRAWING NUMBER	REVISION
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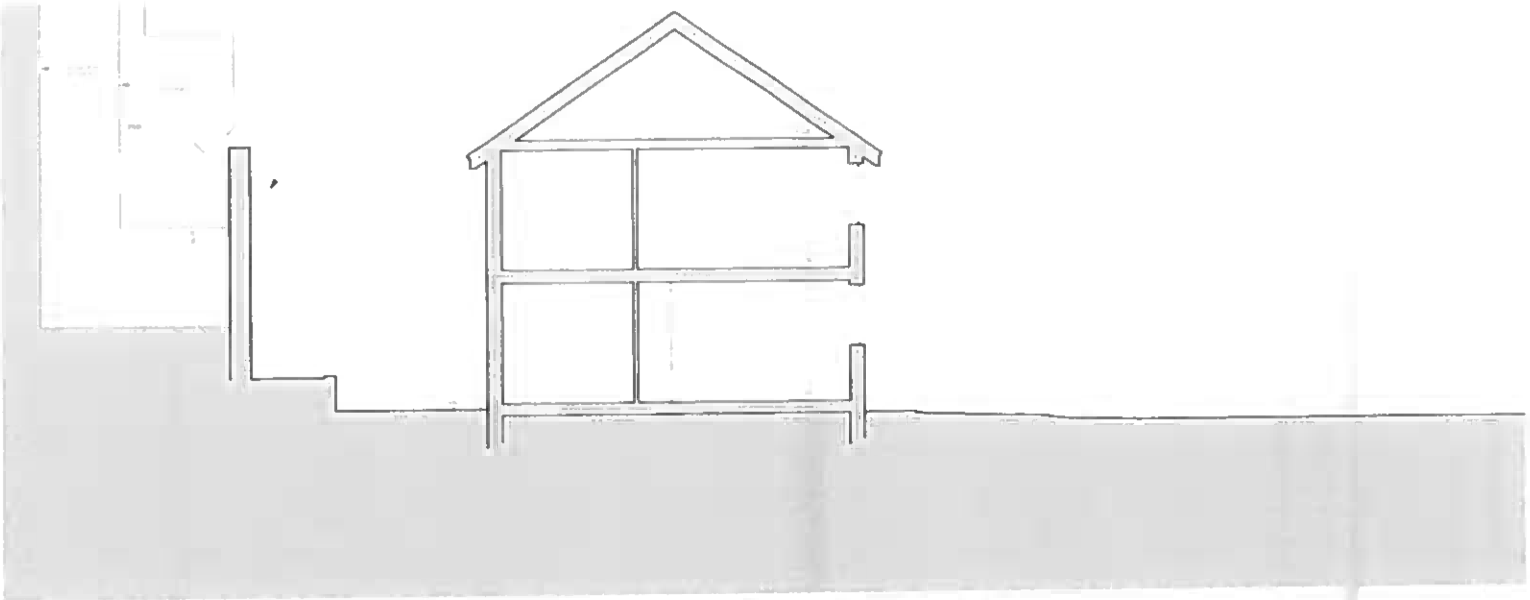

Existing Section B - B

REVISIONS
- 05 04 12 Issued for Planning

not issued to planners

PROJECT
THE GARDEN HOUSE

DRAWING TITLE
EXISTING SECTION B - B

STATUS
PLANNING

NOTES

JAMES GORST
ARCHITECTS Ltd

SCALE	DRAWING NUMBER	REVISION
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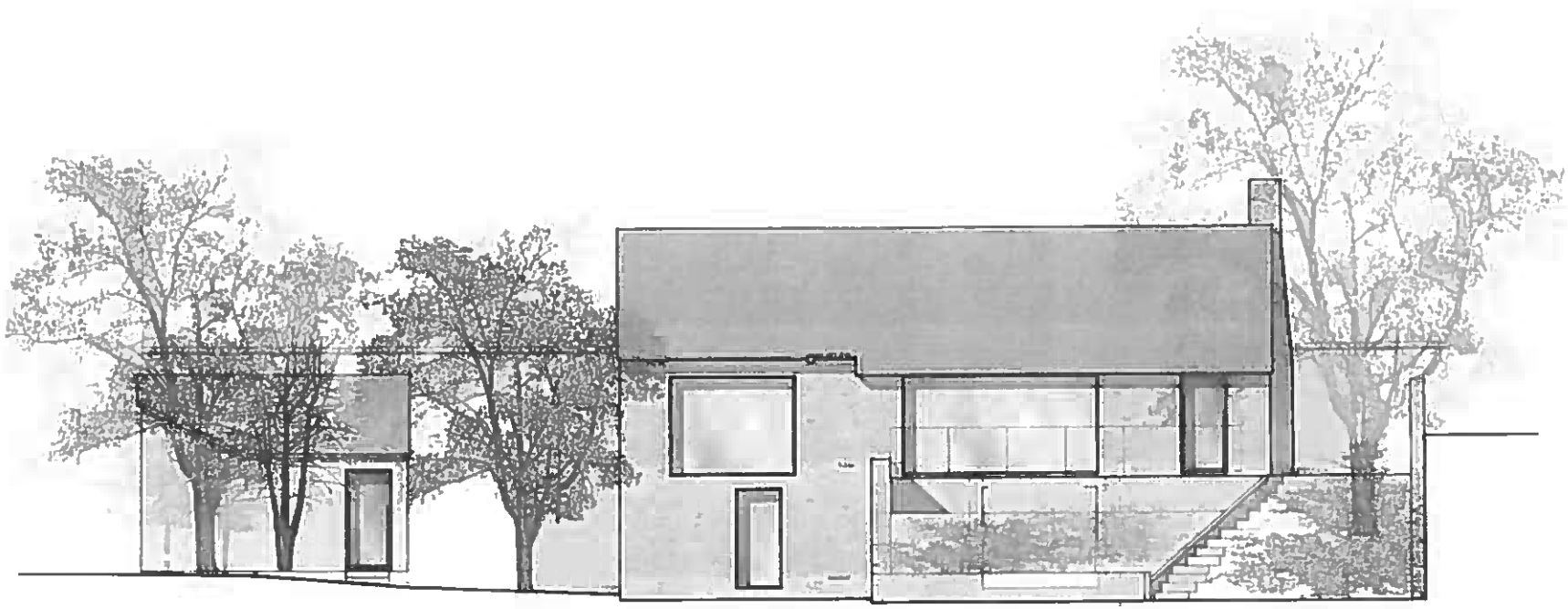

Proposed East Elevation

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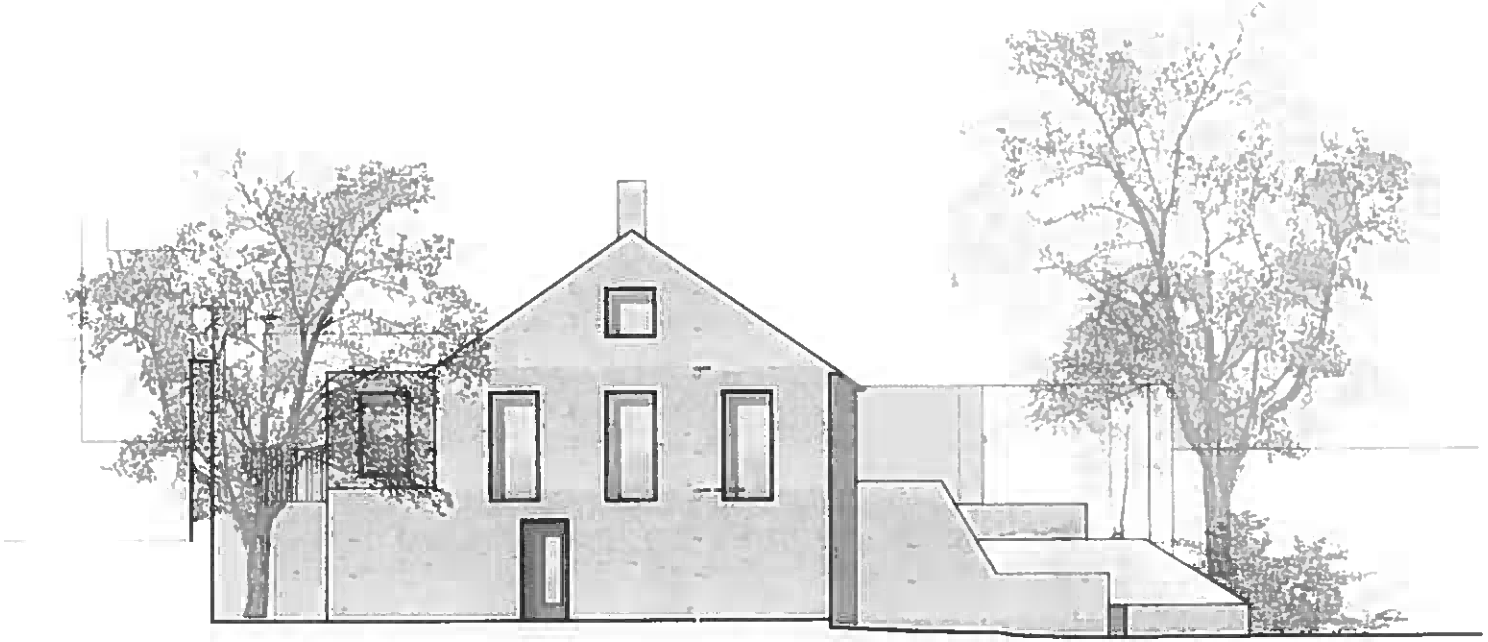
SCALE 1:100@A3 DRAWING NUMBER GH10/P130

REVISIONS
- 15.02.13 Issued for Planning



Proposed South Elevation

NOTES

PROPOSED MATERIALS

Walls:	Brick (house) Timber [illegible]
Roof:	Grey Slate, Lead
Windows:	[illegible]
Doors:	Painted timber

PROJECT
THE GARDEN HOUSE

DRAWING TITLE
PROPOSED SOUTH ELEVATION

STATUS
PLANNING

NOTE
[illegible]

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[illegible]

SCALE	DRAWING NUMBER	REVISION
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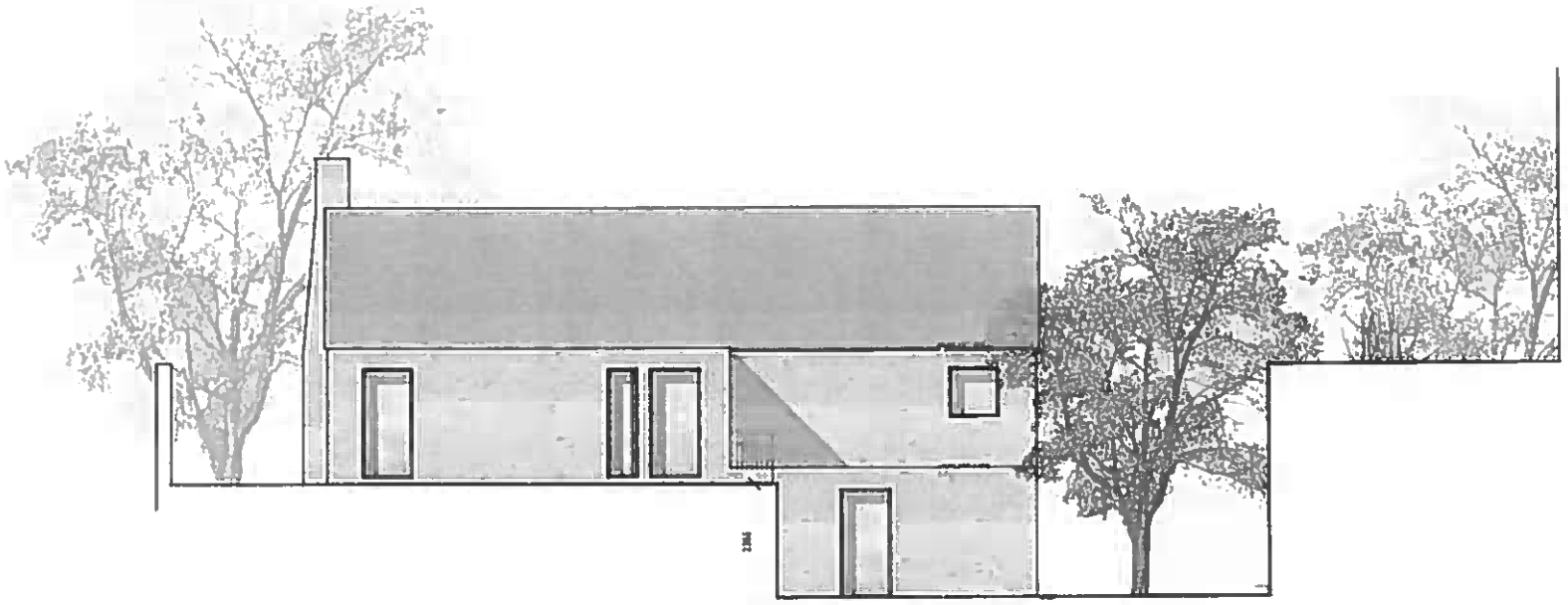
REVISIONS

- 15.02.13 Issued for Planning



NOTES

PROPOSED MATERIALS

Walls:	Brick (lower) Timber (upstairs)
Roof:	Grey Slate, Lead
Windows:	Anodised aluminium
Doors:	Painted timber

Proposed West Elevation

PROJECT
THE GARDEN HOUSE

DRAWING TITLE
PROPOSED WEST ELEVATION

STATUS
PLANNING

NOTE
Do not scale from this drawing. Any discrepancies to be reported to the architect.
All dimensions will be taken on site prior to ordering and construction.
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JAMES GORST
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0 2 4 6 8 10 M

SCALE	DRAWING NUMBER	REVISION
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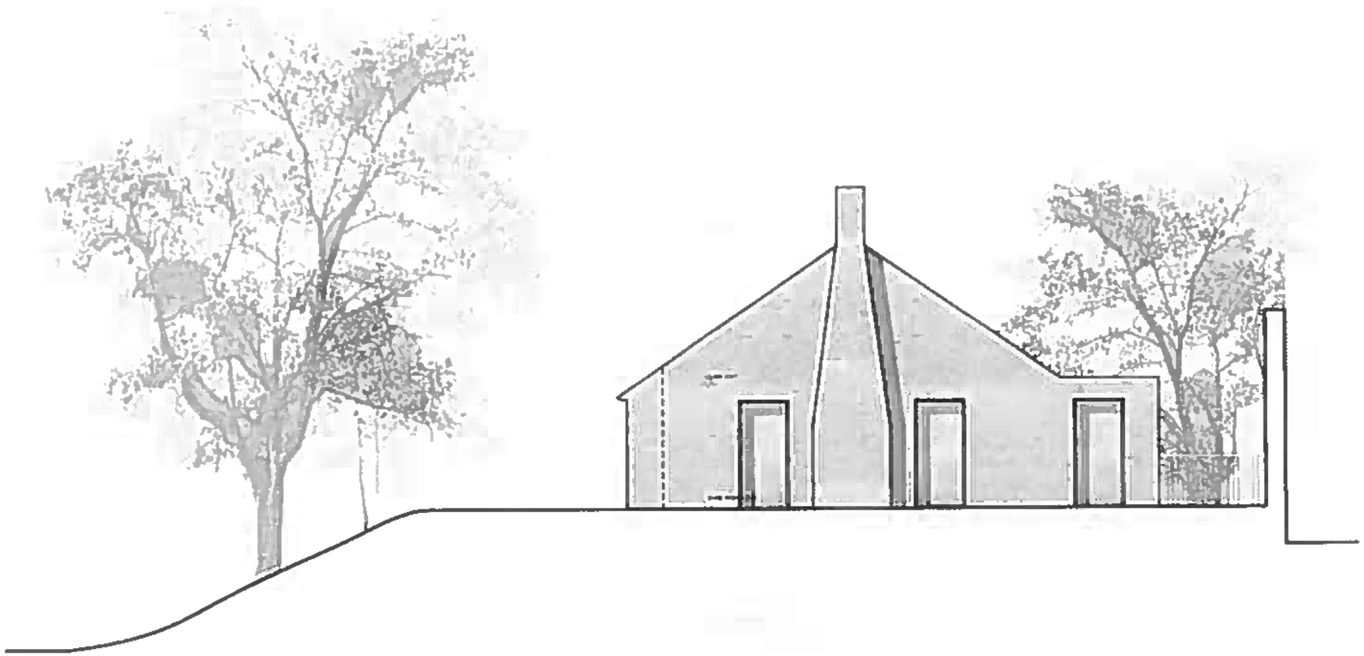

Proposed North Elevation

REVISIONS

Issued for Planning

NOTES

PROPOSED MATERIALS

Walls: Brick (house) Timber (outhouse)

Roof: Grey Slate, Lead

Windows: Anodised aluminium

Doors: Painted timber

PROJECT
THE GARDEN HOUSE

DRAWING TITLE
PROPOSED NORTH ELEVATION

STATUS
PLANNING

NOTE

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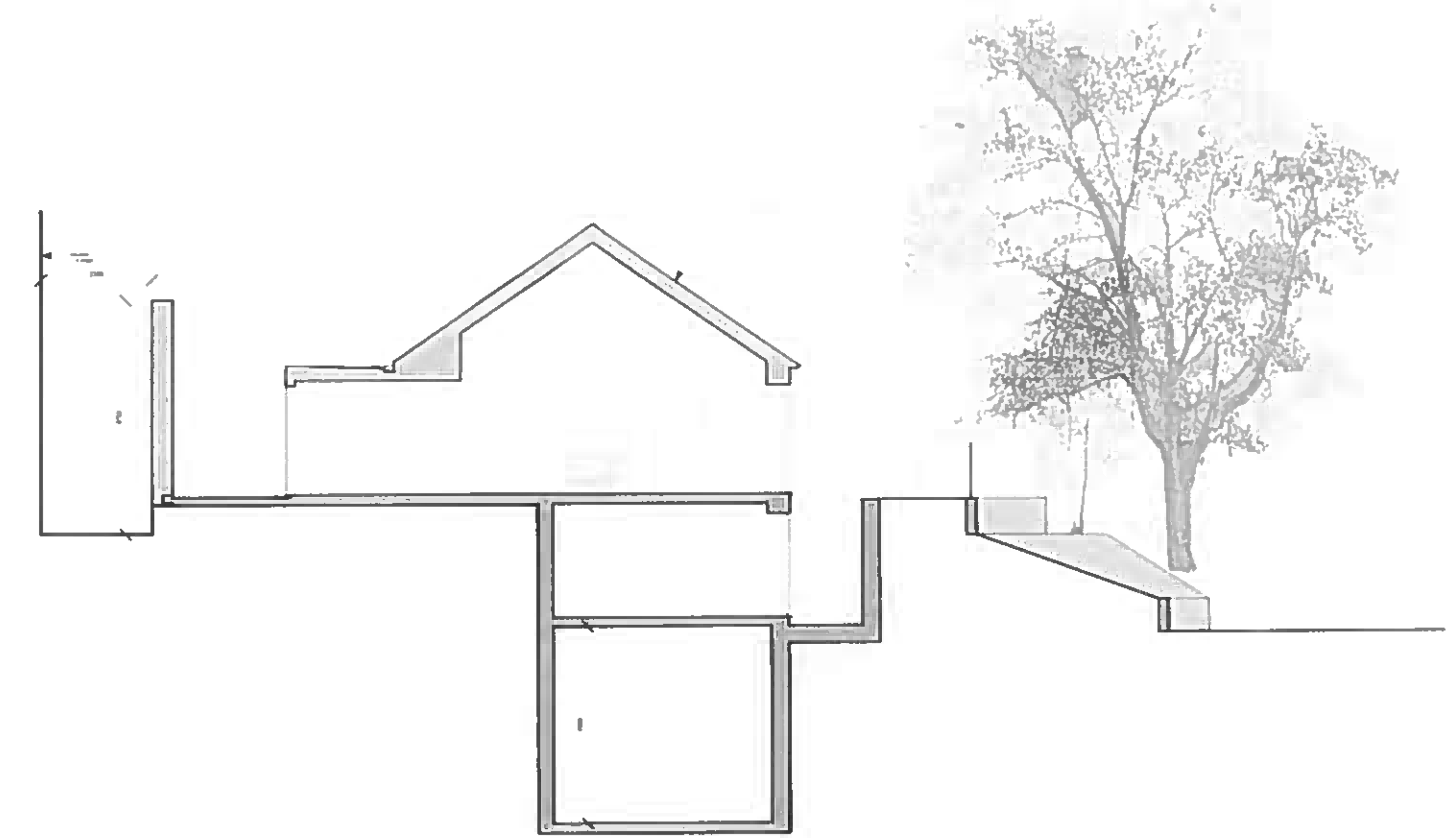
SCALE 1:100@A3

DRAWING NUMBER

REVISION -

REVISIONS
- 15.02.13 Issued for Planning



Proposed Section A-A

NOTES

PROJECT
THE GARDEN HOUSE

DRAWING TITLE
PROPOSED SECTION A-A

STATUS
PLANNING

NOTE
Do not scale from this drawing. Any discrepancies to be reported to the architect.
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The House of Detention
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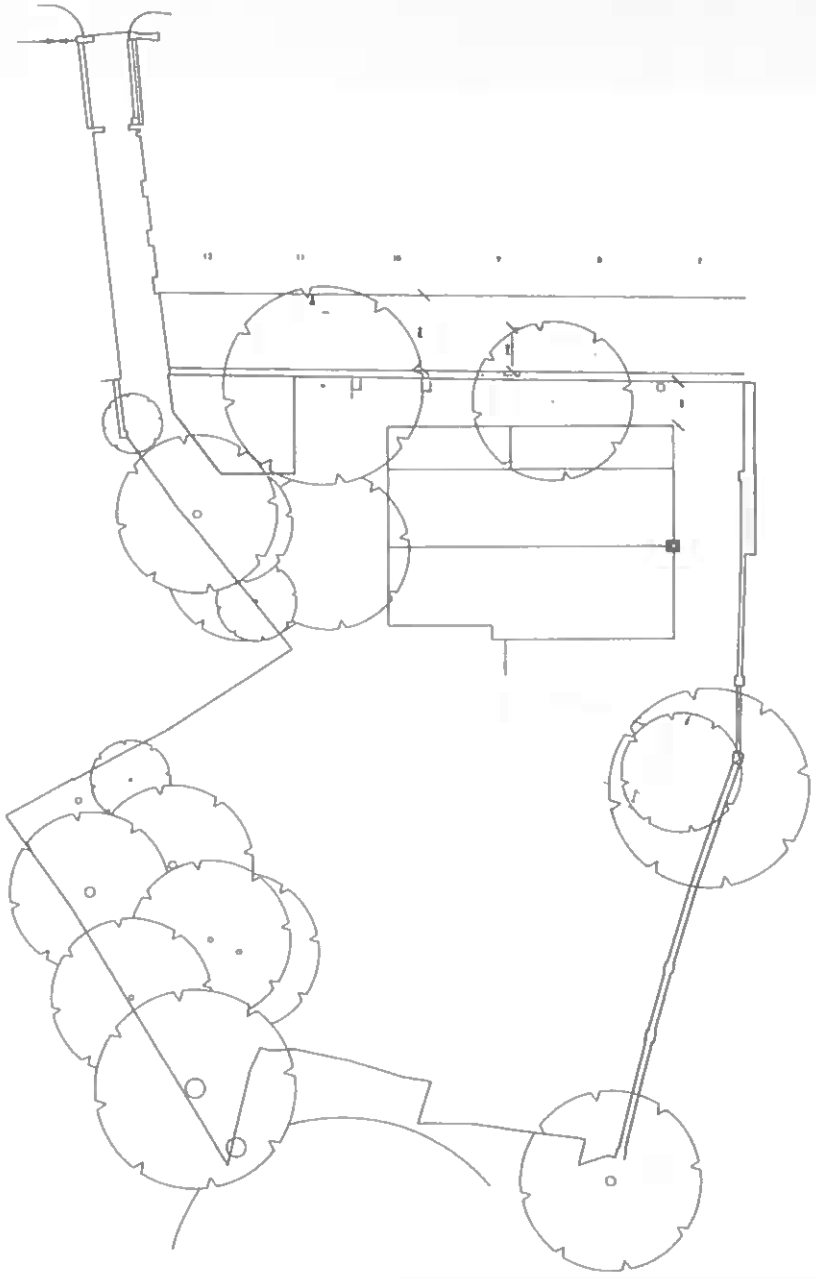
London EC1R 0AS

SCALE	DRAWING NUMBER	REVISION
1:100@A3	GH10/P130	-

REVISIONS

- 15.02.13 Issued for Planning



NOTES

PROJECT
THE GARDEN HOUSE

DRAWING TITLE
PROPOSED SITE PLAN

STATUS
PLANNING

NOTE:
Do not scale from the drawing. Any discrepancies to be reported to the architect.
All dimensions will be taken on site prior to ordering and commencement.
Copyright remains with the architect.
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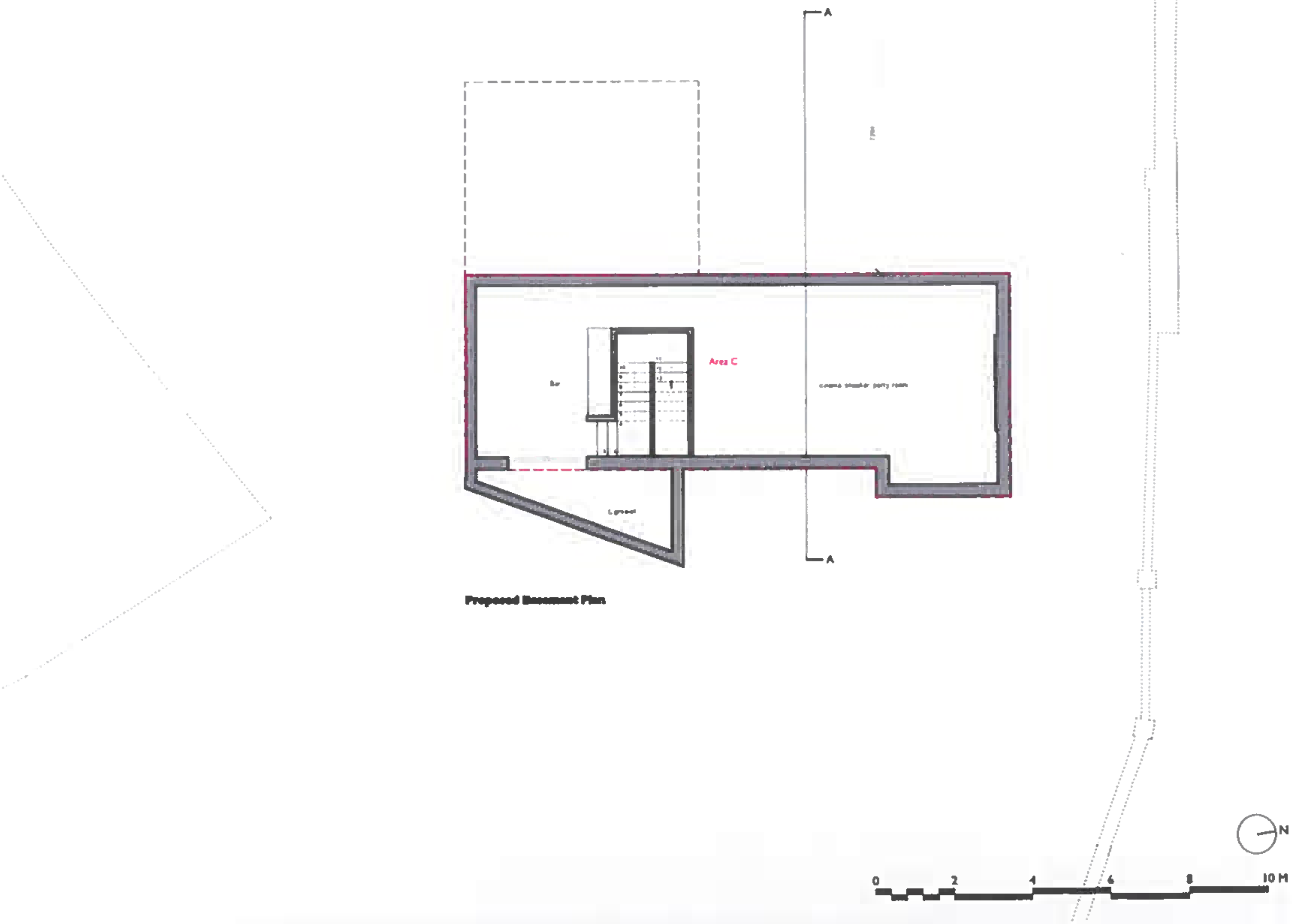
SCALE	DRAWING NUMBER	REVISION
1:200@A3	0910/P100	-

REVISIONS
- 13.02.13 Issued for Planning



Proposed Basement Plan

NOTES

Area C = Basement within the definition of Permitted Development (ref 2010/3118/P)

PROJECT
THE GARDEN HOUSE

DRAWING TITLE
PROPOSED BASEMENT PLAN

STATUS
PLANNING

NOTE

JAMES GORST
ARCHITECTS Ltd

SCALE	DRAWING NUMBER	REVISION
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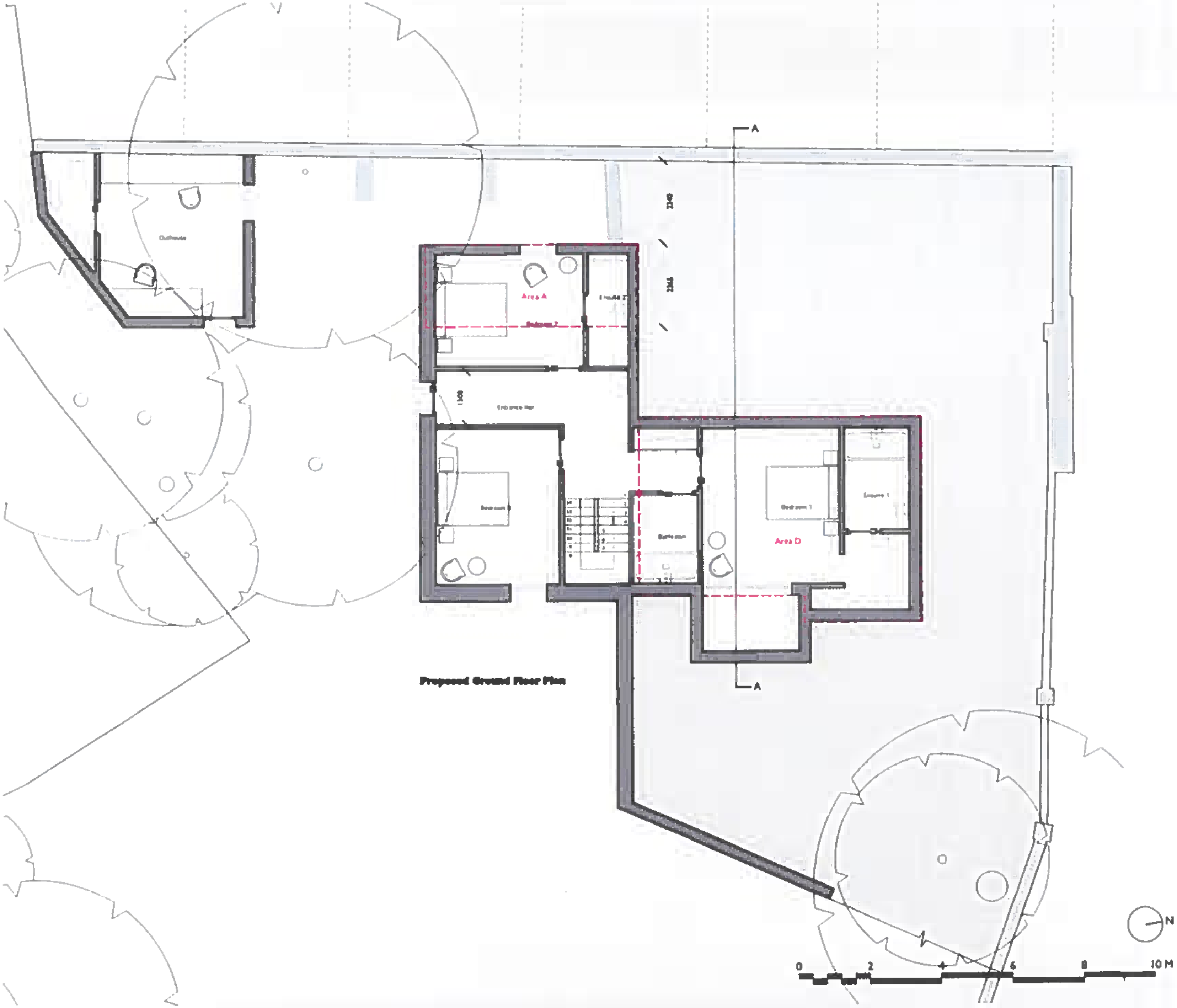

Proposed Ground Floor Plan

REVISIONS
- 15.02.13 Issued for Planning

NOTES

Area A = Single storey extension within the definition of Permitted Development (ref 2011/3054P)

Area D = Basement within the definition of Permitted Development (ref 2010/3118P)

PROJECT
THE GARDEN HOUSE

DRAWING TITLE
PROPOSED GROUND FLOOR PLAN

STATUS
PLANNING

NOTE
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London EC1R 0AS

SCALE	DRAWING NUMBER	REVISION
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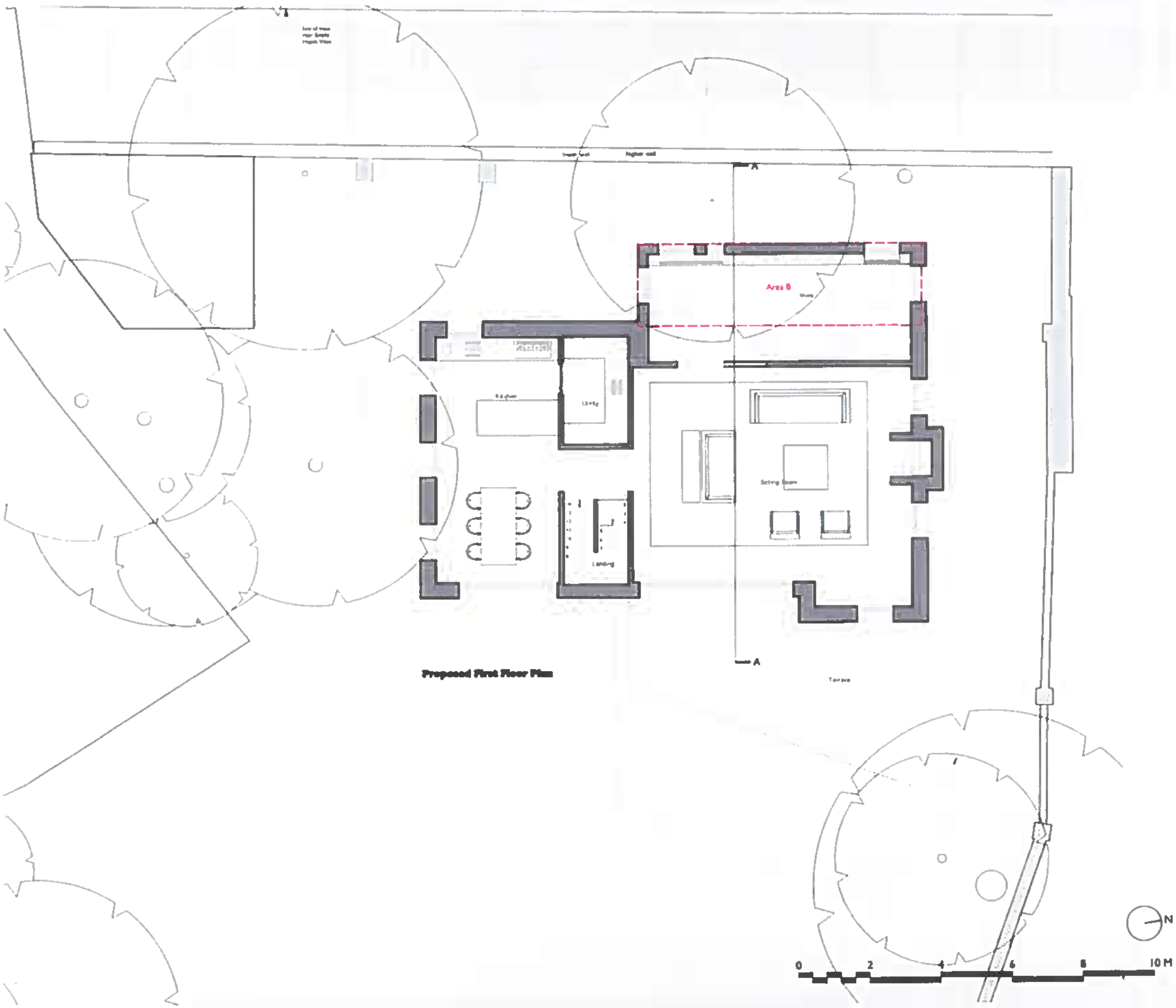

REVISIONS

- 15.02.13 Issued for Planning

NOTES

Area B = Single story extension within the definition of Permitted Development (ref: [illegible])

PROJECT
THE GARDEN HOUSE

DRAWING TITLE
PROPOSED FIRST FLOOR PLAN

STATUS
PLANNING

NOTE
Do not scale from the drawing. Any discrepancies to be reported to the architect.
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[illegible]

SCALE	DRAWING NUMBER	REVISION
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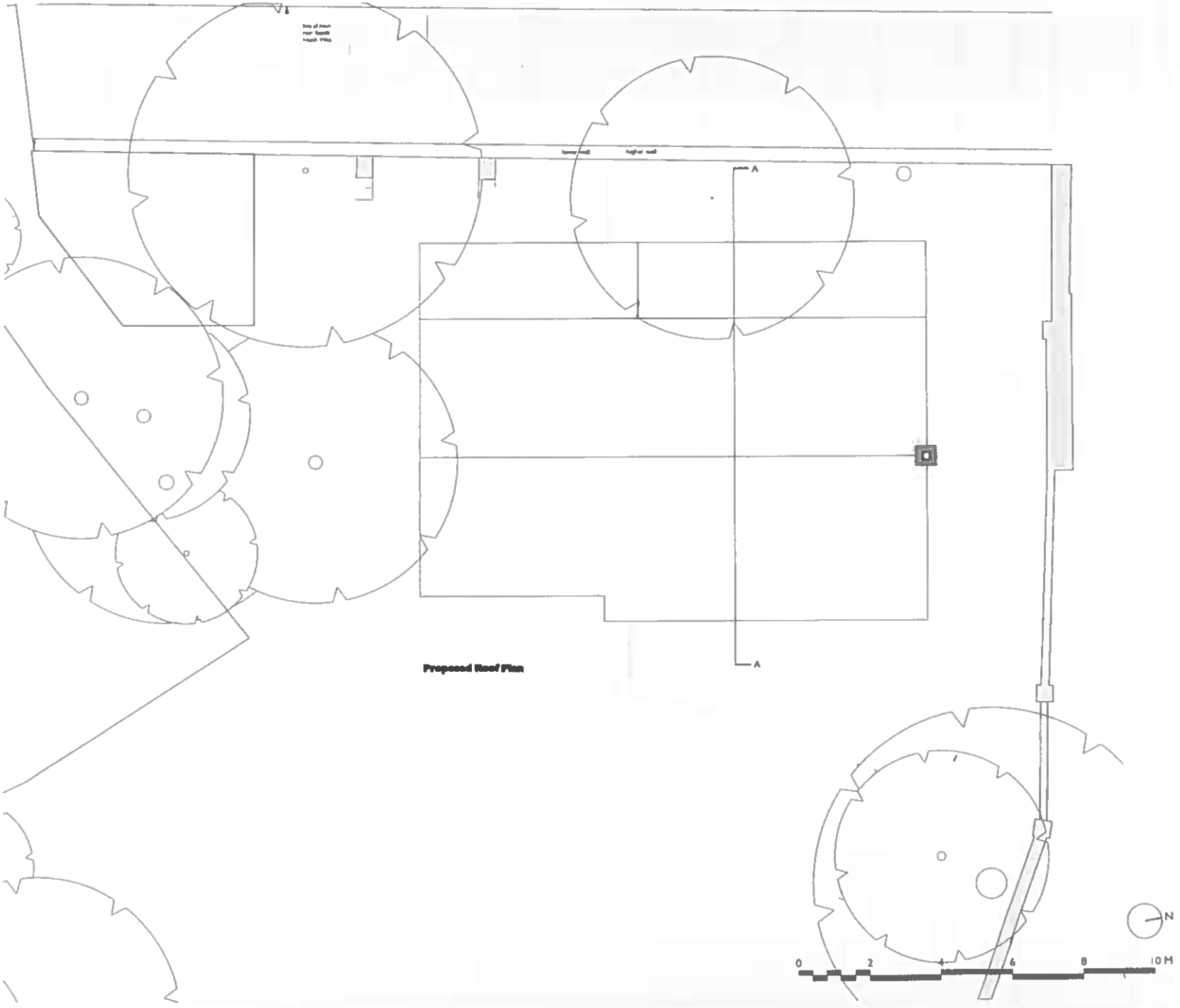

Proposed Roof Plan

REVISIONS

- 15.02.11 Issued for Planning

NOTES

PROJECT
THE GARDEN HOUSE

DRAWING TITLE
PROPOSED ROOF PLAN

STATUS
PLANNING

NOTE
Do not scale from this drawing. Any discrepancies to be reported to the architect.
All dimensions will be taken as size prior to ordering and commencement.
Copyright remains with the architects.
This drawing is to be read in conjunction with the specification and all other reference drawings.

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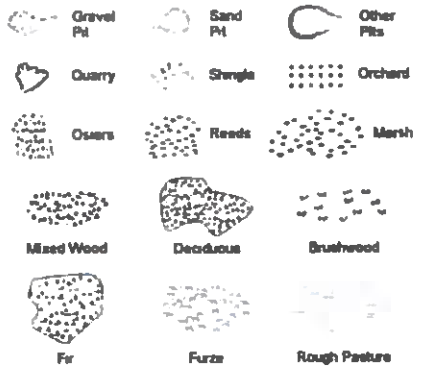
SCALE	DRAWING NUMBER	REVISION
1:100@A3	GH10/P105	-

APPENDIX B

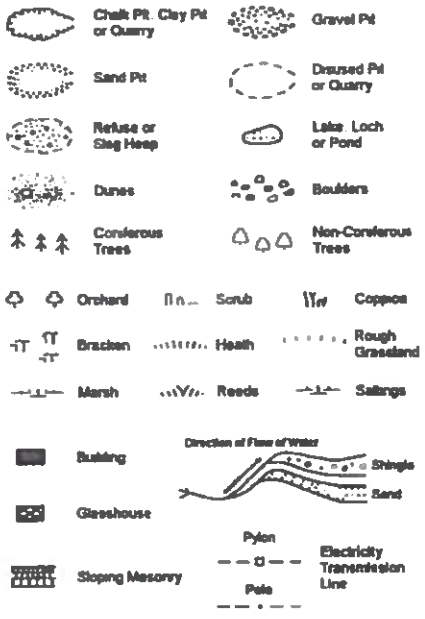
Historical Maps

Historical Mapping Legends

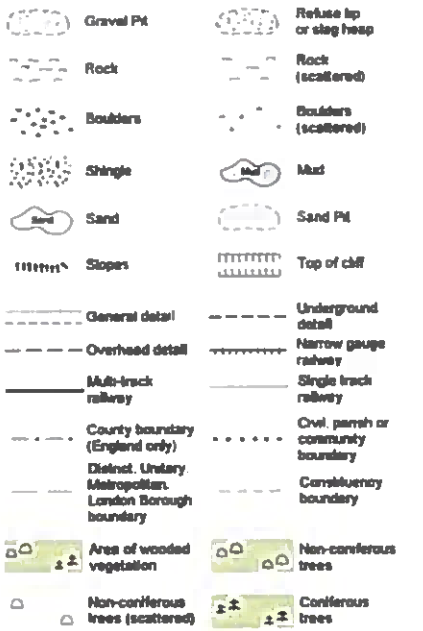
Ordnance Survey County Series 1:10,560



Ordnance Survey Plan 1:10,000



1:10,000 Raster Mapping



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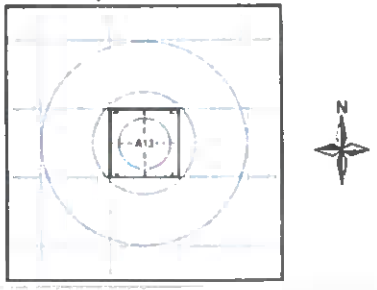
Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Middlesex	1:10,560	1873 - 1882	3
Middlesex	1:10,560	1879	4
London	1:10,560	1896	5
Essex	1:10,560	1920	6
London	1:10,560	1920	7
London	1:10,560	1930	8
Essex	1:10,560	1930	9
Historical Aerial Photography	1:10,560	1960	10
Ordnance Survey Plan	1:10,000	1961	11
Ordnance Survey Plan	1:10,000	1965	12
Ordnance Survey Plan	1:10,000	1966	13
Ordnance Survey Plan	1:10,000	1975	14
London	1:25,000	1966	15
Ordnance Survey Plan	1:10,000	1996	16
10K Raster Mapping	1:10,000	1999	17
10K Raster Mapping	1:10,000	2006	18
10K Raster Mapping	1:10,000	2011	19

Historical Map - Slice A



Order Details

Order Number:	38391464_1_1
Customer Ref:	34891
National Grid Reference:	526530, 186430
Slice:	A
Site Area (Ha):	0.01
Search Buffer (m):	1000

Site Details

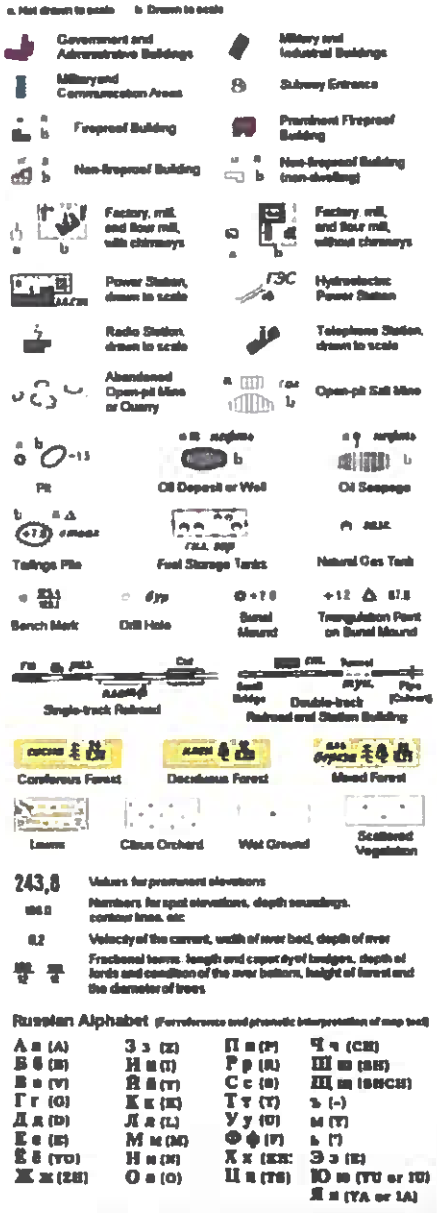
The Garden House, Vale of Health, Hampstead, LONDON, NW3 1AN

Landmark

Russian Military Mapping Legends

1:5,000 and 1:10,000 mapping

a. Not drawn to scale b. Drawn to scale

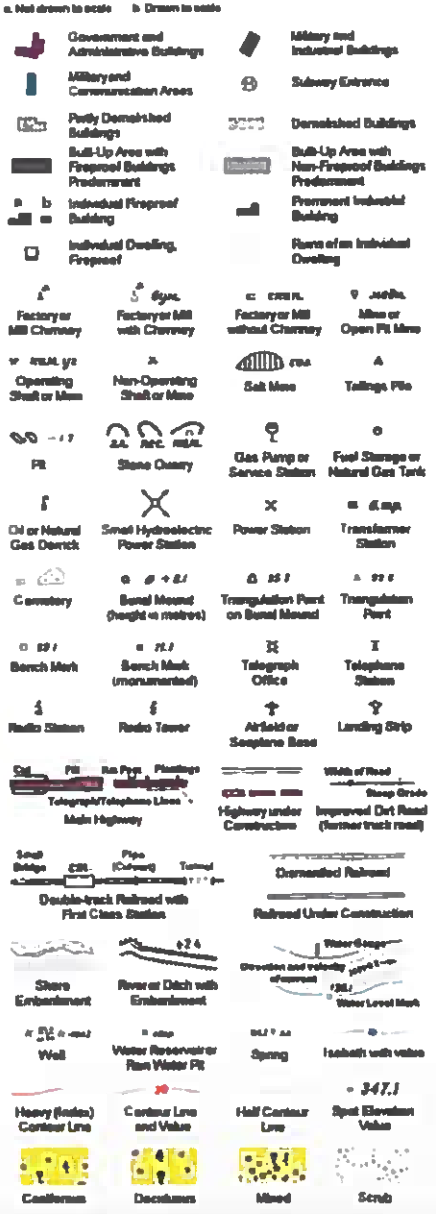


Russian Alphabet (For reference and phonetic interpretation of map text)

А а (A)	З з (Z)	П п (P)	Ч ч (CH)
Б б (B)	И и (I)	Р р (R)	Ш ш (SH)
В в (V)	Й й (Y)	С с (S)	Щ щ (SHCH)
Г г (G)	К к (K)	Т т (T)	ъ (-)
Д д (D)	Л л (L)	У у (U)	ы (Y)
Е е (E)	М м (M)	Ф ф (F)	ь (')
Ё ё (YO)	Н н (N)	Х х (KH)	Э э (E)
Ж ж (ZH)	О о (O)	Ц ц (TS)	Ю ю (YU or IU)
			Я я (YA or IA)

1:25,000 mapping

a. Not drawn to scale b. Drawn to scale



Key to Numbers on Mapping

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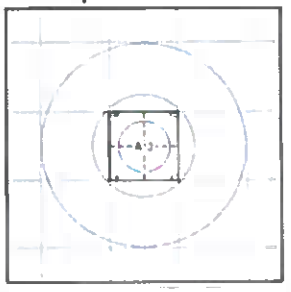
intelligent engineering

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Middlesex	1:10,560	1873 - 1882	3
Middlesex	1:10,560	1879	4
London	1:10,560	1896	5
Essex	1:10,560	1929	6
London	1:10,560	1930	7
London	1:10,560	1930	8
Essex	1:10,560	1930	9
Historical Aerial Photography	1:10,000	1960	10
Ordnance Survey Plan	1:10,000	1961	11
Ordnance Survey Plan	1:10,000	1963	12
Ordnance Survey Plan	1:10,000	1963	13
Ordnance Survey Plan	1:10,000	1975	14
London	1:25,000	1966	15
Ordnance Survey Plan	1:10,000	1996	16
10K Raster Mapping	1:10,000	1999	17
10K Raster Mapping	1:10,000	2006	18
10K Raster Mapping	1:10,000	2011	19

Russian Map - Slice A



Order Details

Order Number:	38391464_1_1
Customer Ref:	34891
National Grid Reference:	526530, 186430
Slice:	A
Site Area (Ha):	0.01
Search Buffer (m):	1000

Site Details

The Garden House, Vale of Health, Hampstead, LONDON, NW3 1AN

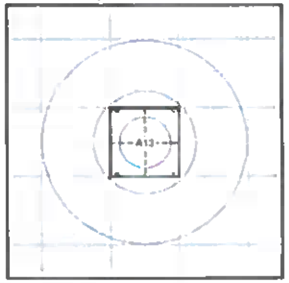
hardjackson
intelligent engineering

Published 1873 - 1882
Source map scale - 1:10,560

Map Name(s) and Date(s)

01100 1873 1:10,560	01200 1873 1:10,560
01600 1874 1:10,560	01700 1882 1:10,560

Historical Map - Slice A



Order Details

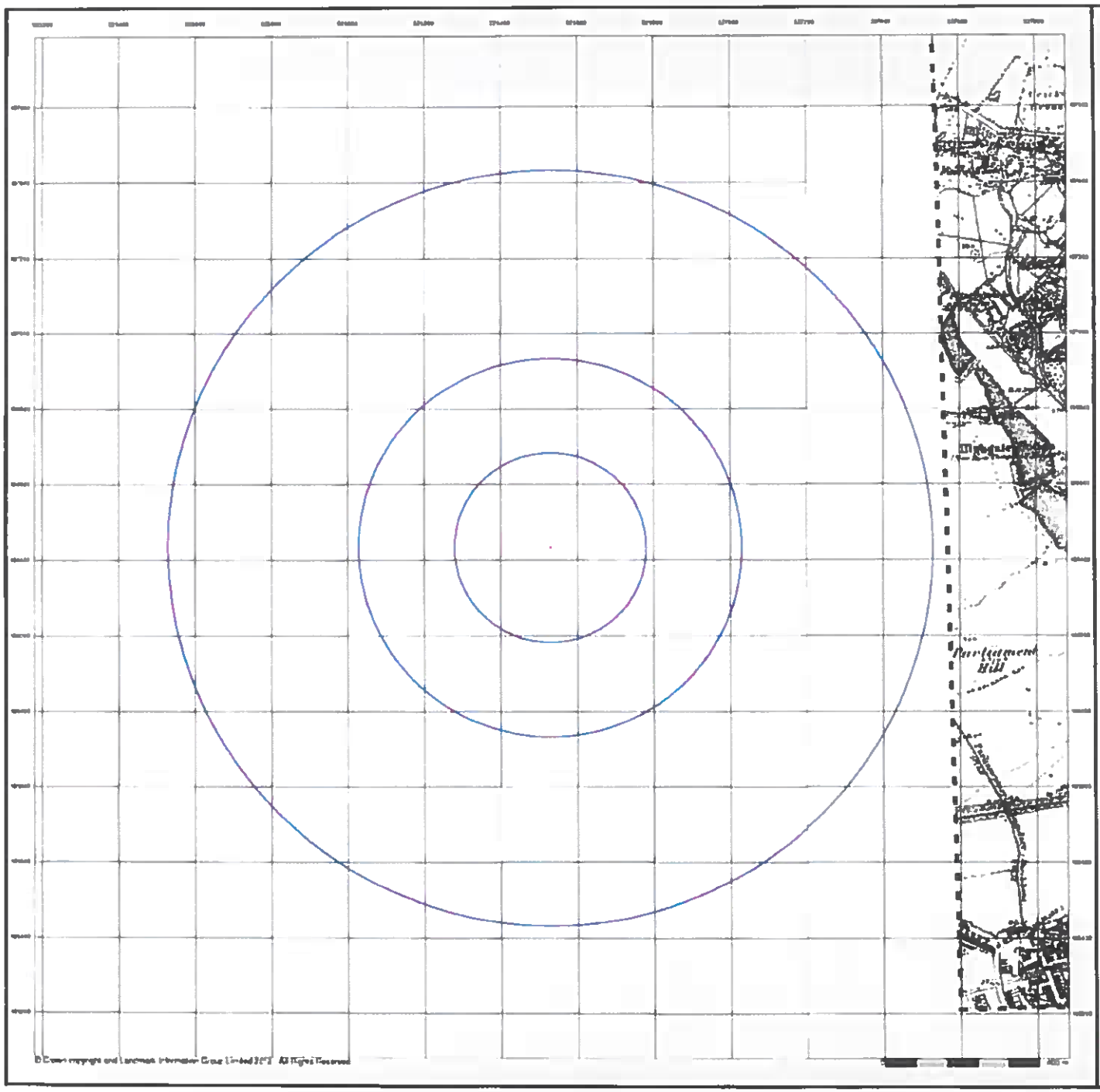
Order Number:	38391464_1_1
Customer Ref:	34891
National Grid Reference:	526530, 186430
Slice:	A
Site Area (Ha):	0.01
Search Buffer (m):	1000

Site Details

The Garden House, Vale of Health, Hampstead, LONDON, NW3 1AN

Landmark

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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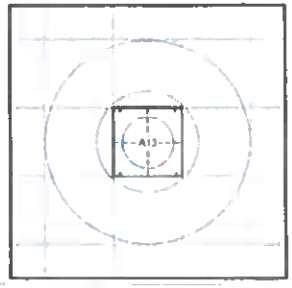
Middlesex
Published 1879
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840 s. In 1854 the 1 2,500 scale was adopted for mapping urban areas. Some maps were raised to update the 1 10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1930, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1840 s, a Provisional Edition was produced, which updated the 1 10,560 mapping from a number of sources. The maps appear unbranded - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1870, the first 1 10,560 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

Historical Map - Slice A



Order Details

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Customer Ref:	34891
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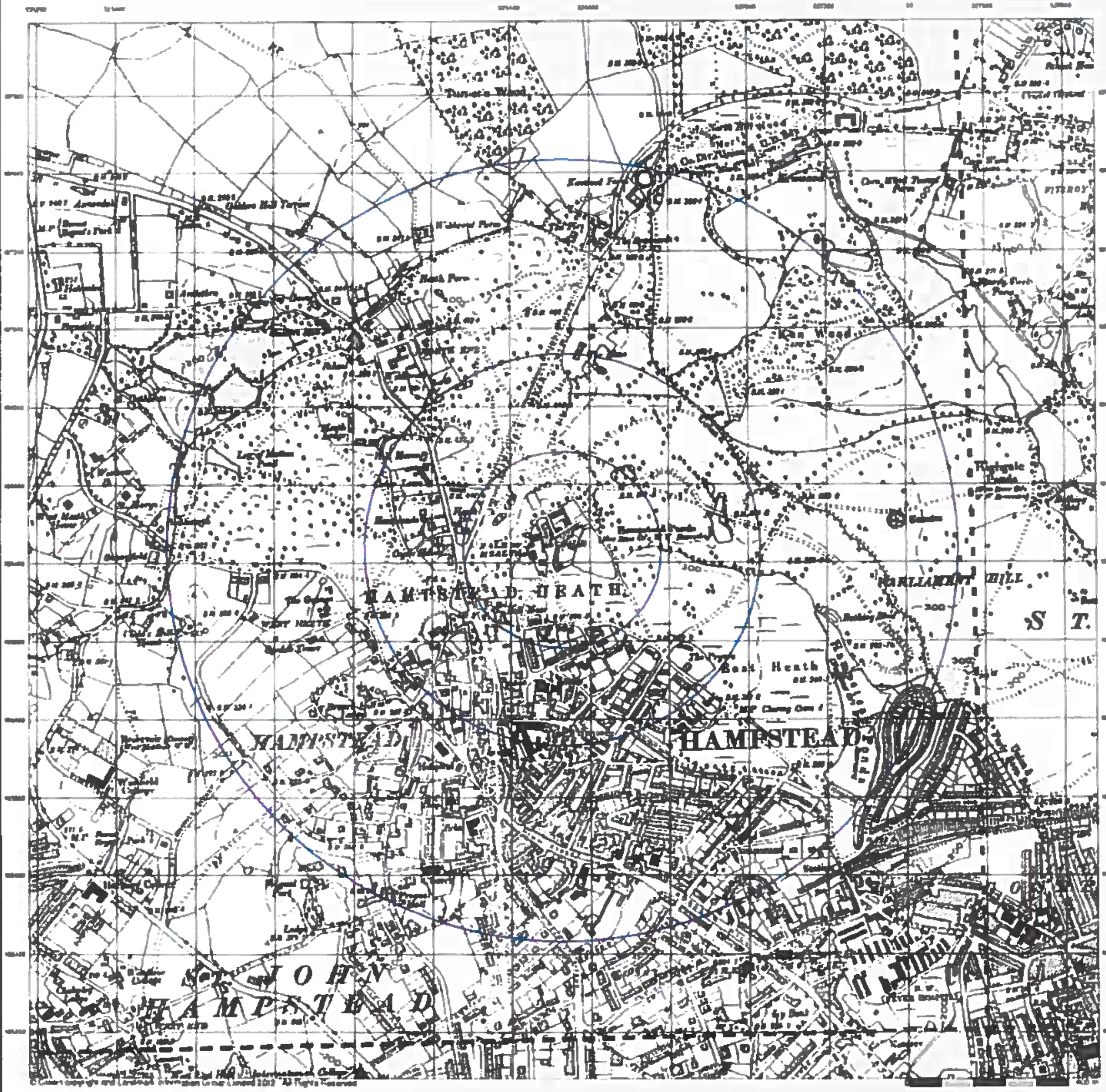
Site Area (Ha):	0.01
Search Buffer (m):	1000

Site Details

The Garden House, Vale of Health, Hampstead, LONDON, NW3 1AN



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London

Published 1896

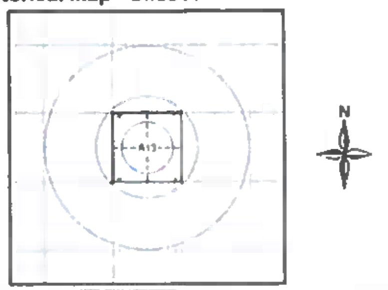
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

003SE 1896 1:10,560	003SW 1896 1:10,560
006NE 1896 1:10,560	007NW 1896 1:10,560

Historical Map - Slice A



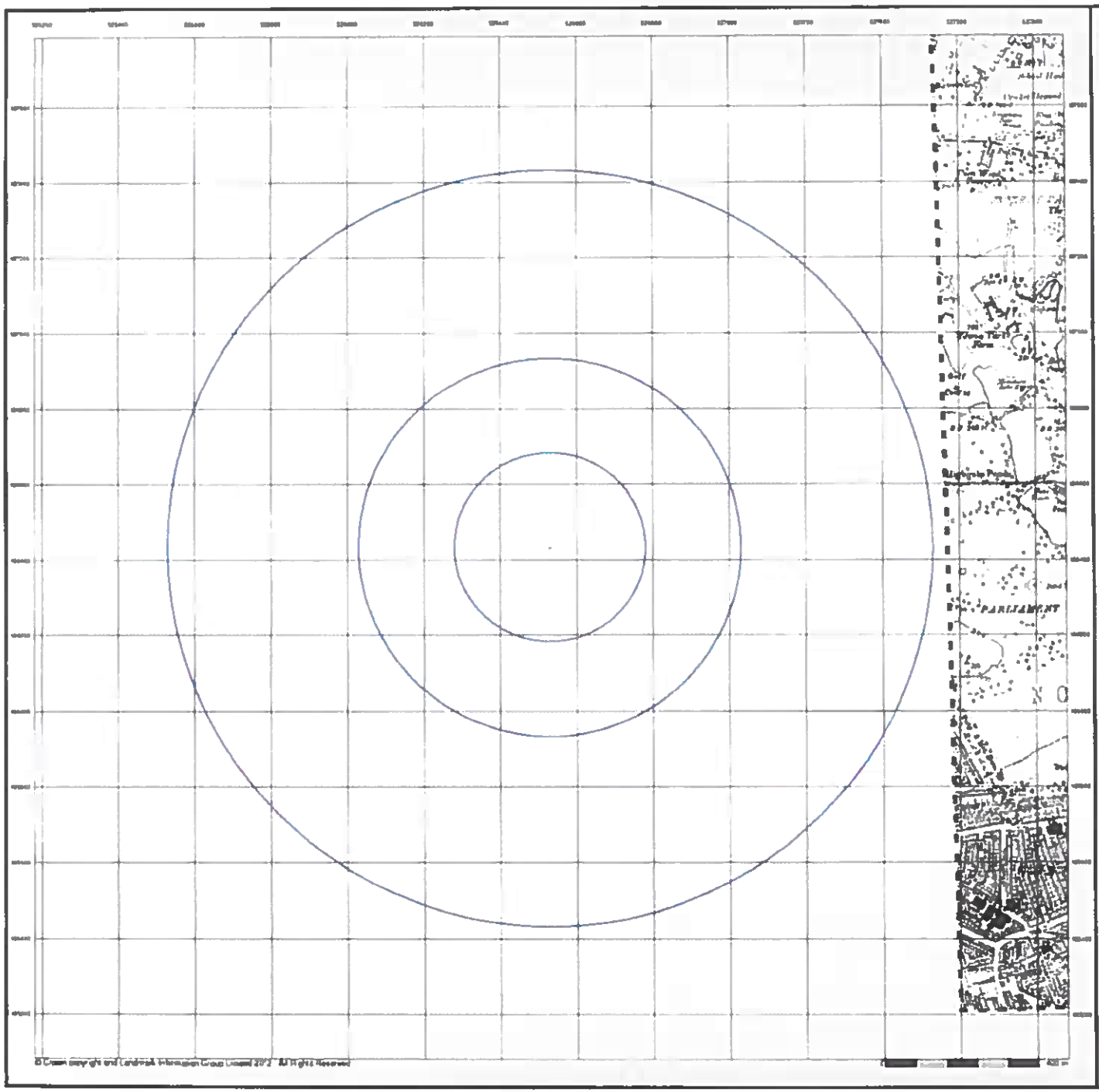
Order Details

Order Number:	38391464_1_1
Customer Ref:	34891
National Grid Reference:	526530, 186430
Slice:	A
Site Area (Ha):	0.01
Search Buffer (m):	1000

Site Details

The Garden House, Vale of Health, Hampstead, LONDON, NW3 1AN

Landmark
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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intelligent engineering

Essex

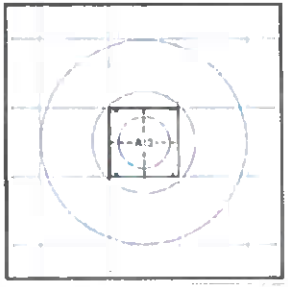
Published 1920

Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas. These maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

Historical Map - Slice A



Order Details

Order Number:	38391464_1_1
Customer Ref:	34891
National Grid Reference:	526530, 186430
Slice:	A
Site Area (Ha):	0.01
Search Buffer (m):	1000

Site Details

The Garden House, Vale of Health, Hampstead, LONDON, NW3 1AN

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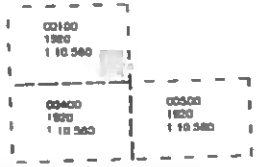
London

Published 1920

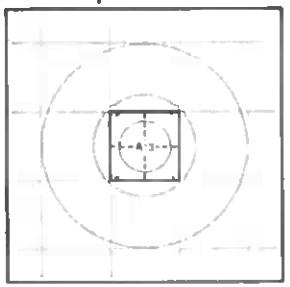
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas. These maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938 all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies at outlying areas. In the late 1940's a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1978, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

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Customer Ref:	34891
National Grid Reference:	526530, 186430
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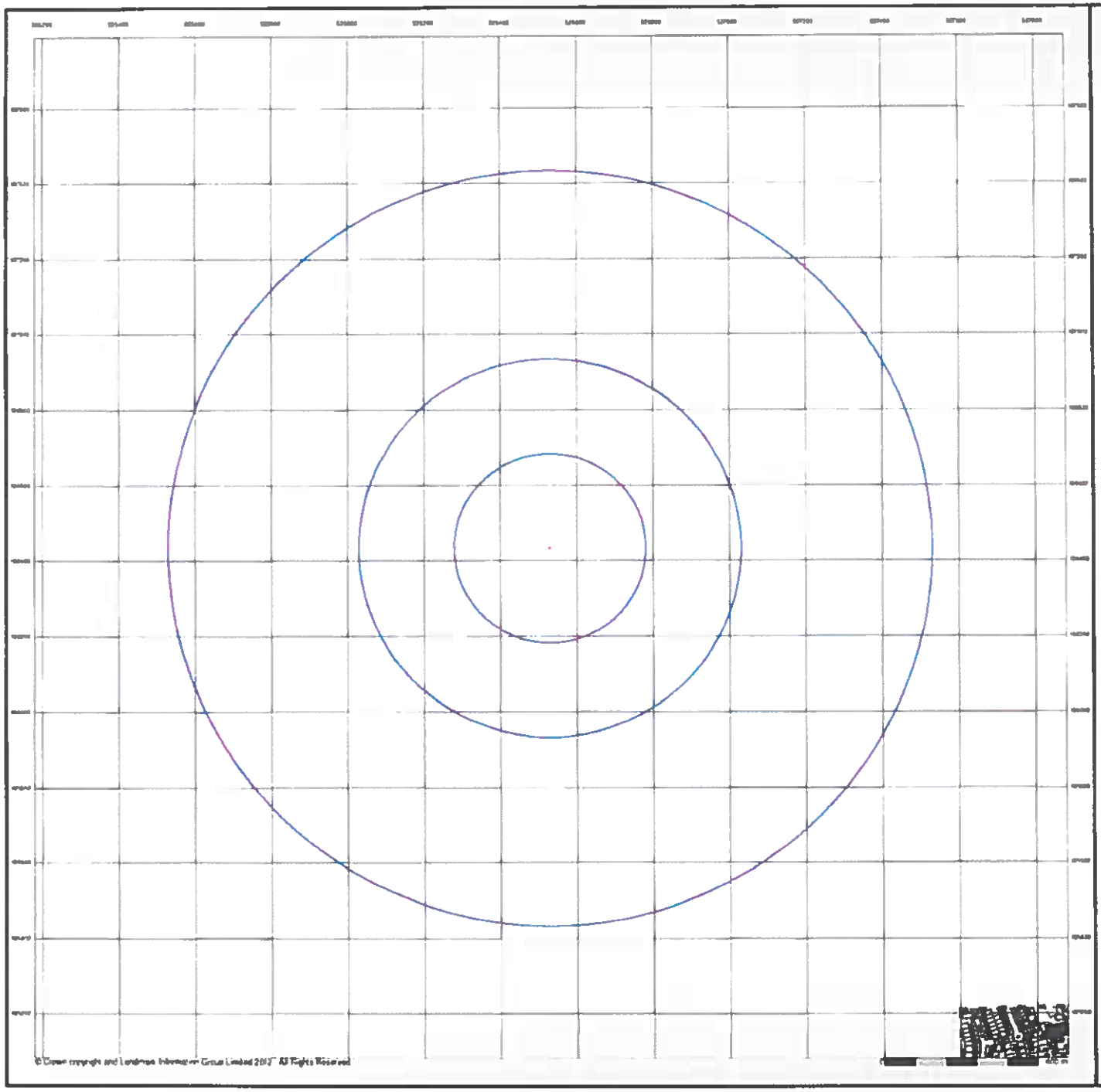
Search Buffer (m)	1000

Site Details

The Garden House, Vale of Health, Hampstead, LONDON, NW3 1AN



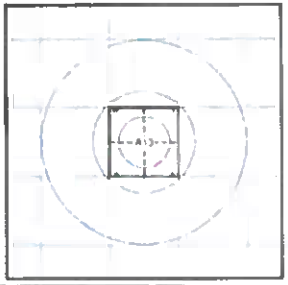
richardjackson
intelligent engineering

London
Published 1938
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas. These maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear undivided - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

Historical Map - Slice A



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Customer Ref:	34891
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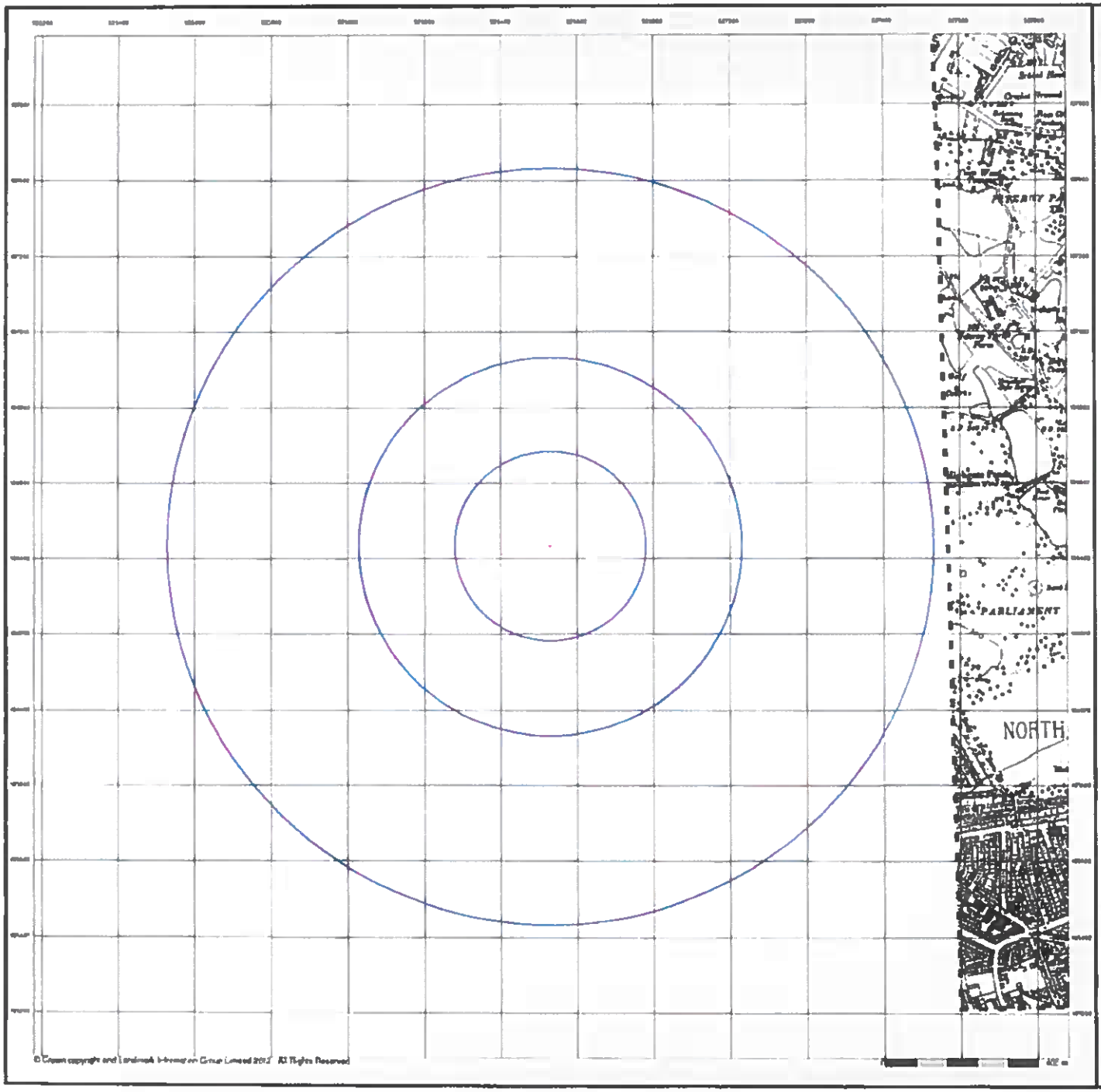
Site Details

The Garden House, Vale of Health, Hampstead, LONDON, NW3 1AN



richardjackson

Essex

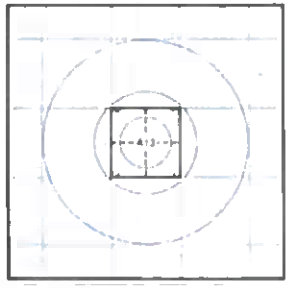
Published 1938

Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland at the time 1:10,560. In 1854 the 1:2,500 scale was adopted for mapping urban areas. These maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1939, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unrevised - with all military camps and other strategic sites removed. These maps were latterly overprinted with the National Grid. In 1979, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

Historical Map - Slice A



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Slice:	A
Site Area (Ha):	0.01
Search Buffer (m):	1000

Site Details

The Garden House, Vale of Health, Hampstead, LONDON. NW3 1AN

Landmark Information Group

Tel 0844 844 9952
Fax 0844 844 9951
Web www.envirocheck.co.uk

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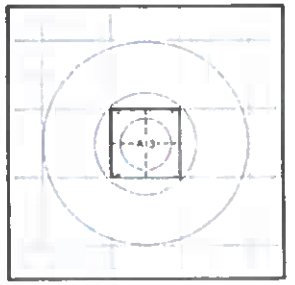
Historical Aerial Photography
Published 1950
Source map scale - 1:10,560

The Historical Aerial Photos were produced by the Ordnance Survey at a scale of 1:1,250 and 1:10,560 from Air Force photography. They were produced between 1944 and 1951 as an interim measure, pending preparation of conventional mapping, due to post war resource shortages. How recently measures in the 1950's meant that every photograph was re-checked for potentially unsafe information with security often replaced by fake fields or clouds. The original editions were withdrawn and only later made available after a period of fifty years although due to the accuracy of the editing, without viewing both revisions it is not easy to spot the edits. Where available Landmark have included both revisions

Map Name(s) and Date(s)

Historical Aerial Photography - Slice A



Order Details

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Site Area (Ha):	0.01
Search Buffer (m):	1000

Site Details

The Garden House, Vale of Health, Hampstead, LONDON, NW3 1AN

Landmark

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Ordnance Survey Plan
Published 1951
Source map scale - 1:10,000

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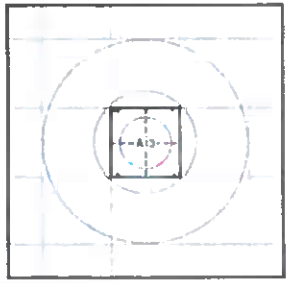
Map Name(s) and Date(s)

Historical Map - Slice A



Order Details

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Slice:	A
Site Area (Ha):	0.01
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Site Details

The Garden House, Vale of Health, Hampstead, LONDON. NW3 1AN