Proposed Redevelopment of Land at Gondar Gardens

London NW6

Environmental Report

Non-Technical Summary

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Prepared by Peter Radmall Associates
on behalf of Linden Wates Homes (Hampstead) Limited

Contents

1. Introduction

1.1 Linden Wates (West Hampstead) Limited are seeking planning permission for redevelopment of land at Gondar Gardens, London NW6, within the London Borough of Camden (LB Camden). The site is 1.24 hectares in area and is occupied partly by a redundant covered reservoir.

1.2 The proposed development comprises:

Redevelopment of the covered reservoir structure to provide 28 residential units with associated parking, refuse storage and landscaping of the site for Private Open Space, following substantial demolition of the roof and internal structure.

1.3 The current scheme represents a revised version of a previous "frontage" proposal, which was rejected on appeal in June 2013. That proposal was itself an alternative to an earlier scheme, which proposed to locate residential units within the footprint of the reservoir.

1.4 The Council issued a Screening Opinion to the effect that the original proposals constituted "EIA development" under the (then) Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations, 1999. An EIA was therefore carried out and an Environmental Statement (ES) submitted.

1.5 Rather than seek a new Screening Opinion, the applicant elected to carry out an EIA for the previous frontage scheme, under the Town and Country Planning (Environmental Impact Assessment) Regulations 2011. The same approach has been adopted for the current proposals, and an Environmental Statement (ES) has therefore been prepared. This document forms the Non-Technical Summary (NTS).

2. EIA Process

2.1 EIA is a structured process for identifying the potential environmental effects of a development during the planning phase, and has been established under European legislation for some 25 years. In summary, an EIA comprises the following steps:

- defining the scope;
- consulting relevant parties;
- carrying out baseline studies;
- predicting the potential effects;
- assessing the significance of those effects;
- identifying and incorporating measures to mitigate significant adverse effects;
- assessing the residual effects; and
- preparing the ES.

2.2 In this case, the obvious starting point was provided by the previous EIA, the scope of which has not been challenged by the Council. The previous assessment was reviewed to reflect the amended scheme and any changes to policy or baseline conditions, and supplementary work was carried where necessary. Selective consultation has been carried out where necessary.

3. Scope of the Assessment

3.1 Schedule 4 of the Regulations states that:

"the aspects of the environment likely to be significantly affected by the development" [may include] "population, fauna, flora, soil, water, air, climatic factors, material assets, including the architectural and archaeological heritage, landscape and the inter-relationship between the above factors."

3.2 The scope of an EIA must be derived on a case-by-case basis. This process normally begins with a broadly similar range of topics, which is then refined to reflect differences in the characteristics of the development and the sensitivity of its location. The scope of the current assessment follows that of the previous EIA, which was not challenged. The following topics have been considered in the assessment:

- Air Quality;
- Climate Change;
- Cultural Heritage;
- Ecology;
- Flood Risk and Drainage;
- Ground Contamination;
- Sunlight and daylight;
- Noise and Vibration;
- Townscape and Views; and
- Transport.

3.3 Three topics – Environmental Wind, Socio-Economics and Waste - were excluded from (i.e. scoped out of) the assessment for the following reasons:

- Environmental Wind - Because no tall buildings are proposed.

- Socio-Economics - Because the development will not displace employment or any other socially or economically productive use of the land, whilst its modest scale will be insufficient to have any meaningful impact on social infrastructure, housing demand or deprivation.

- Waste - Because the scale of the development is insufficient to have a significant impact on the waste management regime. The main waste arisings will occur during demolition, and will be managed in accordance with a Construction Management Strategy to be agreed with the Council.

4. Structure of the ES

4.1 The minimum requirements for the information to be included in Environmental Statements (ref Schedule 4, Part II of the EIA Regs) are as follows:

- *a description of the development;*

- *a description of the measures proposed to mitigate significant adverse effects;*

- *the data required to identify and assess the main effects;*

- *an outline of the main alternatives considered and the reasons for choosing the scheme as submitted, taking account of the environmental effects; and*

- *a Non-Technical Summary (NTS)*

4.2 The ES comprises this document, together with a Main Report and 10 Technical Annexes. The Technical Annexes are as follows:

1. Air Quality Impact Assessment

2. Climate Change
   2.1: Energy strategy
   2.2: Sustainability Statement
   2.3: Code for Sustainable Homes Strategy

3. Cultural Heritage
   3.1: Archaeological Desk-Based Assessment
   3.2: Built heritage Assessment

4. Ecology
   4.1: Extended Phase 1 Habitat Survey
   4.2: Bat Surveys
   4.3: Reptile Surveys
   4.4: Breeding Bird Surveys
   4.5: Reptile Mitigation Strategy

5. Flood Risk and Drainage Assessment

6. Geo-Environment
   6.1: Geo-Environmental Site Assessment Report
   6.2: Envirocheck Report

7. Noise and Vibration
   7.1: PPG24 Environmental Noise Survey
   7.2: BS5228 Noise Impact Assessment
   7.3: BS5228 Vibration Impact Assessment
   7.4: Road Noise Impact Assessment
   7.5: Car Lift Noise Assessment

8. Sunlight and Daylight

9. Townscape and Views: Modelled Views

10. Transport Statement and Transport Statement Addendum

5. Baseline Conditions

Site Character

5.1 The western part of the site comprises a covered reservoir constructed in 1874. At that time the site was located on the edge of the built-up area, with farmland extending to

the north. Residential development had enclosed the southern and eastern sides of the site by 1896, and by 1915 its immediate context was entirely built-up.

5.2 The reservoir was emptied in the late 1990s and formally decommissioned as a reservoir under the Reservoir Act in 2002. It is of brick arch construction with a barrel roof and concrete floor, providing an internal height of up to 7m. It is about 92m long and 53m wide, giving an area of 4,878sqm, representing approximately 39% of the site. The condition of the barrel roof structure is deteriorating and will continue to do so.

5.3 The reservoir is covered with soil and supported by earth bunds on each side. As a result, it forms a plateau-like feature raised above the level of the surrounding area at an elevation of around 80m AOD. This difference is most pronounced to the south and east, where levels slope steeply towards an elevation of about 72mAOD at the site boundary. Levels fall more gradually to the north and form a low bank to the west.

5.4 The reservoir and most of the site are covered with grass, which is cut periodically. A strip of scrub and trees runs along the eastern boundary, whilst there are also several trees along the southern boundary. Areas of hardstanding and ruderal vegetation, together with three small buildings, are located close to the western boundary.

Relationship to Local Area

5.5 The northern, eastern and southern boundaries abut the rear gardens of residential properties in Gondar Gardens, Agamemnon Road and Hillfield Road respectively. The western boundary fronts onto Gondar Gardens, the opposite side of which comprises the garages and rear gardens of properties in Sarre Road.

5.6 The surrounding area is densely developed, mainly with two- and three-storey terraced houses typical of the period. There are several schools, such as Hampstead School to the north-west and Beckford Primary School to the south. Areas of open space include the UCL sports ground and Hampstead Cemetery to the north, and Fortune Green Park to the north-east.

5.7 Local shops and services are located on Mill Lane, together with community facilities such as a public library on West End Lane, about 500m to the east. West Hampstead Thameslink Station is located 750m to the south-east.

Relevant Designations

5.8 Most of the site, except for a strip along the western boundary, is shown as Private Open Space on the current Proposals Map and Core Strategy. This area is also designated as a Site of Nature Conservation Importance (SNCI Borough II). The citation for this designation refers in particular to:

- its cover of mostly neutral grassland, supporting a moderate diversity of wildflowers and typical grassland butterflies;
- the presence of spiked sedge, which is locally uncommon; and
- the presence of slow-worm, which is the only known occurrence in Camden.

5.9 Trees along the eastern boundary of the site are the subject of a Tree Preservation Order. The reservoir has been placed on the draft schedule of locally listed buildings.

Designations in the surrounding area (500m radius) include three listed buildings and a Grade II Registered Park and Garden (Hampstead Cemetery).

6. The Proposed Development

6.1 Since the reservoir is redundant and will deteriorate over time, the priority is to secure an alternative use whilst conserving the ecological interest of the site and the amenity of the local area. Non-residential uses for the site have been discounted because they would be unsuitable in this location.

6.2 The previous frontage scheme was developed as an alternative to the original proposal to place the proposed dwellings within the reservoir, which was rejected by the Council but subsequently granted on appeal. The brief for the frontage scheme has sought to:

- secure a long-term and viable solution for the reservoir;
- retain and enhance the open character and biodiversity of the site;
- create innovative and neighbourly homes;
- achieve Code for Sustainable Homes (CfSH) Level 4;
- enhance the streetscape of Gondar Gardens; and
- take account of views from surrounding properties.

6.3 The current proposals differ from the previous frontage scheme in matters of design detail only; the type, quantum and massing of the development are unchanged.

6.4 The new dwellings will be located along the Gondar Gardens frontage of the site, comprising two four-storey blocks addressing the street, with three-storey extensions behind, above a basement. Vehicles would enter the site from Gondar Gardens, between the frontage blocks, with car lifts providing access to residents' parking at basement level.

6.5 The dwellings would be designed to comply with Code for Sustainable Homes Level 4, achieved through the use of energy-efficient building fabric, supplemented by roof-mounted solar photovoltaics. Other sustainable features of the design would include green roofs and stormwater attenuation.

6.6 The roof and internal piers of the reservoir would be demolished, leaving the side walls and buttresses. Fill would be used to create grassed banks against the walls, and the void would be landscaped to create a new grassland/wildlife area. The remainder of the site would remain essentially in its current open condition as private open space (general public access would not be permitted) and would be managed to enhance its biodiversity.

6.7 This would be achieved within the framework of an Ecological Enhancement Plan, which would include measures such as selective thinning/replanting of perimeter trees and shrubs, erection of bird nesting and bat roosting boxes, construction of habitat piles to provide refuges for species such as slow-worm and hedgehogs, regular cutting of the main grassland area to maintain a hay meadow character, and less frequent cutting of the banks and peripheral areas to encourage a more diverse sward and maintain conditions suitable for slow-worm.

6.8 The construction compound would be set up close to Gondar Gardens, from which all access would be obtained. Construction traffic is anticipated to be routed via Mill Lane to/from the A5/Shoot Up Hill. A Construction Management Plan, incorporating relevant environmental mitigation, will be agreed with the Council.

7. Predicted Effects and Proposed Mitigation

Air Quality

7.1 LB Camden has declared an Air Quality Management Area for NO_2 and fine particulates (PM_{10}), covering the whole borough. Air quality at the site is typical of an "urban background" location, corresponding to Air Pollution Exposure Criteria (APEC) A or B (as per the London Councils' Air Quality and Planning Guidance). This suggests that concentrations of NO_2 and PM_{10} are likely to be around or slightly below the relevant Objective respectively. The guidance indicates that air quality in these circumstances is highly unlikely to provide grounds for refusal and that the development would not expose the new residents to unacceptably poor air quality.

7.2 Fugitive dust emissions during demolition and construction can cause nuisance to nearby receptors. The scale of the development and the nature of the nearest receptors (residential properties) indicate that the risk of such emissions could be medium to high. However, dust control measures and monitoring would be adopted as part of the Construction Management Strategy. Such measures are of proven effectiveness, and any residual effects are unlikely to be significant.

7.3 The energy strategy for the development relies on high-efficiency gas boilers, supplemented by solar photovoltaics; no major point sources of emissions would be introduced. Operational traffic would amount to 5-8 movements per hour during peak periods, which would have no measurable impact on air quality. Overall, the development would neither expose new residents to poor air quality nor impede the implementation of Camden's Air Quality Action Plan.

Climate Change

7.4 The development will be designed to achieve Code for Sustainable Homes Level 4 and to perform better than the Building Regulations Part L 2010 CO_2 Target Emission Rate (TER). The actual Dwelling Emission Rate (DER) will be 25% better than this, thereby meeting the 2011 London Plan target. This will be achieved through a combination of enhanced building fabric and a 14.1kWp solar photovoltaic (PV) system, delivering a total offset of over 14 tonnes of CO_2 per annum.

Cultural Heritage

7.5 The site is of no known archaeological value, having been extensively disturbed during construction of the reservoir. Its heritage interest is confined to the reservoir, which is considered to be of medium evidential value, medium to low historical value, and very low communal and aesthetic value. It is by no means unique as a heritage asset, since at least 30 reservoirs of similar type were constructed in London around the same time.

7.6 The reservoir structure is not visible and makes no contribution to the surrounding townscape, except as an area of green space. It is also a wasting asset, since its condition will deteriorate over time. Although it has been added to the draft schedule of

locally listed buildings, English Heritage does not consider the reservoir to be of statutorily listable quality. Even in the absence of mitigation, demolition of the reservoir is considered to amount to no more than a minor adverse effect.

7.7 Prior to demolition, a photographic and measured survey of the reservoir will be carried out, allowing its key features to be preserved by record. Taking this into account, the residual effect on the significance of this asset is considered to be neutral and not significant. The development will have no effect on the setting or significance of any designated heritage assets in the surrounding area.

Ecology

7.8 The development will necessitate the removal of neutral grassland habitat on the reservoir roof, amounting to about half of the SNCI. This grassland is prone to desiccation during dry periods, has been managed for amenity (rather than ecological) purposes, and is less diverse than the grassland on the eastern and southern slopes of the reservoir, which will not be disturbed. Its loss during construction is therefore regarded as a minor effect.

7.9 The proposed mitigation aims to restore grassland habitat within the reservoir void and to improve overall management of the site, such that the residual effect would be beneficial. The main occurrence of spiked sedge is on the south-facing slope of the reservoir and would be undisturbed; a single stand of this plant located within the footprint of the works would be transplanted within the site.

7.10 Slow-worms are protected under the Wildlife and Countryside Act, 1981 (as amended) and are a UK priority BAP species. Their core habitat within the site comprises the southern and eastern slopes of the reservoir, which lie outside the working area and would be protected with temporary fencing. Prior to the start of construction, any slow-worms found within the working area would be moved into the core habitat. The potential impact due to disturbance is considered to be low to medium and unlikely to result in a significant effect. Despite a possible increase in predation by domestic pets, the slow-worm population would benefit from the creation of hibernacula and rough grassland habitat, such that the net effect is unlikely to be significant.

7.11 Surveys have found no evidence of bats roosting within the site, including the reservoir structure. A small number of common bat species were seen foraging or commuting close to vegetation around the site perimeter, which would be retained. No trees with roosting potential would be affected. The proposed management measures, including erection of bat boxes, would enhance the long-term suitability of the site for foraging and roosting bats. Following some temporary disturbance during construction, the overall residual effect on bats is anticipated to be minor and beneficial.

7.12 Impacts on the assemblage of relatively commonplace birds that use the site would be minimised during construction by avoiding site clearance during the nesting season or by carrying out precautionary surveys. No important nesting habitat would be lost. Despite a possible increase in predation by domestic pets, the proposed mitigation would increase the attractiveness of the site for birds (e.g. by providing bird boxes), such that the residual effect is unlikely to be significant.

Flood Risk and Drainage

7.13 The site is located within Flood Zone 1, which signifies a low (less than 1 in 1,000 year) probability of flooding. The site occupies a hilltop location; there are no watercourses in the local area, which is served by a combined urban drainage system. There are no records of flooding from sources such as groundwater or surcharging of sewers. Approximately 60% of the site is in a greenfield condition; the remainder (the reservoir) is effectively impermeable and likely to discharge runoff towards the surrounding area.

7.14 Localised flooding or pollution of drainage systems can occur during construction; any such impacts will be avoided through the adoption of best practice as part of the Construction Management Plan. By increasing the area of impermeable surfaces (roofs and paving), the development has the potential to increase peak flows from the site. However, the CfSH criteria require the development not to exceed current rates of stormwater discharge. This will be achieved through a combination of sustainable measures such as green roofs, rainwater harvesting and attenuation storage, with residual stormwater flows pumped to the public sewer on Gondar Gardens.

7.15 The greater part of the site will be retained in a greenfield condition, which will be enhanced by removal of the reservoir roof. As a result, the development is not anticipated to have a significant impact on the runoff characteristics of the site, would not increase flooding risk in the surrounding area, and would not expose new the future residents to any such risk.

Ground Contamination

7.16 The history of the site and surrounding area suggests that ground contamination is unlikely to have occurred. Site investigations (SIs) and soil analysis carried out in 2009 revealed a single, marginally elevated concentration of hydrocarbons, whilst heavy metal concentrations were typical of urban soils. The risks of residual contamination and ground gas being present are considered to be low and very low respectively. The underlying geology (London Clay) is an aquiclude, in which groundwater movement will be minimal and unlikely to provide a pathway for the spread of contaminants.

7.17 Further investigation and analysis of shallow site soils will take place prior to construction, and an appropriate mitigation strategy implemented in the event that and pockets of contaminated material are found. Whilst there is a possibility that accidental spills could occur during construction, such risks will be minimised through the Construction Management Strategy. Any discharge from dewatering will be disposed of to the public sewer in accordance with Thames Water requirements.

7.18 Any remediation carried out during construction would ensure that future residents are not exposed to any contamination risk. The proposed development is not of a type that normally poses a contamination risk. The drainage system will be isolated from natural groundwater and incorporate features such as petrol traps. Overall, the development would not have a significant effect on soils or groundwater, would not introduce significant sources of pollution and is unlikely to expose the new residents to risks from contamination or ground gas.

Noise and Vibration

7.19 Ambient noise levels are typical of an urban environment; the main sources of noise comprise background “hum” from distant major roads, intermittent noise from local

traffic and aircraft movements. The site falls into Noise Exposure Category (NEC) A during the day and NEC B at night, which means that noise should be taken into account when determining the application.

7.20 As a result, an appropriate glazing specification has been adopted for bedrooms, which ensures that "good" internal ambient noise levels will be achieved (as per BS8233) when the windows are closed. A mechanical ventilation system will be provided so that residents do not need to open the windows. The development will therefore not lead to any significant effects on the acoustic amenity of future residents.

7.21 During construction, noise levels are likely to reach 71dB at the nearest sensitive properties on occasion, principally during demolition and concrete pours. Whilst these levels could be sufficient to give rise to potentially significant effects, mitigation would be achieved through a range of measures agreed with the EHO as part of the Construction Management Plan. They are likely to include the use of temporary acoustic barriers where practicable, together with liaison with residents so that they are forewarned of the noisiest activities.

7.22 Levels of vibration during some construction activities (e.g. demolition and piling) are likely to be perceptible, on occasion, in some surrounding properties. However, the levels will generally be well below those required to cause cosmetic damage to buildings, and will be mitigated through measures such as the provision of a cushion mat during demolition and the adoption of non-percussive piling.

7.23 Traffic from the completed development will have a negligible effect on noise levels at properties fronting onto Gondar Gardens. The new dwellings will provide a degree of screening along the currently open frontage of the street, which will reduce noise levels at the rear facades of surrounding properties. Building services plant such as the car lifts will be designed so as to avoid disturbance to the new residents and would therefore have a negligible effect on existing properties.

Sunlight and Daylight

7.24 Lighting levels within the majority of nearby properties currently comply with the Building Research Establishment (BRE) Guidelines, which is unusual for an urban location. With construction of the new dwellings, acceptable lighting levels would be maintained at the majority of properties. Although solar access would be reduced for three windows during the winter, these serve bedrooms, and the aims of the BRE Guidelines are therefore considered to be achieved.

7.25 In relation to the proposed dwellings, all rooms will achieve or exceed the recommended Average Daylight Factor (ADF) as recommended in the London Housing Design Guide, BS8206 and the BRE Guidelines, and will also achieve good daylight distribution.

Townscape and Views

7.26 Apart from the inevitable intrusion from construction plant and associated features, the main source of impact would relate to the introduction of built development along the frontage of Gondar Gardens, and the opening up of the reservoir as a landscaped space. No significant vegetation would be lost; the protected trees adjoining the eastern boundary of the site would be unaffected.

7.27 The new dwellings would screen views into the site from Gondar Gardens, from the adjoining mansion blocks and from the rear of several properties in Sarre Road. The remainder of the site would remain open, as seen from the gardens and upper floors of properties in Gondar Gardens, Agamemnon Road and Hillfield Road.

7.28 The character of the site as Private Open Space would be largely maintained, amounting to a moderate effect that is not regarded as significant. The effects on residential amenity would range from minor (Hillfield Road/Agamemnon Road) to moderate (Gondar Gardens) to substantial (Sarre Road), with the latter regarded as significant. The effects on wider views and townscape, and on the setting of cultural heritage assets in the surrounding area, would be negligible.

Transport

7.29 Construction is anticipated to generate up to 20 two-way vehicle movements per day. Whilst this would not be significant in capacity terms, some inconvenience to other road users is unavoidable. This impact would be minimised by agreeing traffic arrangements (e.g. HGV routes) with the Council. Width and turning restrictions suggest that articulated lorries could not be used.

7.30 On-street parking for approximately 11 vehicles would be suspended during construction, whilst the pedestrian footway adjoining the site would also be closed. However, parking surveys indicate that alternative spaces are available, whilst a safe diversion for pedestrians would be provided. With mitigation in place, the effects during construction are unlikely to be significant.

7.31 The completed development would give rise to an increase of up to 20% in daily traffic movements on Gondar Gardens, although the level of increase during peak periods would be substantially lower. On the basis of the IEMA guidance, such an increase is not considered to be significant. All parking for the development would be provided on-site, and the new residents would not have access to on-street parking. On-street parking for approximately three vehicles would be lost in order to accommodate the new access. Since spare capacity exists in the immediate area, this reduction is not considered to be significant.

Cumulative Effects

7.32 A number of the predicted impacts will occur at the same time, which could increase the perceived effects; this is most likely to be the case during construction, when local residents could be variously affected by noise, vibration, traffic and visual intrusion.

7.33 Three other developments have been identified in the local area, on Gondar Gardens and Mill Lane. These are of modest scale and are highly unlikely to give rise to cumulative effects in combination with the proposed development.