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London Borough of Camden Development Management
Camden Town Hall Extension
Argyle Street
LONDON
WC1H 8EQ

11th March 2023

Our reference: SL/jj

Dear Sirs,

Re: Application for Planning Permission and Demolition of a Building in a Conservation Area
Application Address: No. 26 Netherhall Gardens, London NW3 5TH
Planning Application Ref: 2023/0207/P

This is a letter of objection in response to the planning application reference 2023/0207/P made on behalf Mr Bacal, the freeholder owner to No. 24a Netherhall Gardens, London NW3, which is situated immediately adjacent to the application address. I have been instructed to comment on the structural report by SR Brunswick dated October 2022.

My detailed comments on each facet of the report are defined in the table below.

APPRAISAL OF ENGINEERING REPORT PREPARED BY SR BRUNSWICK DATED OCTOBER 2022 BY SIMON LEVY FRICS MAE

Comments made by Steven Brunswick BSc., CEng, FICE., FCIOB		Comments made by Simon Levy FRICS MAE
INTRODUCTION		
I am a Chartered Engineer with over 40 years' experience of structural design and review of residential and commercial properties. I am a fellow of both the Institution of Civil Engineers and the Institute of Building. +A9 I have been asked to produce a Structural Report to support the planning application for the redevelopment of the side extension to 26 Netherhall Gardens. The proposed extension comprises a 3 storey traditional build structure with the new ground floor level at the existing garage floor level, there is no basement proposed, though the new ground floor will have access to a terrace area that will be form part of the extended rear lightwell within the existing garden.		No comment
EXISTING SITE AND BUILDINGS		
I have been provided with survey drawings and drawings of the existing and proposed layouts which are in Appendix 1.		The report does not state that the design engineer has physically inspected the site and the surrounding buildings. A direct site inspection is regarded as essential in the context of advising on the structural impact of the proposed development on neighbouring property.
I. The site address is 26 Netherhall Gardens, London NW3 5TL and is located at approximate National Grid reference 550453 178948, In the London Borough of Camden.		No comment.
II. The property is believed to have been built around 1879 to 1888. A modern garage and side extension was added in the late 1950'6.		No comment.
III. The property is not listed but lies in the Netherhall and Fitzjohns Conservation area.		No comment.
IV. The surrounding properties are large detached residential properties with a number converted into flats. The general nature of the area is residential with various retail outlets 200m away along the Finchley Road.		Largely irrelevant. No mention is made that 24A is a single family house.
V. There are several Network Rail tunnels, the Belsize Old and New tunnels some 100m to the North and 100m to the south of the site. These tunnels are not significant in respect of the proposed development. See layout below.		No comment.
VI. A site visit has been undertaken to ascertain the structural make-up of the building and the general site arrangements.		No reference is made to geological site investigation, which should have been carried out and this report makes no reference to the designer engineer attending on these investigations.

a. 26 Netherhall gardens is a three-storey detached property with Lower Ground, Ground and First Floors. There is additional storage in the attic space.b. The property has been converted into flats, at some point in the past and a modern garage and side extension built to the sidec. The local area is on a hillside setting which slopes down in a generally east-west direction towards Finchley Road (see figure below).d. The lower ground floor is raised some 1.0m to 1.5m from general street level with the ground floor some 3.5m to 4.0m above general street level.e. The property has a raised front garden with steps up to the ground floor entrance and a modern hard standing front drive with access to Netherhall Gardens.f. The rear garden slopes up from the retaining wall, enclosing the rear lightwell, to the rear boundary.g. The site lies between 28 Netherhall gardens on the left and 24A & 24 Netherhall Gardens to the right. To the rear is a singles storey building belonging to 47 Maresfield Gardens and Netherhall gardens to the front.h. Access to the site is directly off Netherhall Gardens.		No commentNo comment.The sloping nature of the site is an important factor relevant to the extent of proposed excavation and the effect this excavation may have on 24A.No comment.No comment.No comment.The proximity of the proposed new development to 24A has not been defined. This is 1m.No comment.
i. There are several mature trees on the site which have been surveyed by Crown Arboricultural Consultants.		The relevance of the trees to the foundation construction and formation depth is discussed below. The design engineer makes no reference to this very important influencing factor whatsoever.
VII. Existing structures generally comprise loadbearing masonry frame with timber floors and roof.		Wrong. The ground floor structure to 24A is a ground bearing masonry slab. This false assumption is of some importance.
VIII. From trial holes undertaken the foundations are shallow stepped masonry footings on concrete levelling strips up to 600mm deep.		The design engineer does not describe which property this applies to.

SITE GROUND CONDITIONS		
The following is a brief description of the site ground conditions based upon the Site Analytical Services "Phase 1Preliminary Risk Assessment" (Ref 14/22068-1) and "Report ona Ground Investigation" (Ref 14/22068) The site is classified by the Environmental Agency as 'non-productive' strata.In summary the site ground profile comprises: **Figure 5 – Summary of Ground Conditions** *Based on a factor of 3 against soil compressive capacity given in SAS report		This data does not define whether there is desiccation and the clay plasticity index. No suction tests have been carried out to determine heave potential following the removal of mature tree vegetation. This is of considerable relevance to the wellbeing of 24A.
A small area of contamination is noted in the report The contamination is in the made ground with elevated concentrations of Benzo(a)pyrene, Benzol9a) anthracene and Benzo(a)fluoranthene indicated in one concentrated spot which exceed the residential end - user protection limit. Remedial measures will need to be reviewed as part of the development to protect human health and break exposure pathways for the localised area of contamination		The remedial measures to remove the contaminated ground are not defined in the construction method statement. It appears that this issue has been ignored.
DESCRIPTION OF WORKS		
The existing detached building is a substantial property built in the late 1800's with load bearing masonry walls and timber floors. The property comprises three floors including lower and upper ground floors. The Property has a significant number of trees to the front and side areas as outlined in the Assessment Feedback Plan produced by Crown Arboricultural Consultants which identifies the trees and associated Root protection areas, as attached to this report.		See above regarding the relevance of trees and vegetation to the foundation formation depth and in respect of heave potential.
As part of the proposed works, it is intended that a 3 storey side extension is constructed with a flat on each level. The layout for this part of the development is attached in Appendix 1. The finish to the building is of traditional cavity wall construction to match the existing solid masonry development. The side extension is to be on the site of the existing 1950's side extension and garage with lower ground floor level to match the existing lower ground level.		No comment.
The rear of the new development will extend into the rear garden with an extended lightwell and new external retaining wall.		The new lightwell will involve significant ground excavation and spoil removal on account of the site's topographical characteristics.

Strata	Depth BGL (m)	Ground Water (m BGL)	Angle of Shearing Resistance (ϕ)	Bulk Unit Weight kN/m³	BH1 Allowable Bearing Pressure (kpa)
Made Ground	0.00 – 1.50	1.14-1.88	-°	20	-
Weathered London Clay	0.12 – 9.20		21°	20	65* @ 2.25m BGL 108* @ 4.25m BGL 100* @ 6.75m BGL
Un-weathered London Clay	6.00 – 20.00+		21°	20	125* @ 9.75m BGL

The overall area of hard landscaping will be similar to the existing and efforts will be made to use sustainable drainage systems to minimise any run-off. This drainage will be designed and detailed by a specialist as the design is developed but will comprise a combination of rainwater harvesting tanks and storage of rainwater run-off in attenuation tanks on site.		Sustainable drainage systems "SUDS" will involve the excavation of the ground to build soakaways taking account of the clay subsoil. These soakaways will need to be of large capacity to cope with the surface and rainwater input. Permeability tests have not been described or reported thereby demonstrating that a SUDS will be able to effectively operate. This is an important omission and if the surface water drainage system cannot cope, this may have a substantial detrimental effect on 24A.
PARTY WALLS		
The work involves the construction of the new building close to the boundary with 24A & 24 Netherhall Gardens with a fire escape and access route between the two properties. The foundations of the party / boundary wall to the rear of the property extend some 2.5 m below the existing ground level, so are well below the level of the new traditional strip footing foundations to the new development.		Legal status of the party /boundary wall should be clarified and confirmed. The foundations to the rear wall are irrelevant as far as 24A is concerned. There is no reference to the depth of foundation to 24A and its relationship with the proposed new works and excavations. This is a substantial and unacceptable omission from the report as the 24A foundations are at risk of being undermined and inadequately supported, resulting in structural damage.
As the proposal does not include a basement it is not anticipated that the development will cause any significant localised ground movements and any that do occur will be less than Category 1- very slight (CIRIAC850).		This should be proven with reference to 2D finite element modelling assessment - there is no evidence that this has been done. An opinion from the design engineer without technical back up is inadequate. Simon Levy can cite several examples of other projects where engineering summary assessments of likely slight damage have been made but where very serious structural damage has been sustained.
FLOOR CONSTRUCTION		
To facilitate services, sound insulation, fire separation and underfloor heating the new development is to be constructed with concrete floors on profile metal decking as shuttering and reinforced to suit the fire condition. The metal decking will be supported by a steel frame built into the external walls and stair enclosure.		This does not concern 24A

FOUNDATIONS		
There are significant trees in the immediate area of the proposed work which would indicate that tree roots to some depth would be expected. Trial holes along the boundary have been excavated which show that the adjoining property and its rear extension have traditional foundations with 400 deep ranging in overall depth from ground level of 1600mm to 2400mm as the ground rises along the line of the boundary wall. The new ground level of the block is to be similar to the existing without any internal steps, so to match the existing foundations the new foundations will be approximately 1600mm below this level and significantly below the level affected by any trees so a traditional foundation can be considered for the extension to the property.		If roots from nearby trees are found in the foundation excavations, Building Control will require that the foundation excavations are deepened. The foundations should be designed pursuant to Chapter 4.3 of the NHBC Standards. There is no evidence provided that demonstrates that they have. If the foundations do extend deeper, these may undermine the foundations to 24A, necessitating underpinning work to 24A. This is particularly relevant given that the report does not record the depth and form of the foundations to 23A.
It will be necessary to construct a retaining wall under the new flank wall to support the new steps to the side of the extension against the boundary with 24A & 24 Netherhall Gardens. This retaining wall is of varying height up to 2.5m high with its base above the foundations to the adjacent property. The retaining wall will be constructed using reinforced concrete cast in an underpinning sequence as follows.		
Excavate a 4m x 1.2 m wide section working from the front of the building to the rear and cast the new base and retaining wall. The excavation is to be supported with steel trench sheets restrained by steel props anchored into the retained ground.		The design adequacy shall be assessed under the Party Wall Etc Act 1996 and is a separate matter to the granting of planning permission.
The soil support is to be removed as the concrete is cast to ensure that no voids are left between the new wall and the retained soil.		It is normal good building practice to use cement boards as a permanent shutter to in-situ cast concrete rather than to cast directly up against bare soil in open cut. Overspill concrete beyond the boundary is a trespass. This work should also be carried out sequentially to minimise the risk of the retained soil collapsing.
The completed RC wall is to be propped to the completed base and left to cure for 3 days before commencing the next section in the sequence.		
As each section is completed the soil against the existing building can be removed and the wall underpinned to support the additional loading.		See above. Structural calculations are required to demonstrate that the wall construction is adequate.
DRAWINGS AS ILLUSTRATED IN REPORT.		The drawing does not illustrate the position of the boundary between the properties.
Temporary Works Section (Sections to be cast in 1.2 m widths with 4 m minimum height length of base. Maximum height to be retained 2.5 m).		The maximum length of each section is normally 1 m and not 1.2 m.

It will be necessary to underpin the flank wall of 26 Netherhall gardens to accommodate the increased loading from the new side extension.		If the foundations to the new structure are deepened due to tree root discovery in the excavated trenches, it may be necessary to underpin the flank wall to 24A too. See above.
DRAWINGS AS ILLUSTRATED IN REPORT.		
The rear retaining wall for the side extension will support the garden and give a lightwell to the lower ground floor of the side extension as shown in the section on the right. The proposed wall will retain the sloping garden and so will be 3.5m high and designed to support a retained height of 4.5 to take account of the sloping garden with a live load allowance of 5KN/m2 to allow for the garden to be used by other residents of the block.		No comment - these matters will be assessed under Party Wall Act administration.
The proposed structural solution will involve the construction of a reinforced concrete retaining wall with a varying wall thickness from 300mm at the top to 500mm at the base to deal with the applied loads and to minimise deflection of the wall under load. The wall will be designed with a heel for stability which will be backfilled with granular fill material to allow any ground water to drain away via the land drain at the base of the wall. Overall stability being achieved by the combined structure of the retaining wall incorporating a reinforced concrete slab forming the base of the lightwell and the structure of the proposed building to form a box.		The effect on groundwater flow consequential to the substantial ground excavation will need to be assessed and here, advice from a hydro-geologist may be required. The destination of the ground water drain must be determined and designed for reasons defined above (under "SUDS"). This has not been designed based on the documents supplied with the planning application and is regarded as a substantial omission and may have a major adverse impact on 24A.

Accordingly, Mr Bacal, the owner to 24a Netherhall Gardens objects to the planning application for reasons that are defined in the narrative below. Mr Bacal also reserves the right to supplement this with further objections.

To summarise, the principal issues that arise from the SR Brunswick report dated October 2022 are as follows:

1. The absence of any details relating to the depth of the foundations to No. 24a and the relationship of the new foundations to No. 26 with the existing foundations to No. 24a. At the very least, a cross sectional diagram should be provided.

2. A failure to take account of the close proximity of the mature trees and other vegetation, which is likely to impact the depth of the foundations to the new structure at No. 26. If the foundations to No. 26 are deepened, there will be a need to underpin No. 24a as the latter will be undermined.

3. The absence of any details relating to the sustainable drainage described nor any design data associated with the same, risking damage and potential nuisance affecting 24A.

4. The potential adverse impact on No. 24a of vegetation removal and the effect of heave that may cause significant structural damage to No. 24a.

5. The absence of finite element modelling. This technology is designed to establish if adjacent excavation will adversely affect neighbouring property. The opinion of Mr Brunswick that damage up to Category 1 may be experienced is regarded as inadequate.

For the reasons defined above, the Council are invited to **reject** the application for Planning Permission.

Yours faithfully,

[redacted]

SIMON LEVY FRICS
CHARTERED BUILDING SURVEYOR