Nora-Andreea Constantinescu, Planning Officer, Borough of Camden, Planning Department, 2<sup>nd</sup> Floor, 5 Pancras Square, London, N1C 4AG.

7<sup>th</sup> August 2019.

Dear Nora,

## [2019/1653/P] - 155 Drummond Street NW1 2PB. BIA SCREENING STAGE — Revision A.

Thank you for your emails of; 07 May 2019 at 12:09, 02 July 2019 @ 11:28 and 19 July 2019 @ 18:03.

Please find enclosed the following:

Job No. – Doc. No:	Rev.:	Name:	Scale @ A1:	Date:	Company name:	Notes:
863 – 01	С	GENERAL NOTES & SPECIFICATIONS.	-	23.01.2018	Rodrigues Associates Structural Engineer	-
863 – 02	С	EXISTING: BASEMENT PLAN.	1:25	23.01.2018	Rodrigues Associates Structural Engineer	-
863 – 03	С	EXISTING: GROUND FLOOR PLAN.	1:25	23.01.2018	Rodrigues Associates Structural Engineer	-
863 – 04	С	EXISTING: MEZZANINE PLAN.	1:25	23.01.2018	Rodrigues Associates Structural Engineer	-
863 – 05	-	EXISTING: FIRST FLOOR PLAN.	1:25	01.02.2019	Rodrigues Associates Structural Engineer	-
863 – 06	-	EXISTING: SECOND FLOOR PLAN.	1:25	01.02.2019	Rodrigues Associates Structural Engineer	-
863 – 07	-	EXISTING: THIRD FLOOR PLAN.	1:25	01.02.2019	Rodrigues Associates Structural Engineer	-
863 – 08	-	EXISTING: ROOF PLAN.	1:25	01.02.2019	Rodrigues Associates Structural Engineer	-

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863 – 20	D	EXISTING: BASEMENT CROSS	1:25	06.08.2019	Rodrigues Associates	-
20		SECTION A-A			Structural	
					Engineer	
863 –	С	PROPOSED:	1:25	22.02.2019	Rodrigues	-
09		BASEMENT PLAN.			Associates	
					Structural Engineer	
863 –	G	PROPOSED:	1:25	22.02.2019	Rodrigues	_
10		GROUND FLOOR	1.20	22.02.20.10	Associates	
		PLAN.			Structural	
000		BB0B00FB	4.05	00.00.0040	Engineer	
863 – 11	С	PROPOSED: MEZZANINE PLAN.	1:25	22.02.2019	Rodrigues Associates	-
11		MEZZAMINE PLAM.			Structural	
					Engineer	
863 –	D	PROPOSED:	1:25	22.02.2019	Rodrigues	-
12		FIRST FLOOR PLAN.			Associates	
					Structural	
863 –	С	PROPOSED:	1:25	22.02.2019	Engineer Rodrigues	_
13		SECOND FLOOR	1.23	22.02.2019	Associates	-
.0		PLAN.			Structural	
					Engineer	
863 –	С	PROPOSED:	1:25	22.02.2019	Rodrigues	-
14		THIRD FLOOR PLAN.			Associates	
					Structural Engineer	
863 –	С	PROPOSED:	1:25	22.02.2019	Rodrigues	-
15		FOURTH FLOOR			Associates	
		PLAN.			Structural	
000		PROPOSER	4.05	00 00 0040	Engineer	
863 – 16	С	PROPOSED: FIFTH FLOOR PLAN.	1:25	22.02.2019	Rodrigues Associates	-
10		FIFTITECON FLAN.			Structural	
					Engineer	
863 –	С	PROPOSED:	1:25	22.02.2019	Rodrigues	-
17		SIXTH FLOOR PLAN.			Associates	
					Structural	
863 –	С	PROPOSED:	1:25	22.02.2019	Engineer Rodrigues	
18		SEVENTH FLOOR	1.20	22.02.2013	Associates	
		PLAN.			Structural	
					Engineer	
863 –	В	PROPOSED:	1:25	22.02.2019	Rodrigues	-
19		ROOF PLAN.			Associates Structural	
					Engineer	
863 –	D	PROPOSED:	1:25	06.08.2019	Rodrigues	-
22		BASEMENT			Associates	
		LONGITUDINAL			Structural	
863 –		SECTION C-C	1:50	06.08.2019	Engineer	
23	-	PROPOSED: BASEMENT &	1.50	00.06.2019	Rodrigues Associates	-
_0		SUPERSTRUCTURE			Structural	
		CROSS SECTION D-D			Engineer	
5965/17	D	FOUNDATION PLAN.	1:50	January	Ove Arup &	-
L.7.G		GROUND FLOOR		1980	Partners	
		PLAN.		<u> </u>		1

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			1	I		I
					structural engineer	
5965/17 L.7.1	Н	MEZZANINE PLAN. 1 <sup>ST</sup> FLOOR PLAN. 2 <sup>ND</sup> FLOOR PLAN.	1:50	May 1980	Ove Arup & Partners structural engineer	-
5965/17 X.7.1	G	DETAIL SECTIONS.	1:20 1:5	28.07.1980	Ove Arup & Partners structural engineer	-
5965/17 R 047	С	FOUNDATION DETAILS. GROUND FLOOR SLAB DETAILS.	1:50 1:25	January 1980	Ove Arup & Partners structural engineer	-
5965/17 R 066	A	FIRST FLOOR SLAB DETAILS.	1:50 1:20	June 1980	Ove Arup & Partners structural engineer	-
5965/17 R 067	С	FIRST FLOOR BEAM DETAILS.	1:25 1:20	June 1980	Ove Arup & Partners structural engineer	-
5965/17 R 7.31	-	REINFORCEMENT DETAILS.	1:10	November 1980	Ove Arup & Partners structural engineer	-
5965/05 M.1	В	SITE LAYOUT & BOREHOLE LOG.	1:200	-	Ove Arup & Partners structural engineer	-
5965/17 M.1	В	SITE LAYOUT & BOREHOLE LOG.	1:200	November 1979	Ove Arup & Partners structural engineer	-
5965 M.2	-	SITE INVESTIGATION.	NTS	March 1976	Ove Arup & Partners structural engineer	-
863	-	STRUCTURAL SCHEME DESIGN REPORT	NTS	February 2019	Rodrigues Associates Structural Engineer	-
863	-	NOTES ON SCREEN PROCESS	NTS	23 May 2019	Rodrigues Associates Structural Engineer	-

I confirm that you attended a site visit, 16 July 2019 and that together we viewed the existing basement structure; which is an approximately 2.2m height void space formed from reinforced concrete structures, with sections of retained old basement brick walls to the north [Drummond Street] and the south [Tolmers Square Estate] and with flank walls that are the brick party wall structures to the adjacent properties to the east [141-153 Drummond Street] and to the west [159 Drummond Street].

I explained the works that we have undertaken to the basement, to date [and to Building Control Approval] comprise; structural investigations, the test-casting of a section of new perimeter wall and the removal of loose spoil from the central void space, only.

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The existing freehold structure was heavily engineered by Ove Arup [circa 1980] and I explained the general principles of the structural reinforcement of the basement structures in lay terms [by this I mean, as best as I am able to. I am not a qualified structural engineer and although I understand the general principles of the structural design, I am not an expert and Campbell Reith should refer any detailed questions to Rodrigues Associates].

The structure from the 1<sup>st</sup> floor slab upwards, is a mixture of masonry and timber structures, of poor quality, which shall be demolished in order to improve the efficiency of the structure and to develop the site.

The structure from the 1<sup>st</sup> floor slab downwards comprises good quality reinforced concrete and masonry structures. A 600mm thick reinforced concrete transfer structure at 1<sup>st</sup> floor level, sits on brickwork flank walls and 3 no. reinforced concrete columns. This in turn sits on a 450mm reinforced concrete ground slab which is supported on 2 no. 2.2m deep I-beams [running north-south i.e. parallel to the adjacent party walls] constructed from reinforced concrete. The I-beams sit on strip foundations down to the formation level and 155 Drummond Street is a free-standing structure which takes no structural support from the adjacent party walls [141-153 Drummond Street & 159 Drummond Street].

The existing basement and foundation structures [while adequate for the existing building] are an open structural system and are not particularly efficient. There are no basement columns below the ground floor columns, for example. By closing this structural system, it is possible to more than double the loadbearing capacity of the building foundations all while retaining unfettered and open access to the Tolmers Square Estate. Closing the structural system, comprises casting 'L-sections' of reinforced concrete wall, spanning between the ground floor reinforced concrete slab and the lower edge of the reinforced concrete basement I-beams [such as the section that I pointed out on site]. Additionally, to close the structural system, 3 new basement columns are to be cast below the 3 existing ground floor columns and a section of basement slab is to be cast to span the lower edge of the reinforced concrete basement I-beams. All of this can be achieved without disturbance to the existing structures, without underpinning and without taking structural support from the party wall structures. Please ref: Structural Scheme Design Report by Rodrigues Associates.

In your email 02 July 2019 @ 11:28, you requested clarification as to whether the existing foundations are under-pinned? They are not under-pinned. Foundation-A is extended sideways, but is no deeper than existing Foundation-A. <u>Please ref</u>: Structural Scheme Design Report by Rodrigues Associates.

In your email 02 July 2019 @ 11:28, you requested clarification as to whether we are casting a new basement slab? Yes, we are casting a new basement slab, but only within the central void space and it shall be no lower than the existing basement structures. <u>Please ref</u>: Structural Scheme Design Report by Rodrigues Associates.

In your email 02 July 2019 @ 11:28, you requested existing and proposed structural engineer's sections. Please refer to the attached and the above drawing schedule. N.B. SECTION A-A [EXISTING] and SECTION D-D [PROPOSED] are cut on similar lines and adequately describe the limit of the existing structure and the proposed structural alterations.

Please find the following statement, which confirms the screening stage of the BIA undertaken to ascertain if any issues were found that needed to be further investigated. With reference to the 'London Borough of Camden geological, hydrogeological and hydrological study Guidance for subterranean development' and using the same numbering and referencing system for ease of correlation. This statement has been prepared with reference

to the drawings and documents as previously issued to you as DOCUMENT ISSUE REGISTER, dated 15 March 2019 and those drawings and documents scheduled above.

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## Surface flow and flooding screening flowchart.

## Question 1.

No, the site is not within the catchment of the pond chains on Hampstead Heath.

#### Question 2.

No, the proposed basement structural alterations shall not materially change from the existing route, the proposed site drainage or the surface water flows [e.g. volume of rainfall and peak run off].

#### Question 3.

No, the proposed basement structural alterations shall not result in a change in the proportion of hard surfaced and/or paved external areas.

## Question 4.

No, the proposed basement structural alterations shall not result in changes to the profile of the Inflows [instantaneous and long term] of surface water being received by adjacent properties or downstream watercourses.

#### Question 5.

No, the proposed basement structural alterations shall not result in changes to the quality of surface water being received by adjacent properties or downstream water courses.

#### Question 6.

No, the site is not in an area known to be at risk from surface water flooding, such as South Hampstead, West Hampstead, Gospel Oak and King's Cross. No, the site is not at risk of flooding and the proposed basement structural alterations are not below the static water level of a nearby surface water feature.

## Subterranean [groundwater] flow screening flowchart.

## Question 1a.

No, the site is not located directly above an aquifer.

#### Question 1b.

Please see Rodrigues Associates Ref: RA/863 'Notes on Screen Process'.

#### Question 2.

No, the site is not within 100m of a watercourse, well [used/disused] or a potential spring line.

## Question 3.

No, the site is not within the catchment of the pond chains on Hampstead Heath.

## Question 4.

No, the proposed basement structural alterations shall not result in a change in the proportion of hard surfaced and/or paved external areas.

## plat-form

#### Question 5.

No, as part of the site drainage, more surface water [e.g. rainfall and run-off] than at present shall not be discharged to the ground [e.g. via soakaways and/or SUDS].

## Question 6.

No, the lowest point of the proposed excavations [allowing for any drainage and foundation space under the basement floor] is not close to nor lower than the mean water level in any local pond [not just the pond chains on Hampstead Heath] nor any spring line.

## Slope stability screening flowchart.

## Question 1.

No, the existing site does not include slopes, natural or manmade, greater than 7 degrees [approximately 1 in 8].

## Question 2.

No, The proposed re-profiling of the landscaping at the site shall not change the slopes at the property boundary to more than 7 degrees [approximately 1 in 8].

#### Question 3.

No, the development does not neighbour land, including railway cuttings and the like, with a slope greater than 7 degrees [approximately 1 in 8].

#### Question 4.

No, the site is not within a wider hillside setting in which the general slope is greater than 7 degrees [approximately 1 in 8].

#### Question 5.

Please see Rodrigues Associates Ref: RA/863 'Notes on Screen Process'.

## Question 6.

No tree/s shall be felled as part of the proposed development, nor are any works proposed within any tree protection zones of trees to be retained.

## Question 7.

No, there is no history of seasonal shrink-swell subsidence in the local area, and/or evidence of such effects on site.

## Question 8.

No, the site is not within 100m of a watercourse, well [used/disused] or a potential spring line

## Question 9.

Please see Rodrigues Associates Ref: RA/863 'Notes on Screen Process'.

## Question 10.

Please see Rodrigues Associates Ref: RA/863 'Notes on Screen Process'.

#### Question 11.

No, the site is not within 50m of the Hampstead Heath ponds.

## Question 12.

Please see Rodrigues Associates Ref: RA/863 'Notes on Screen Process'.

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## Question 13.

Please see Rodrigues Associates Ref: RA/863 'Notes on Screen Process'.

#### Question 14.

No, the site is not over [or within the exclusion zone of] any tunnels e.g. railway lines.

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Having completed the screening process, as set out to the requirement of 'London Borough of Camden geological, hydrogeological and hydrological study Guidance for subterranean development', the design team consultants, plat-form and Rodrigues Associates do conclude that there are no issues related to the proposed basement structural alterations, which require further investigations.

You have confirmed that after receipt of the enclosed information, that there can be communication between Campbell Reith and Rodrigues Associates, to tie up any loose ends regarding the BIA screening process. Please kindly arrange this communication via myself, by way of email exchange or a brief meeting with Campbell Reith.

We await your comments.

Yours sincerely,

Graeme Little. plat-form.

c.c. MR@Rodrigues Associates.