

STATION HOUSE

9 – 13 SWISS TERRACE, BELSIZE ROAD, LONDON NW6 4RR

FLOOD RISK REPORT

FOR

SHAPIRO SHULMAN PROPERTIES

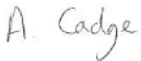
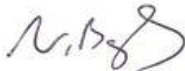


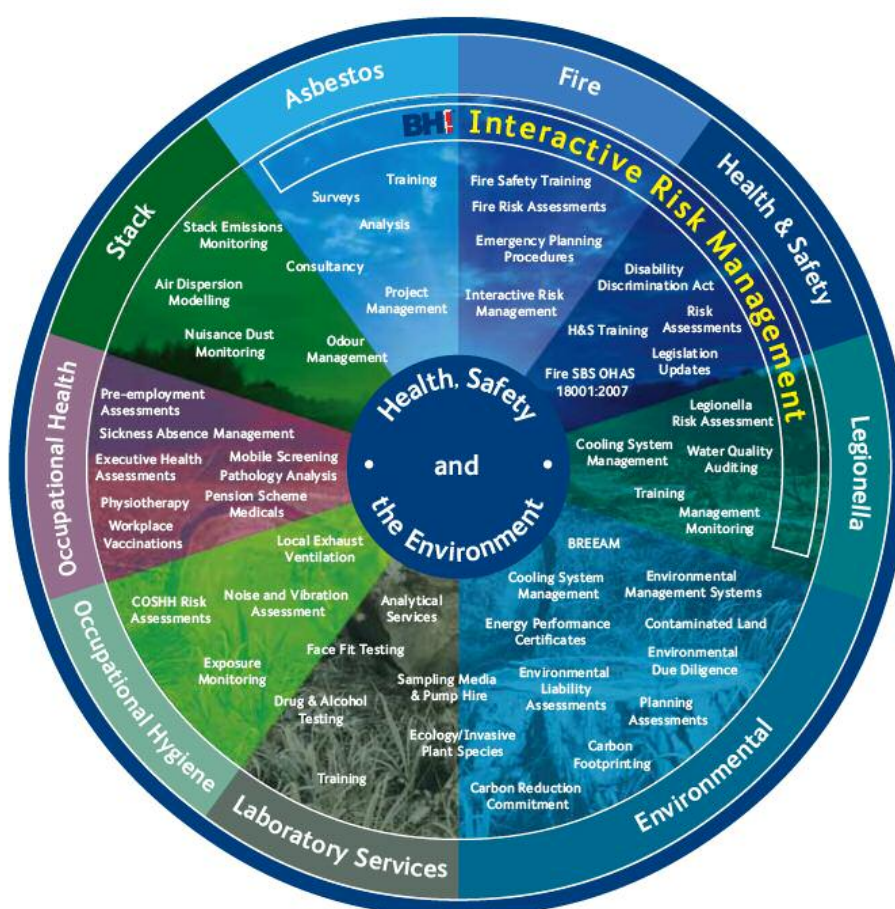
September 2013

Our Ref: HLEC27848/002R

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Project Reference:	HLEC27848/002R	
	Name:	Signature:
Report Author:	Alison Cadge	
Technical Reviewer:	Neil Bagley	
Date:	6th September 2013	
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EXECUTIVE SUMMARY

This Flood Risk Report has been prepared in relation to the Permitted Development application for the subject site. The site currently comprises an office building arranged over lower ground, ground and seven upper floors. The proposed works comprise the conversion of the first through seventh floors of the existing building to residential use. The lower ground and ground floors will remain in commercial use.

The assessment considers the risk to the site from key sources of flooding, including fluvial and tidal sources, surface water, sewer surcharging, groundwater and man-made features such as canals and reservoirs.

Overall, the site is considered to be at a low risk of flooding from all sources assessed. The development is therefore considered to be safe from a flood risk perspective. In addition, given the nature of the proposed works (comprising conversion of an existing building only) there will be no increase in flood risk as a result of the development proposal.

No further assessment or mitigation is considered necessary in relation to flood risk issues.

1 INTRODUCTION

RPS was commissioned to prepare a Flood Risk report in relation to the proposed conversion of the upper floors of *Station House, 9-13 Swiss Terrace, Belsize Road, London NW6 4RR* to residential flats.

The aim of this report is to provide an assessment of flood risk to the property, identify any impacts on flood risk resulting from the proposed works, and to provide recommendations for reducing this risk (where applicable). The report has been produced with reference to the guidance detailed in the National Planning Policy Framework (NPPF).

The following has been undertaken as part of the assessment:

- Assessment of the topographical, hydrological and hydrogeological setting through review of information sourced from the British Geological Survey, the Environment Agency and the Ordnance Survey;
- Review of readily available (online) flood risk mapping provided by the Environment Agency;
- Review of the Strategic Flood Risk Assessment produced by the Local Authority outlining flood risk from various sources within the Borough; and
- Consultation with the Water Authority regarding records of sewer flooding at the property.

Given that the proposal is for a change of use of the existing property, there is no requirement under the NPPF to apply the Sequential Test or Exception Test in relation to this application.

2 SITE DESCRIPTION AND SETTING

2.1 Site Description

The site is located in Swiss Cottage in the London Borough of Camden at national grid reference TQ 26487 84382. It is within a mixed commercial and residential setting. A site location plan is provided in Figure 1.

The site occupies an area of approximately 0.01 hectares. It is currently occupied by an office building arranged over lower ground, ground and seven upper floors.

According to Ordnance Survey mapping, the site is located at approximately 55m AOD, and the surrounding land generally slopes down to the west. The site is located at the eastern end of Belsize Road, which slopes notably away from the site to the west.

2.2 Hydrological Setting

The nearest surface water feature is a small artificial pond associated with a commercial / leisure development 150m east of the site. The nearest main watercourse is the Regent's Canal (part of the Grand Union Canal) 1.3km southeast of the site.

A tributary of the River Tyburn, a historical river which has been culverted below ground, passes approximately 200m to the east of the site, flowing in a southerly direction.

2.3 Hydrogeological Setting

According to BGS mapping, the site is underlain by the London Clay Formation, which generally comprises low permeability clay with variable sandy and silty parts. Significant shallow groundwater reserves are unlikely to be present beneath the site.

3 PROPOSED DEVELOPMENT

3.1 Description of Development

The Permitted Development application is for the conversion of the first through seventh floors of the existing building to residential use. The ground floor and lower ground floor will remain in commercial use. Development plans are provided in Appendix B.

4 CONSULTATIONS & REGULATORY INFORMATION

4.1 Environment Agency

The Environment Agency flood map (available online) indicates that the site is located within Flood Zone 1 (low probability of flooding). The annual probability of flooding from fluvial / tidal sources is classified as less than 1 in 1000. The Environment Agency Flood Map is provided in Figure 2.

Environment Agency mapping also indicates that the site is not located within an area potentially at risk from reservoir flooding.

4.2 Local Authority

The North London Strategic Flood Risk Assessment (SFRA) was published in August 2008. It provides an overview of flood risk from various sources within the North London boroughs, including the London Borough of Camden. Information of relevance to this assessment is summarised below:

- Generally, Camden has a particularly high risk of flooding from sewers and surface water, and a low fluvial flood risk. Groundwater flooding was found to present a relatively low risk. Reservoirs were considered to present a low risk.
- Camden suffered widespread surface water flooding in August 2002 due to a high intensity rainfall event. Finchley Road to the east of the site and Belsize Road to the south of the site were both impacted (together with a large number of roads across the borough of Camden). Belsize Road was also affected by surface water flooding in 1975.
- Very few groundwater flooding incidents have been recorded in the North London area, and all of these have been recorded in the London Borough of Enfield. Almost all occurred where drift deposits overlie the London Clay.
- Fewer than five sewer flooding incidents were recorded by Thames Water within the postcode area of the subject site in the ten years between 1997 and 2007.
- The nearest recorded flood event occurred approximately 200m to the east of the site and was attended by the fire brigade (no further details were provided).
- Five surface water flood risk areas have been identified based on available surface water and sewer flooding records. South Hampstead to the west of the site forms one of the five risk areas. However, the areas are not clearly delineated and it is not specified whether the subject site falls within the area potentially at risk.

4.3 Water Authority

Thames Water has advised that there have been no recorded sewer flooding incidents at the subject site.

4.4 Information from Client / Site Tenants

The site owner is unaware of any previous flooding incidents affecting the subject property.

5 ASSESSMENT OF FLOOD RISK

5.1 Background

The following assessment is based on the data presented in the preceding sections of this report. It should be noted that flooding can occur at any location and cannot always be predicted. However, this report aims to identify any specific or known risks relating to the subject property, based on available information sources.

5.2 Fluvial / Tidal Flooding

Fluvial and tidal flooding refers to flooding from surface watercourses and their tributaries, estuaries and the sea. Environment Agency mapping indicates that the site is located within Flood Zone 1, whereby the annual probability of fluvial or tidal flooding is classified as less than 1 in 1000.

The North London SFRA confirms that the borough of Camden generally has a low fluvial flood risk.

The National Planning Policy Framework (NPPF) details the suitability of different land uses within each flood zone. Under the Technical Guidance to the NPPF, the proposed land use is classified as 'more vulnerable' and such uses are considered compatible with Flood Zone 1.

Overall, the risk associated with flooding from fluvial or tidal sources is considered to be low.

5.3 Flooding from sewers

Sewer flooding can occur during periods of heavy rainfall when a sewer becomes blocked or is of inadequate capacity.

Thames Water has advised that the subject property has no history of sewer flooding, and a relatively small number of sewer flooding incidents were reported within the SFRA for the postcode area.

In the event of sewer surcharging on Belsize Road, water would be conveyed in a westerly direction away from the subject property, following local topography.

Overall, the risk associated with flooding from sewers is considered to be low.

5.4 Surface water (pluvial) flooding

This can occur during intense rainfall events, when water cannot soak into the ground or enter drainage systems. Overland flow is likely to follow the local topography, ponding in valleys or topographical depressions.

The North London SFRA has reported that Belsize Road was affected by surface water flooding in 1975 and 2002 (much of the borough of Camden was affected by these events). However, given that this street slopes notably down to the west (with the subject property located at the eastern end), it is likely that any overland flow would be conveyed in a westerly direction away from the site, rather than ponding in the vicinity of the subject site. The more vulnerable residential uses are to be located on the upper floors of the building (first floor and above) so would not be affected in the unlikely event of ponding of surface water in the vicinity of the site.

Overall, the risk associated with surface water (pluvial) flooding is considered to be low.

5.5 Groundwater flooding

Groundwater flooding can occur in low-lying areas when groundwater levels rise above surface levels, or within underground structures. BGS mapping indicates that the site is underlain by low permeability London Clay, which is unlikely to contain significant groundwater reserves. The SFRA states that very few groundwater flooding incidents have been recorded in the North London area, with almost all occurring in areas where drift deposits overlie the London Clay. No previous groundwater flooding incidents have been reported at the subject property.

Overall, the risk associated with groundwater flooding is considered to be low.

5.6 Other Sources

Other potential sources of flooding include man-made structures such as reservoirs and canals. No man-made water features are recorded within 1km of the subject site and Environment Agency mapping shows that the site is not within an area considered to be at risk from reservoir flooding. The culverted watercourse (River Tyburn) 200m to the east of the site is effectively incorporated into the underground sewer system and is not considered to represent a significant flood risk to the site. Overall the risk associated with flooding from other sources (such as reservoirs and canals) is considered to be low.

5.7 Impact of Development on Flood Risk

Given that the proposed works comprise the conversion of the existing property only, with no external alterations to the building footprint or drainage system, there will be no off-site increase in flood risk as a result of the proposed works.

6 CONCLUSIONS & RECOMMENDATIONS

6.1 Conclusions

This assessment has considered the potential risks to the application site associated with flooding from fluvial and tidal sources, sewer surcharging, surface water (pluvial) flooding, groundwater flooding and flooding from other (man-made) sources. Overall, the subject site is not considered to be at a significant risk of flooding from any of the sources assessed. The development is considered to be safe from a flood risk perspective, and will not result in an increase in flood risk off-site.

6.2 Recommendations

No further assessment or mitigation is considered necessary in relation to flood risk for the Permitted Development application.

APPENDIX A

Figures



Figure 1: Site Location Plan

Map Date: Current

Scale: Not to scale

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🌐 www.rpsgroup.com

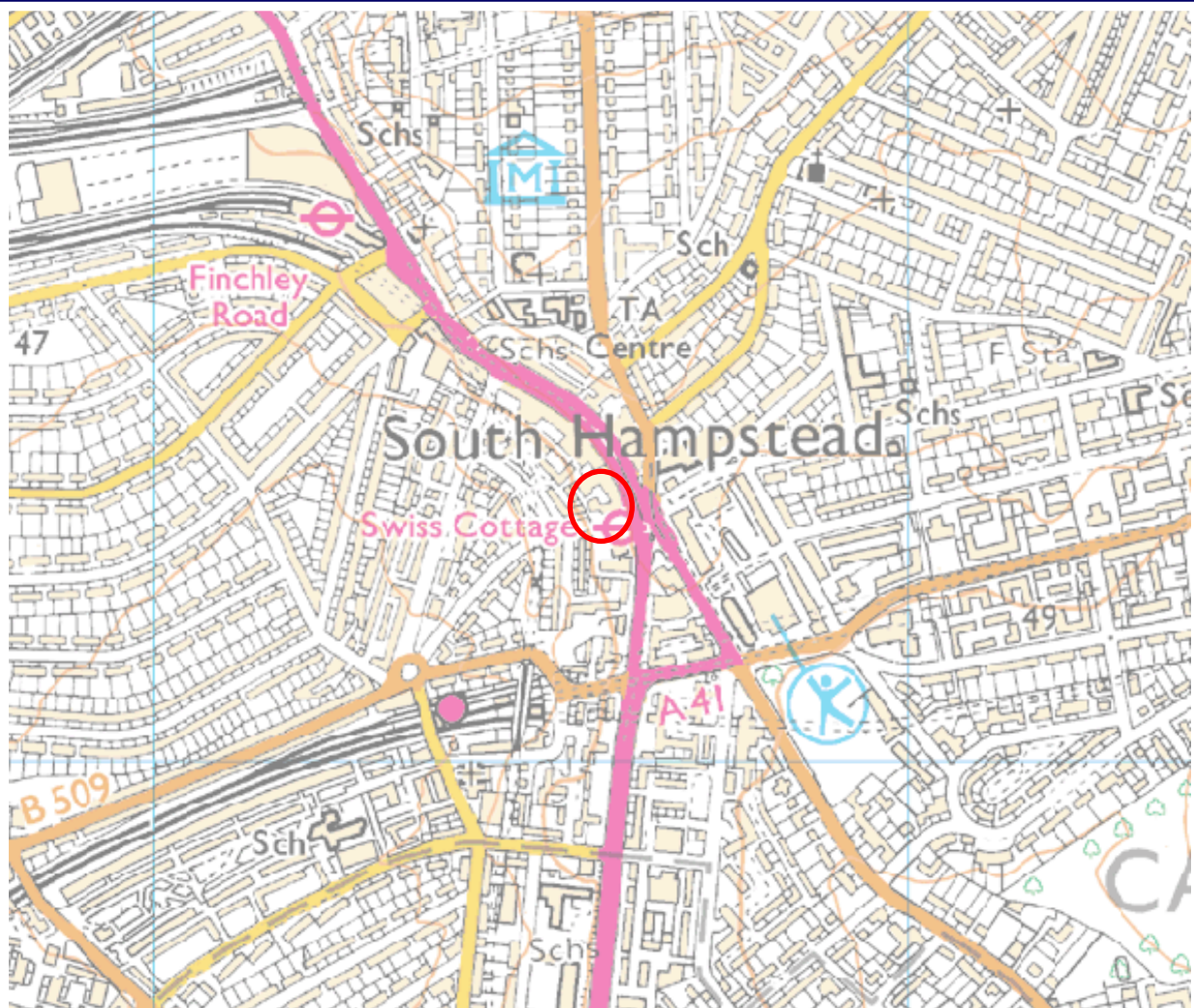


Figure 2: Environment Agency Flood Map

Map Date: Current

Scale: Not to scale

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London
EC3V 3ND

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APPENDIX B

Development Plans

General Notes
Do not scale from this drawing.
This drawing is to be read in conjunction with all relevant design team specifications and drawings.
All dimensions are to be checked on site prior to commencement of work any discrepancies reported to the Project Architect.
All materials and components are to be handled, stored, protected, installed and finished strictly in accordance with the manufacturer's recommendations.

Notes

B	15/8/2013	Amas Amended	SLK
A	10/8/2013	Kitchenette Added	SLK

REV	DATE	DESCRIPTION	INITIALS
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Shapiro Schulman

Station House

Station House
Swiss Terrace
London
NW6 4RR

Proposed Lower Ground Floor Plan

05.08.2013 1:100 @ A3

P001 B

CJB JA Preliminary

MAP
architecture and design

MAP Architecture and Design Limited
Gallants Business Centre Lower Road, East Farleigh, Maidstone, Kent ME15 0JS
Telephone 020 7403 0009 info@amosarchitecture.com

Area Schedule

Lower ground floor office	1392 sqft
Ground floor office	1616 sqft

Total office area 3008 sqft

1st 1bed / Apartment 01	484 sqft
1st Studio / Apartment 02	375 sqft
1st 1bed/ Apartment 03	644 sqft
1st 1bed / Apartment 04	523 sqft
1st Total	2026 sqft

2nd 1bed / Apartment 05	484 sqft
2nd Studio / Apartment 06	375 sqft
2nd 1bed/ Apartment 07	644 sqft
2nd 1bed / Apartment 08	523 sqft
2nd Total	2026 sqft

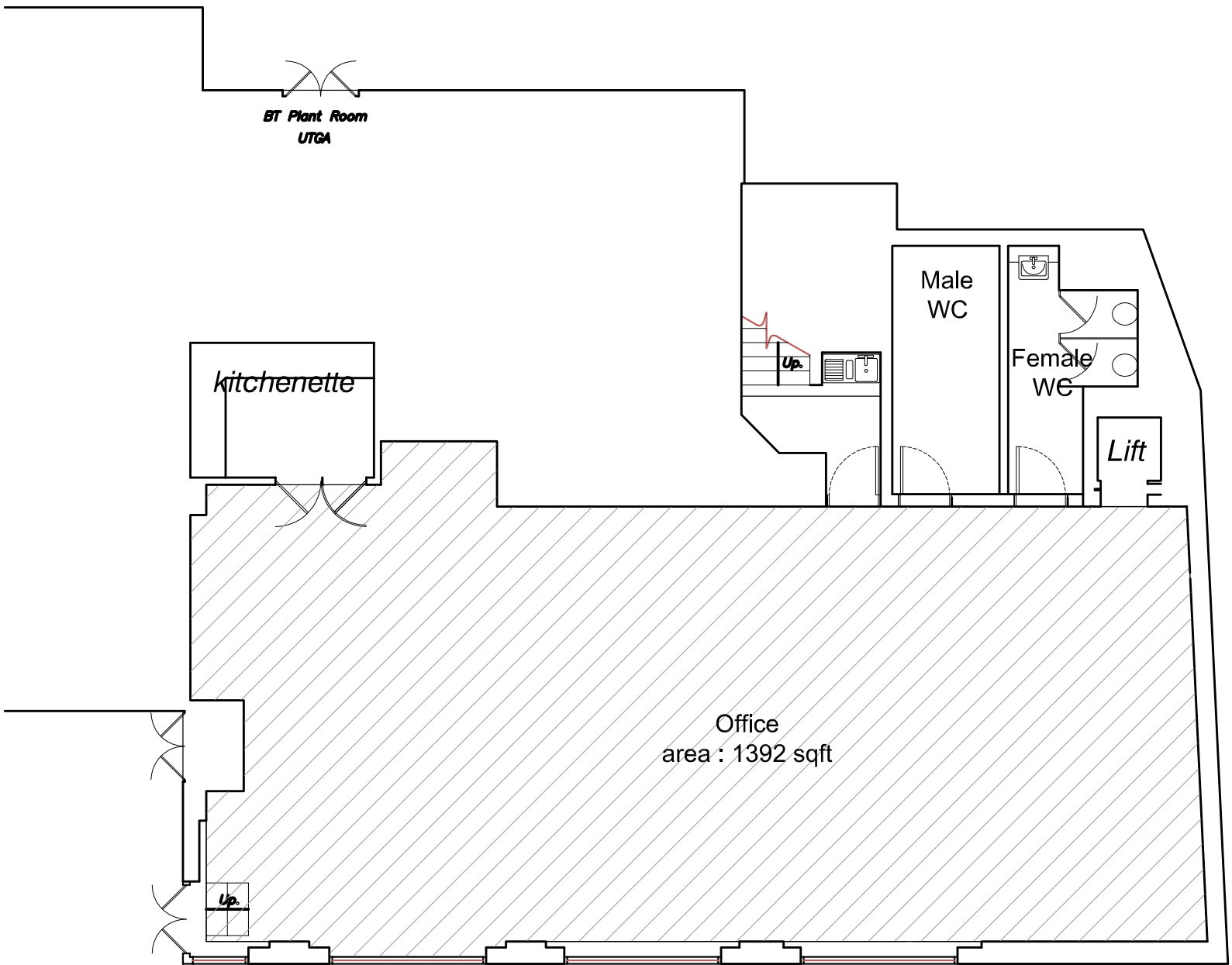
3rd 2bed / Apartment 09	890 sqft
3rd 2bed / Apartment 10	1248 sqft
3rd Total	2138sqft

4th 2bed / Apartment 11	890 sqft
4th 2bed / Apartment 12	1248 sqft
4th Total	2138sqft

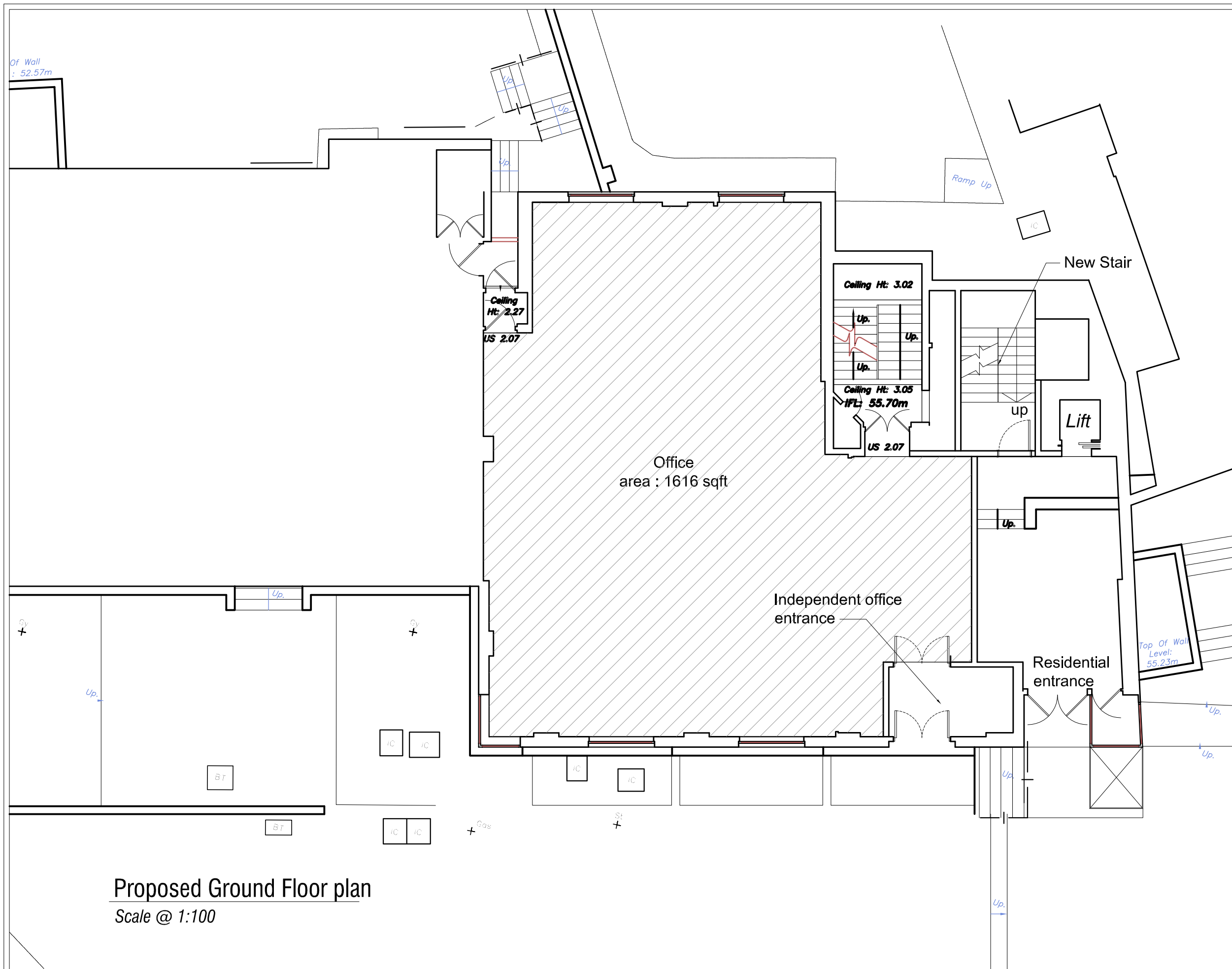
5th 2bed / Apartment 13	890 sqft
5th 2bed / Apartment 14	1248 sqft
5th Total	2138sqft

Penthouse Lower Level	1560 sqft
Penthouse Upper Level	1328 sqft
6th & 7th Total	2888 sqft

Total residential area 13354 sqft



Proposed Lower Ground Floor plan
Scale @ 1:100



General Notes

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All materials and components are to be handled, stored, protected, installed and finished strictly in accordance with the manufacturer's recommendations.

Notes

A	10/8/2013	External Lift Added , Steps orientated	SLK
REV	DATE	DESCRIPTION	INITIALS

Shapiro Schulman

Station House

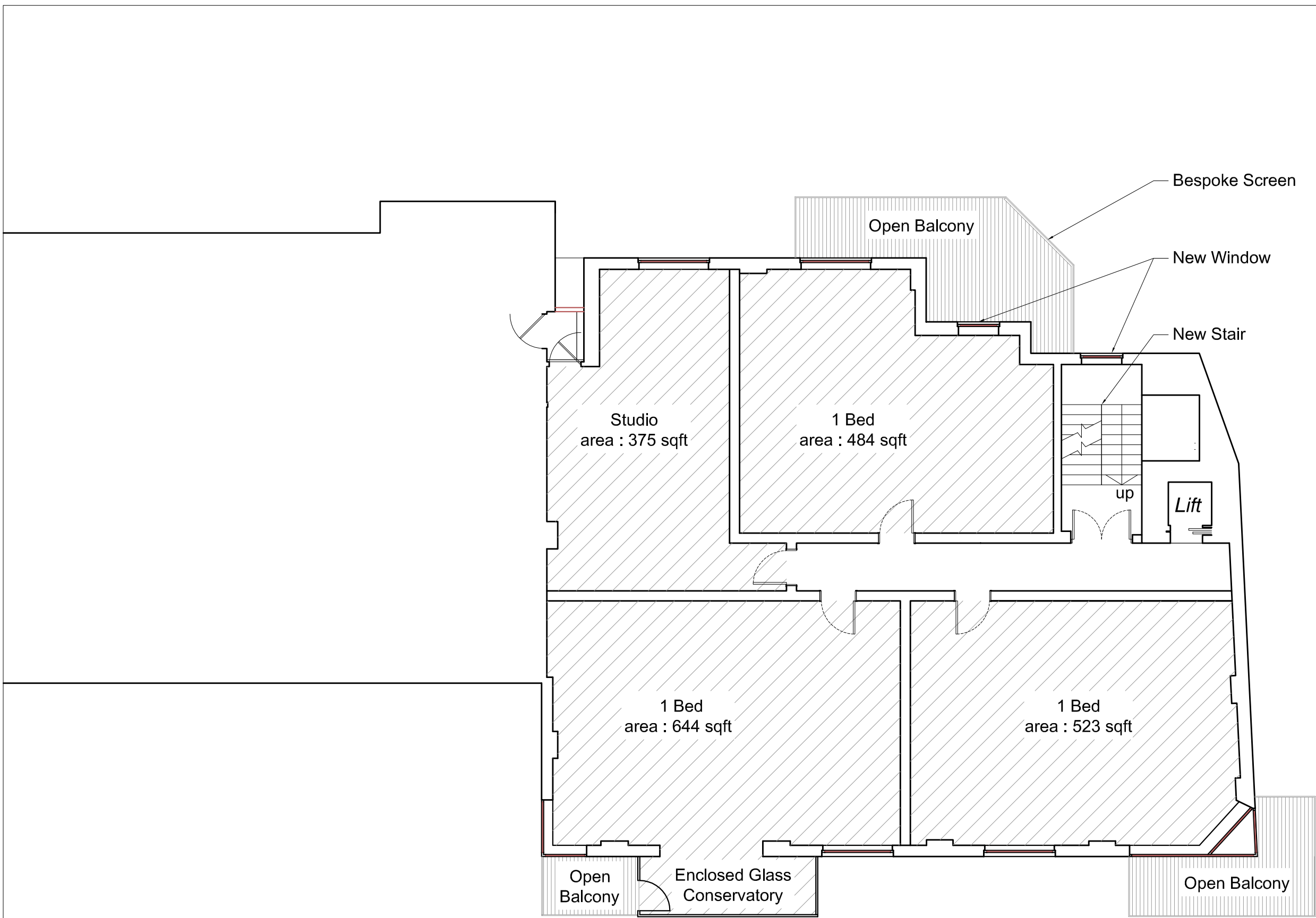
Station House
Swiss Terrace
London
NW6 4RR

Proposed Ground Floor Plan

Date	05.08.2013		Starting time	1:00 @ A3	
Process number	-		Starting number	P002	Station
Operator	CJB	Audio briefing	JA	Starting phase	Preliminary

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architecture and design

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Proposed 1st Floor plan B
Scale @ 1:100

General Notes
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All materials and components are to be handled, stored, protected, installed and finished strictly in accordance with the manufacturer's recommendations.

Notes

A	10/8/2013	Apartment sized Amended	SLK
REV	DATE	DESCRIPTION	INITIALS


Shapiro Schulman

Station House

Station House
Swiss Terrace
London
NW6 4RR

Proposed 1st Floor Plan

Date	05.08.2013	Scale	1:100 @ A3
Project	-	Drawn by	P003b
Drawn by	CJB	Checked by	JA
Project	CJB	Drawn by	JA
Project	CJB	Drawn by	JA

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APPENDIX C

General Notes

RPS HEALTH, SAFETY & ENVIRONMENT

Flood Risk Due Diligence Desk Study Report

General Notes

The following notes should be read in conjunction with the report:

1. This report contains only that available factual data for the site, which was obtained from the sources, described in the text. These data were related to the site on the basis of the location information made available to RPS by the client.
2. The assessment of the site is based on information supplied by the client. Relevant information was also obtained from other sources.
3. The desk study information is not necessarily exhaustive and further information relevant to the site may be available from other sources.
4. The report reflects both the information provided to RPS in documents made available for review and the results of observations and consultations by RPS staff.
5. Where data have been supplied by the client or other sources, including that from previous site audits or investigations, it has been assumed that the information is correct but no warranty is given to that effect. While reasonable care and skill has been applied in review of this data no responsibility can be accepted by RPS for inaccuracies in the data supplied.
6. This report is prepared and written in the context of the proposals stated in the introduction to this report and its contents should not be used out of context. Furthermore new information, changed practices and changes in legislation may necessitate revised interpretation of the report after its original submission.
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9. These terms apply in addition to the RPS HSED "Standard Terms & Conditions" (or in addition to another written contract which may be in place instead thereof) unless specifically agreed in writing. (In the event of a conflict between these terms and the said Standard Terms & Conditions the said Standard Terms & Conditions shall prevail.) In the absence of such a written contract the Standard Terms & Conditions will apply.