

264 Belsize Road, London NW6 4BT

Utilities Assessment



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Executive summary

This Utilities Assessment presents the utility approach that has informed the design of the proposed development against relevant London Plan Policy (Policy SI 5 Water Infrastructure) and London Borough of Camden Local Plan (Policy CC2, CC3, and CC5).

The relevant policies were included in this report briefly, and the detailed contents of the policies can be referred to the Planning Policy section of the Energy Statement and Sustainability Statement of this planning application.

This report Includes information on:

- Existing and proposed new service entry points (to be confirmed on site and by the utility authority)
- Existing surface and foul water drainage points (to be confirmed by CCTV Survey)
- No central HVAC plant is proposed due to the small scale of the project

Proposed utilities and services

Electricity

The existing electricity supply to 264 Belsize Road and the shop unit (converted into the communal entrance of the development) is to be used through a new fuse board via a check meter and an isolator to individual distribution boards within each residential unit.

Communications

A new fibre optic supply for telecom and media services will be provided to each residential unit from Kilburn Place.

Gas

The new building design proposal does not require a gas supply and will gas will be disconnected.

Water

The new residential development will require a larger mains water supply to meet the higher demand requirements for five residential units.

The new mains water supply will also serve an automatic fire suppression system via a sprinkler system.

An application to Thames Water is to be completed to confirm if there is sufficient capacity in the network to supply the increased demand for the new development and to provide the suitably sized new water supply.

Foul and Surface Water

A CCTV below-ground drainage survey is to be undertaken to determine the exact location and size of the existing foul and surface water drainage connection(s) and the current condition of the pipes within the system. The new building development has a similar footprint to the existing building but with increased foul flow discharge.

The development will include a green roof system that will attenuate and reduce the water run-off rate. It is envisaged that the existing drainage discharge points to the sewer will be reused.

1 Introduction

- 1.1 Control Electrical Engineers Ltd has appointed Peter Deer and Associates Ltd (PDA) to undertake the design stage utility report for the proposed development to support the planning application for the redevelopment of the mixed-use commercial/community building, 264 Belsize Road, Camden, London, NW6 4BT.
- 1.2 This Utilities Assessment presents the utilities approach that has informed the design of the proposed development against relevant London Plan Policy (Policy SI 5 Waste Infrastructure) and London Borough of Camden (LBC) Local Plan (Policy CC2, CC3, and CC5).
- 1.3 This report includes information on:
- Existing service entry points (**subject to site survey and confirmation by utility authority**)
 - Existing surface and foul water drainage points (**subject to CCTV Survey**) □ Proposed utilities and services
 - Electricity
 - Communications
 - Water
 - Foul and Surface Water
- 1.4 This document should be read in conjunction with:
- Design and Access Statement
 - Energy Statement
 - Sustainability Report

Proposed Development

- 1.5 This development contains 5no. two-bedroom duplexes. Each property will have access to a private garden or balcony.
- 1.6 Full details of the proposal are set out in Alan Power Architects Ltd.'s Design and Access Statement. The proposed development includes 5 residential units as above, and **it is not regarded as a major development** according to the London Plan 2021 (FLA of 506m² <1000m²).

Site Location

- 1.7 Location: 264 Belsize Road, Kilburn, London, NW6 4BT. Proposed dwelling units face southeast.
- 1.8 The site is located in Kilburn within the Borough of Camden. It is located on the northern side of Belsize Road (<https://www.openstreetmap.org/#map=19/51.53769/-0.19249>). The site area is approximately 470m², previously occupied by an existing redundant non-residential institution building.

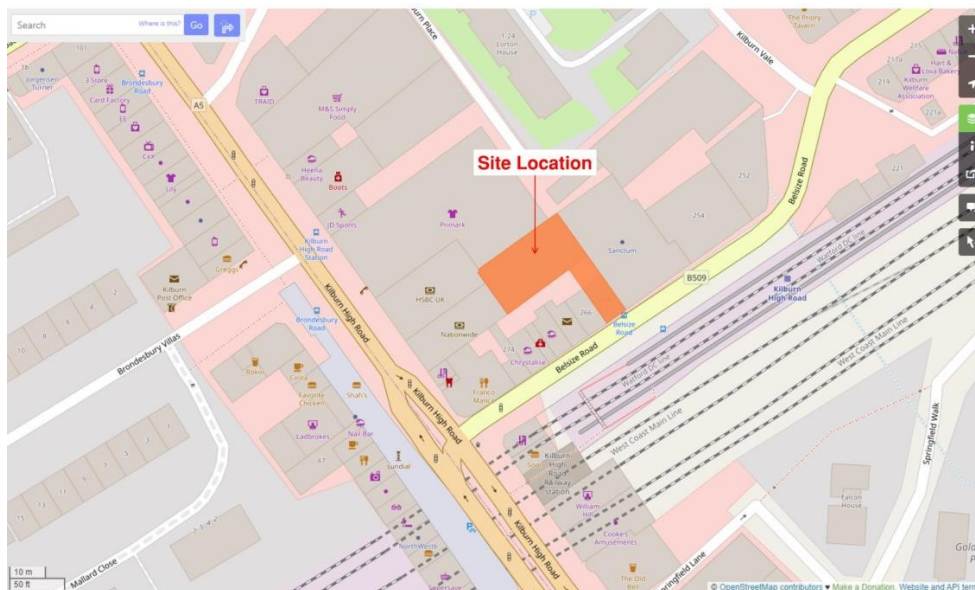


Figure 1 Site location (Open Street Map 2022)

- 1.9 The site is within an Archaeological Priority Area due to its proximity to an old Roman road, now the A5. It is approximately 40 metres east of Kilburn High Road. It is close to the Priory Road Conservation Area but is not in the Conservation Area itself.

Mechanical Ventilation with Heat Recovery

- 1.10 At this stage, it is proposed to provide appropriate energy-efficient mechanical ventilation systems such as continuous Mechanical Ventilation with Heat Recovery (MVHR) to meet the overheating and fresh air supply requirements. Additionally, all dwellings will have openable windows to allow for purge ventilation and provide the occupants with the option of natural ventilation.

Heating system description

- 1.11 The Government has announced that by 2025, all new homes will be banned from installing gas and oil boilers and will be heated by low-carbon alternatives instead. The ban is part of a UK action plan to reach carbon Net-Zero by 2050. **An all-electric air source heat pump (per dwelling) with an underfloor heating system is proposed.**

Location of mechanical ventilation fans/heat recovery units/heat pumps.

- 1.12 No central HVAC plant room is proposed for this development due to the small scale of this project.
- 1.13 The heat pump outdoor units are proposed to be located in the plant areas at the rear of the building.
- 1.14 The designer will select the external heat pump condensing units for low noise operation and, where required, fit additional acoustic attenuation.
- 1.15 The proposal is to locate a new energy-efficient MVHR ventilation unit with variable speed fans, heat recovery and ductwork, individually in each dwelling.

2 Planning Policies

London Plan

Policy SI 5 Water infrastructure.

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| <p>A) In order to minimise the use of mains water, water supplies and resources should be protected and conserved in a sustainable manner.</p> <p>B) Development Plans should promote improvements to water supply infrastructure to contribute to security of supply. This should be done in a timely, efficient and sustainable manner taking energy consumption into account.</p> <p>C) Development proposals should: 1) through the use of Planning Conditions minimise the use of mains water in line with the Optional Requirement of the Building Regulations (residential development), achieving mains water consumption of 105 litres or less per head per day (excluding allowance of up to five litres for external water consumption) 2) achieve at least the BREEAM excellent standard for the 'Wat 01' water category 160 or equivalent (commercial development) 3) incorporate measures such as smart metering, water saving and recycling measures, including retrofitting, to help to achieve lower water consumption rates and to maximise futureproofing.</p> <p>D) In terms of water quality, Development Plans should:</p> <ol style="list-style-type: none"> 1) promote the protection and improvement of the water environment in line with the Thames River Basin Management Plan, and should take account of Catchment Plans 2) support wastewater treatment infrastructure investment to accommodate London's growth and climate change impacts. Such infrastructure should be constructed in a timely and sustainable manner taking account of new, smart technologies, intensification opportunities on existing sites, and energy implications. Boroughs should work with Thames Water in relation to local wastewater infrastructure requirements. <p>E) Development proposals should:</p> <ol style="list-style-type: none"> 1) seek to improve the water environment and ensure that adequate wastewater infrastructure capacity is provided 2) take action to minimise the potential for misconnections between foul and surface water networks. <p>F) Development Plans and proposals for strategically or locally defined growth locations with particular flood risk constraints or where there is insufficient water infrastructure capacity should be informed by Integrated Water Management Strategies at an early stage.</p> |
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Table 1 Section from LBC Policy CC2

Camden Local Development Plan

Camden Local Plan Policy CC2 Adapting to climate change.

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| <p>The Council will require development to be resilient to climate change. All development should adopt appropriate climate change adaptation measures such as:</p> <p>The protection of existing green spaces and promoting new appropriate green infrastructure;</p> <ol style="list-style-type: none"> a. not increasing, and wherever possible reducing, surface water run-off through increasing permeable surfaces and use of Sustainable Drainage Systems; b. incorporating bio-diverse roofs, combination green and blue roofs and green walls where appropriate; and |
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Table 2 Section from LBC Policy CC2

Camden Local Plan Policy CC3: Water and Flooding

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| <p>Council will seek to ensure that development does not increase flood risk and reduces the risk of flooding where possible.</p> <p>We will require development to:</p> <ol style="list-style-type: none"> a. incorporate water efficiency measures; b. avoid harm to the water environment and improve water quality; c. consider the impact of development in areas at risk of flooding (including drainage); d. incorporate flood resilient measures in areas prone to flooding; e. utilise Sustainable Drainage Systems (SuDS) in line with the drainage hierarchy to achieve a greenfield run-off rate where feasible; and f. not locate vulnerable development in flood-prone areas. <p>Where an assessment of flood risk is required, developments should consider surface water flooding in detail and groundwater flooding where applicable. The Council will protect the borough's existing drinking water and foul water infrastructure, including the reservoirs at Barrow Hill, Hampstead Heath, Highgate and Kidderpore.</p> |
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Table 3 Section from LBC Policy CC3

3 Electricity

- 3.1 There are two existing electricity supplies to 264 Belsize Road.
- 3.2 There is one that appears to be rated at 21KW /100A single phase. The meter is located in the basement. The supply source is not determined from the visual inspection, but it is likely to be from the service head located at the entrance to the residential units.
- 3.3 The second supply appears to be a 100A three-phase located within the shop unit (264 Belsize Road).
- 3.4 To minimise the scope of work for the utility services and provide a sustainable design, the PDA proposal is;-
- The existing 100A Single phase used for the shop unit will be part of the landlord's common area. It is assumed that there will be no requirement for any comfort cooling. The supply will be adequate for general small power & lighting within the demise.
 - The existing 100A three-phase supply will be used for the 5 residential units. The electricity supply will be from a new fuse board via a check meter and an isolator to individual distribution boards within each residential unit.
- 3.5 The table below indicates the maximum demand assessment for the residential units. Each unit is considered to have a very similar power requirement at this design stage.

	One Dwelling	Five Dwellings
Load Type	Power (W)	Power (W)
Lighting (All LED)	920 W	4.600 KW
Air Source Heat Pump	5359 W	26.795 KW
MVHR Unit	575 W	2.875 KW
Towel Rails	300 W	1.500 KW
Hot Water Immersion	3000 W	15.000 KW
Elec Under Floor Heating	1800 W	9.000 KW
Pumps	690 W	3.450 KW
Hob	2000 W	10.000 KW
General Small Power	2500 W	12.500 KW
Total Power	17144 W	85.720 KW
Diversity*	0.75	0.60
Total Power	12858 W	51.432 KW
	13.53 KVA	54.14 KVA
	58.85 A	78.14 A (Per Phase)
* Not all equipment will be on simultaneously		

Table 4 Indicative maximum demand for the development

4 Telecom & Media

- 4.1 A new fibre optic supply will be provided to the rear of the site via Kilburn Place and it is intended to provide telecom and media services to each residential unit.

5 Water

- 5.1 There are two incoming water supplies serving the existing building. It is believed that the pipework routes into the building are 15mm diameter from Belsize Road at the front of the building and 32mm diameter from Kilburn Place at the rear of the building.
- 5.2 The existing supplies serve minimal toilet accommodation and tea points.
- 5.3 The proposal is to utilise the existing 15mm diameter supply from Belsize Road for the shop.
- 5.4 The new residential development is likely to require a larger mains water supply to meet the higher demand requirements for five residential units.
- 5.5 The new mains water supply will also serve an automatic fire suppression system via a sprinkler system.
- 5.6 An application to Thames Water is to be completed to confirm there is sufficient capacity in the network to supply the increased demand for the new development and to provide the suitably sized new water supply. The proposal for the point of entry for the new supply into the building is from Kilburn Place.
- 5.7 All water outlets will use water-saving technologies such as low water rate taps and reduced flush WC's.

6 Gas

- 6.1 There is an existing gas supply to a gas meter located in the basement area to the front of the building serving two gas boilers. It is believed that the pipework route into the building is from Belsize Road at the front of the building.
- 6.2 The new building design proposal does not require a gas supply and the existing supply will be disconnected.

7 Foul and Surface Water

- 7.1 There are existing drainage manholes located internally at ground floor level towards the rear of the building.
- 7.2 It is believed that the existing drainage system is a combined foul and surface water system and runs downstream through to the adjacent building below ground drainage system.
- 7.3 There are three existing residential flats; Flats A, B & C over the first to third floors partially above the ground floor entrance fronting onto Belsize Road (Figure 2). The three flats are not part of the project works, and existing drainage provisions are to be maintained. The foul drainage discharge routes from the three flats are to be confirmed following further site investigations.

- 7.4 A CCTV below-ground drainage survey is to be undertaken to determine the exact location, routes and size of the existing foul and surface water drainage connection(s), and the current condition of the pipes within the system.
- 7.5 The proposed foul water strategy for the new building is to provide new soil and waste down pipes to serve each unit, with collection within a void below ground floor level. It is envisaged that the new scheme will discharge via gravity to the existing outlet point(s) with new connections to the manholes as necessary.
- 7.6 The design proposal increases the foul discharge flow rate from the existing, which is minimal serving toilets and tea points only.
- 7.7 The proposed surface water strategy for the new building is to provide new surface water down pipes from roof and gutter areas, with offsets within a void below ground floor level to discharge via gravity to the existing rainwater outlet points, with new connections to the manholes as necessary.
- 7.8 The new building development has a similar footprint to the existing building. The new development roof will include a green roof system that will attenuate and reduce the water run-off rate.

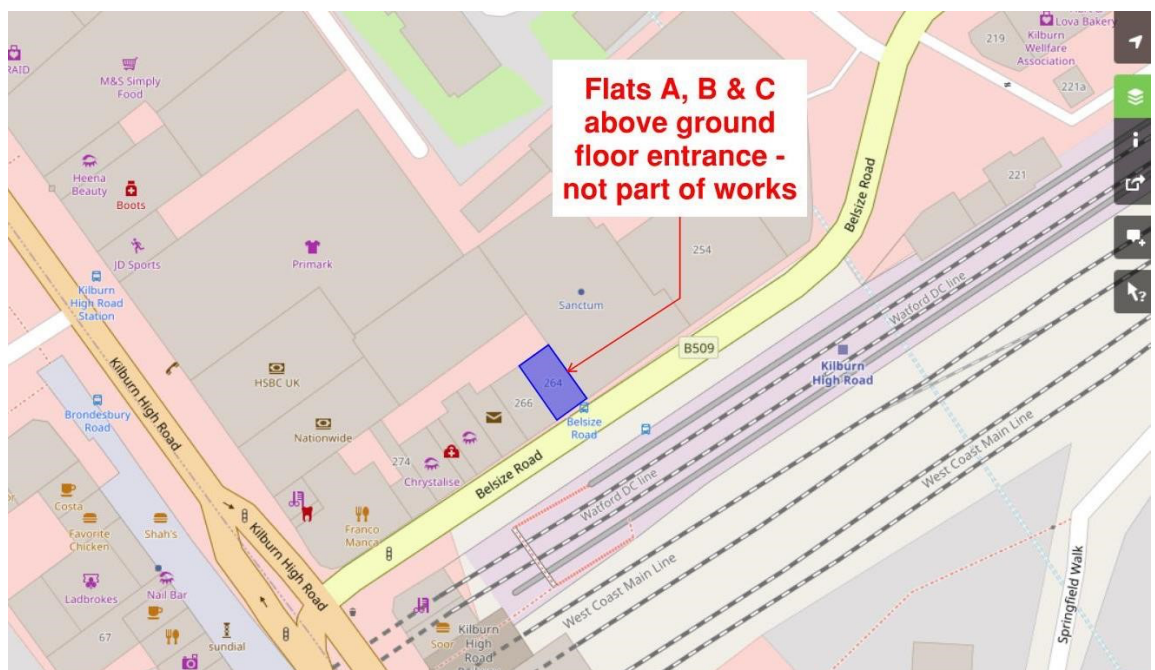


Figure 2 Location of existing residential Flats A, B & C