Faarup Associates Ltd
Low Carbon Consulting Engineers

93 Drummond Street, NW1 2HJ

2016

BREEAM 2014 UK Non-Domestic Refurbishment & Fit Out Scheme Assessment

Quality Standards Control

The signatories below verify that this document has been prepared in accordance with our quality control requirements. These procedures do not affect the content and views expressed by the originator.

Revision	*Planning*	*Rev A*	*Rev B*	*Rev C*
Date	28/07/2016	07/10/2016		
Prepared by (BREEAM Assessor)	U. Uzair	U.Uzair		
Checked by	S. Lee	S.Lee		
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3. Executive Summary

Syntegra Consulting Ltd has been commissioned to undertake the Building Research Establishment Environmental Assessment Method (BREEAM) for 93 Drummond Street in London. The BREEAM pre-assessment aims to provide the outline sustainability strategy and act as a sustainable design guide for the construction works to be performed. In accordance with Camden Council's planning requirements and as derived from local policy, the proposed developments will be expected to meet a minimum BREEAM 'Excellent' rating demonstrating this way that the project is designed and built to minimise greenhouse gas emissions across their lifetime and incorporate sustainable design and construction measures.

The building is to be classified as a Refurbishment and Fit building under BREEAM UK Refurbishment and Fit out (R&FO) for which the pre-assessment shows that by achieving the minimum standard requirements together the most feasible credits; the proposed project could achieve an overall score of 75% leading to a BREEAM rating of 'Excellent'.

It should be noted that the project can and is committed to achieving a minimum score of 70% only, the threshold for 'Excellent'. The score outlined in this report is a target to ensure the required 'Excellent' threshold will be met. The current BREEAM strategy may be subject to change and therefore cannot be subjected to a specific score in order to ensure future flexibility with respect to third party verification by the BRE and any changes necessitated.

Environmental Section	Weighting	Credits Available	Credits Targeted	Weighted Score
Management	16.37%	21	16	12.47%
Health & Wellbeing	17.67%	19	10	9.30%
Energy	13.35%	17	11	8.64%
Transport	8.19%	9	9	8.18%
Water	7.28%	8	5	4.54%
Materials	11.81%	9	8	10.49%
Waste	9.38%	11	7	5.96%
Land Use & Ecology	5.46%	2	2	5.45%
Pollution	10.49%	10	9	9.44%
Innovation	10.00%	10	1.0	1.00%
Indicative BREEAM Score	75.51% 'Excellent' Rating			

4. Introduction

This BREEAM Pre-assessment report will be included as part of the planning application that addresses the environmental impact of the development. This report focuses on the environmental strategy for the proposed scheme and how BREEAM measurements will be targeted to achieve the sustainability aspirations of this project and also to meet the planning policy requirements.

The development is to be located in the **London Borough of Camden** and it is in close proximity to Euston Station (approximately 0.2miles to the East) and Regents Park (approximately 0.6miles to the West). The proposal is **a refurbishment of existing warehouse/ shop space at 93 Drummond Street, Kings Cross London to an industrial type office.**

Figure 1 Site Location

The detailed existing and proposed floor plan layouts have been provided under appendix B of this Report.

5. Planning Policy – London Borough of Camden

5.1. Camden Development Policies 2010 - 2025

Policy DP22: Promoting Sustainable Design and Construction

The Council will require development to incorporate sustainable design and construction measures. Schemes must:

a. demonstrate how sustainable development principles, have been incorporated into the design and proposed implementation; and
b. incorporate green or brown roofs and green walls wherever suitable.

The Council will promote and measure sustainable design and construction by:

c. expecting new build housing to meet Code for Sustainable Homes Level 3 by 2010 and Code Level 4 by 2013 and encouraging Code Level 6 (zero carbon) by 2016.;
d. expecting developments (except new build) of 500sqm of residential floor space or above or 5 or more dwellings to achieve 'very good' in EcoHomes assessments prior to 2013 and encouraging 'excellent' from 2013;
e. expecting non-domestic developments of 500sqm of floor space or above to achieve 'very good' in BREEAM assessments and 'excellent' from 2016 and encouraging zero carbon from 2019.

The Council will require development to be resilient to climate change by ensuring schemes include appropriate climate change adaptation measures, such as:

f. summer shading and planting;
g. limiting run-off;
h. reducing water consumption;
i. reducing air pollution; and
j. not locating vulnerable uses in basements in flood-prone areas.

5.2. Camden Core Strategy 2010 - 2025

Policy CS13 – Tackling climate change through promoting higher environmental standards Reducing the effects of and adapting to climate change

The Council will require all development to take measures to minimise the effects of, and adapt to, climate change and encourage all development to meet the highest feasible environmental standards that are financially viable during construction and occupation by:

a. ensuring patterns of land use that minimise the need to travel by car and help support local energy networks;
b. promoting the efficient use of land and buildings;
c. minimising carbon emissions from there development, construction and occupation of buildings by implementing, in order, all of the elements of the following energy hierarchy:
    1. ensuring developments use less energy,

2. making use of energy from efficient sources, such as the King's Cross, Gower Street, Bloomsbury and proposed Euston Road decentralized energy networks;
3. generating renewable energy on-site; and

d. ensuring buildings and spaces are designed to cope with, and minimise the effects of, climate change.

The Council will have regard to the cost of installing measures to tackle climate change as well as the cumulative future costs of delaying reductions in carbon dioxide emissions

Local energy generation

The Council will promote local energy generation and networks by:

e. working with our partners and developers to implement local energy networks in the parts of Camden most likely to support them, i.e. in the vicinity of
   - housing estates with community heating or the potential for community heating and other uses with large heating loads;
   - the growth areas of King's Cross; Euston; Tottenham Court Road; West Hampstead Interchange and Holborn;
   - schools to be redeveloped as part of Building Schools for the Future programme;
   - existing or approved combined heat and power/local energy networks (see Map4);

and other locations where land ownership would facilitate their implementation.

f. protecting existing local energy networks where possible (e.g. at Gower Street and Bloomsbury) and safeguarding potential network routes (e.g. Euston Road);

Water and surface water flooding

We will make Camden a water efficient borough and minimise the potential for surface water flooding by:

g. protecting our existing drinking water and foul water infrastructure, including Barrow Hill Reservoir, Hampstead Heath Reservoir, Highgate Reservoir and Kidderpore Reservoir;
h. making sure development incorporates efficient water and foul water infrastructure;
i. requiring development to avoid harm to the water environment, water quality or drainage systems and prevents or mitigates local surface water and downstream flooding, especially in areas up-hill from, and in, areas known to be at risk from surface water flooding such as South and West Hampstead, Gospel Oak and King's Cross (see Map 5).

Camden's carbon reduction measures

The Council will take a lead in tackling climate change by:

j. taking measures to reduce its own carbon emissions;
k. trialling new energy efficient technologies, where feasible; and
l. raising awareness on mitigation and adaptation measures.

Generating renewable energy on-site

13.11 Buildings can also generate energy, for example, by using photovoltaic panels to produce electricity, or solar thermal panels, which produce hot water. Once a building and its services have been designed to make sure energy consumption will be as low as possible and the use of energy efficient sources has been considered, **the Council will expect developments to achieve a reduction in carbon dioxide emissions of 20% from on-site renewable energy generation** (which can include sources of site-related decentralised renewable energy) unless it can be demonstrated that such provision is not feasible. Details on ways to generate renewable energy can be found in our Camden Planning Guidance supplementary document.

Further to the above requirement planning policy CPG3 refers to achieve additional credits for Energy 60%, Water 60% and Materials 40%. Table below gives the breakdown of each category and percentage of credits score in each section,

Environmental Section	% of Credits (Achieved)	CPG 3 Policy Requirement
Management	76.19%	None
Health & Wellbeing	52.63%	None
Energy	64.71%	60%
Transport	100.00%	None
Water	62.50%	60%
Materials	88.89%	40%
Waste	63.64%	None
Land Use & Ecology	100.00%	None
Pollution	90.00%	None
Innovation	10.00%	None

Electrical, Mechanical and Fabric requirements will need to confirm compliance with the standards and requirements highlighted in this pre-assessment note in order to achieve the estimated rating. The final score may change if during the project process it is encountered that some of the 'Target' credits won't be achievable, however the overall target of BREEAM Excellent and minimum credits requirements in Energy, Water and Material sections will be maintained.

5.3. Camden Planning Guidance – Sustainability CPG 3 (July 2015)

Section 4. Sustainability assessment tools

9.13 You are strongly encouraged to meet the following standards in accordance with Development Policy DP22 – Promoting sustainable design and construction:

Time period	Minimum rating	Minimum standard for categories (% of un-weighted credits)
2010-2015	Very good	**Energy 60%** **Water 60%** **Materials 40%**
2016+	Excellent	

9.16 Pre-assessment
At this stage the Council will expect:

- **The submission of a pre-assessment report at the planning application stage.** The report should summarise the design strategy for achieving your chosen level of BREEAM and include details of the credits proposed to be achieved.
- **The pre-assessment report is to be carried out by a licensed assessor. The name of the assessor and their licence number should be clearly stated on the report.**

9.17 Design stage assessment
At this stage the Council will expect:

- **Submission of an early design stage assessment to the Council prior to beginning construction** of the development. This is needed to discharge the relevant condition or Section 106 planning obligation.
- Ensure the assessor submits the final Design Stage Assessment to BRED for certification
- **Submission of a copy of the Design Stage certificate** to the Council

9.17 Post-construction assessment
At this stage the Council will expect:

- A post-construction assessment to be carried out as soon as possible after completion
- **Submission of a copy of the post-construction certificate** to the Council
- Submission of a copy of the Design Stage certificate to the Council, if not already submitted.

6. BREEAM 2014 Non-domestic Refurbishment and Fit-out

6.1. Introduction

This project is classes as Refurbishment and Fit-out scheme and comes under BREEAM 2014 UK Non-domestic Refurbishment and Fit-out. The scheme provides a modular set of criteria that are applied depending upon the scope of works for a particular project type including:

- Part 1: Fabric and Structure
- Part 2: Core Services
- Part 3: Local Services
- Part 4: Interior Design

The scheme is split into these assessment parts to allow the scheme to reflect the aspects of a building that are tenant or landlord responsibilities, as well as the varied life cycle stages that each component or element is upgraded.

6.2. Mandatory Credit Issues

There are mandatory credits set which must be achieved in order to achieve the difference performance ratings. These must be achieved in addition to the optional credits to achieve the targeted ratings.

Failure to meet the mandatory criteria may restrict a development to an UNCLASSIFIED rating, regardless of the overall percentage achieved.

Category	BREEAM Rating	Pass	Good	Very Good	Excellent	Outstanding
	Minimum Score	<30%	<45%	<55%	<70%	<85%
Management	Man 03 – Responsible Construction Practices	-	-	-	1 credit (Considerate construction)	2 credits
	Man 04 – Commissioning and Handover	-	-	-	Criterion 9 (Building User Guide)	1 credit
	Man 05 – Aftercare	-	-	-	Parts 2 and 3 only: 1 credit (Seasonal commissioning)	1 credit
Energy	Ene 01 – Reduction in	-	-	-	Parts 1,2,3 and 4 (full	8 credits

Category	BREEAM Rating	Pass	Good	Very Good	Excellent	Outstanding
	Minimum Score	<30%	<45%	<55%	<70%	<85%
	CO_2 Emissions				assessments): 6 credits, varies for other assessment types	
	Ene 02 – Energy Monitoring	-	-	1 credit	Parts 2,3 and 4: 1 credit (First sub-metering credit)	1 credit
Water	Wat 01 – Water Consumption	-	1 credit	1 credit	1 credit (where applicable)	2 credits
	Wat 02 – Water Metering	-	Criterion 1	Criterion 1	Part 2: Criterion 1 only	Criterion 1
Materials	Mat 03 – Responsible Sourcing	Criterion 1	Criterion 1	Criterion 1	Criterion 1 only	Criterion 1
Waste	Was 01 – Construction Waste Management	None	None	None	None	1 credit
	Was 03 – Operational Waste	-	-	-	1 credit	1 credit

6.3. BREEAM 2014 Credit Weightings

BREEAM 2014 also introduces different credit weightings, i.e. relative scale of importance to various credit issues depending on the assessment route adopted.

The table below outlines the weightings for each of the nine environmental sections included in the BREEAM UK Refurbishment and Fit-out 2014 scheme. The core weightings are applied to a fully fitted building (i.e. a major refurbishment assessed against all Parts 1, 2, 3 and 4) are also used for the basis of defining the weightings for all other projects. For other project types, not being assessed against all parts, such as a fit-out project assessed against Parts 3 or 4 only, the core weightings are applied proportionately according to the number of credits available in each category for that project type.

Table 2.2: BREEAM Environmental section weightings for common project types								
Environmental Section	Core weightings	Part 1 only	Part 2 only	Part 3 only	Part 4 only	Parts 1 and 2	Parts 2 and 3	Parts 3 and 4
Management	12%	15.0%	16.7%	16.5%	20.0%	13.0%	16.5%	14.1%
Health and Wellbeing	15%	14.8%	14.4%	15.3%	19.9%	11.0%	15.3%	15.9%
Energy	19%	16.4%	24.5%	24.3%	2.5%	18.8%	24.3%	22.5%
Transport	8%	10.0%	11.2%	11.1%	13.4%	8.6%	11.1%	9.5%
Water	6%	0.0%	7.5%	7.4%	10.1%	5.7%	7.4%	7.1%
Materials	12.5%	15.6%	5.4%	5.3%	19.3%	13.4%	5.3%	13.7%
Waste	7.5%	9.4%	9.3%	9.2%	11.2%	8.1%	9.2%	7.9%
Land Use and Ecology	10%	12.5%	0.0%	0.0%	0.0%	10.7%	0.0%	0.0%
Pollution	10%	6.3%	11.0%	10.9%	3.6%	10.7%	10.9%	9.3%
Total	100%	100%	100%	100%	100%	100%	100%	100%
Innovation (additional)	10%	10%	10%	10%	10%	10%	10%	10%

7. Credits Requiring Early Actions

Under the BREEAM 2014 UK Non-Domestic Refurbishment & Fit Out criteria, there are a number of credits which require early action by the design team in order for the credits to be awarded. The relevant credits, the actions which need to be carried out and when these would be executed are listed below in Table 2.3.

Table 2.3: BREEAM 2014 Early Stage credits (RIBA Stage 1, 2 & 3)

Credit Issue	RIBA Stage 1 Action Required	RIBA Stage 2 & 3 Actions Required
Man 01: Project Brief and Design	-	**One Credit – Stakeholder Consultation**: Prior to completion of the Concept Design (RIBA Stage 2 or equivalent), the project delivery stakeholders should have met to identify and define their roles, responsibilities and contributions for each of the key phases of project delivery. **One Credit – Stakeholder Consultation**: By completion of Concept Design Stage **One Credit – Sustainability Champion**: the defined performance targets must be formally agreed between the client and design/project team
Man 02: Life Cycle Costing and Service Life Planning	-	An elemental level Life Cycle Cost (LCC) analysis has been carried out based on the proposals developed during RIBA Stage 2
Mat 06: Material Efficiency	Consult with relevant design team members to identify and implement measures for efficient use of materials.	-
Hea 06: Safety and Security	-	Appoint security specialist to conduct a Security Needs Assessment (SNA) or consult with an Architectural Liaison office (ALO)

Table 2.3: BREEAM 2014 Early Stage credits (RIBA Stage 1, 2 & 3)		
Credit Issue	**RIBA Stage 1 Action Required**	**RIBA Stage 2 & 3 Actions Required**
Ene 04: Low Carbon Design	-	Carry out a passive design analysis and a renewables feasibility study
Wst 05: Adaption to Climate Change	-	Conduct a climate change adaption strategy appraisal for structural and fabric resistance
Wst 06: Functional Adaptability	-	Undertake a building specific functional adaption strategy study. Incorporate adaption measures into the design where practical and cost effective.
Le 04: Enhancing Site Ecology	The ecologist must be appointed by RIBA Stage 1 to carry out surveys and provide recommendations	-
Le 05: Long Term Impact on Biodiversity	-	The Ecology Report must be available at Stage 2 (following the appointment of the ecologist at Stage 1)

8. Conclusion

In summary the project aims to achieve highest sustainability standards and would adopt features to enhance the environmental performance of the existing building. As can be seen in the table below, the proposed development can achieve Excellent under BREEAM 2014 Non-domestic Refurbishment & Fit-out scheme, and meet the local planning requirement as per Policy DP22. The credits in Energy, Water and Materials categories also meet the local planning requirement set by Camden Planning Guidance – Sustainability CPG 3 Section 4 Sustainability assessment tools.

Table 3.1 – Summary of targeted score

Category	Credits available	Credits targeted	Credits achieved (%)	Weighting	Category score (%)
Management	21	16	76.19 %	16.83 %	12.47 %
Health and Wellbeing	19	10	52.63 %	18.16 %	9.30 %
Energy	17	11	64.71 %	13.72 %	8.64 %
Transport	9	9	100.00 %	8.41 %	8.18 %
Water	8	5	62.50 %	7.48 %	4.54 %
Materials	9	8	88.89 %	12.13 %	10.49 %
Waste	11	7	63.64 %	9.64 %	5.96 %
Land Use and Ecology	1	2	100.00 %	2.80 %	5.45 %
Pollution	10	9	90.00 %	10.78 %	9.44 %
Innovation	10	1	10.00 %	10.00 %	1.00 %
Total	115	78	67.24	-	**75.51 % (Excellent)**

7. Appendix A – BREEAM Pre Assessment Report

BREEAM®

Code for a Sustainable Built Environment
www.breeam.com

BREEAM UK Refurbishment & Fit-out 2014 - Pre-assessment

93 Drummond Street, Kings Cross

Pre-assessment

Drummond Street

07 October 2016 Assessment Report

PwC's BREEAM Outstanding rated One Embankment Place in London. Image: Hufton + Crow.

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Assessment details

Assessment references

Registration number:	16-2561	**Date created:**	26/7/2016
Created by:	Umer Uzair		
Architect name:			
Developer name:	Farrup Associates Limited		
Property owner			

Site details

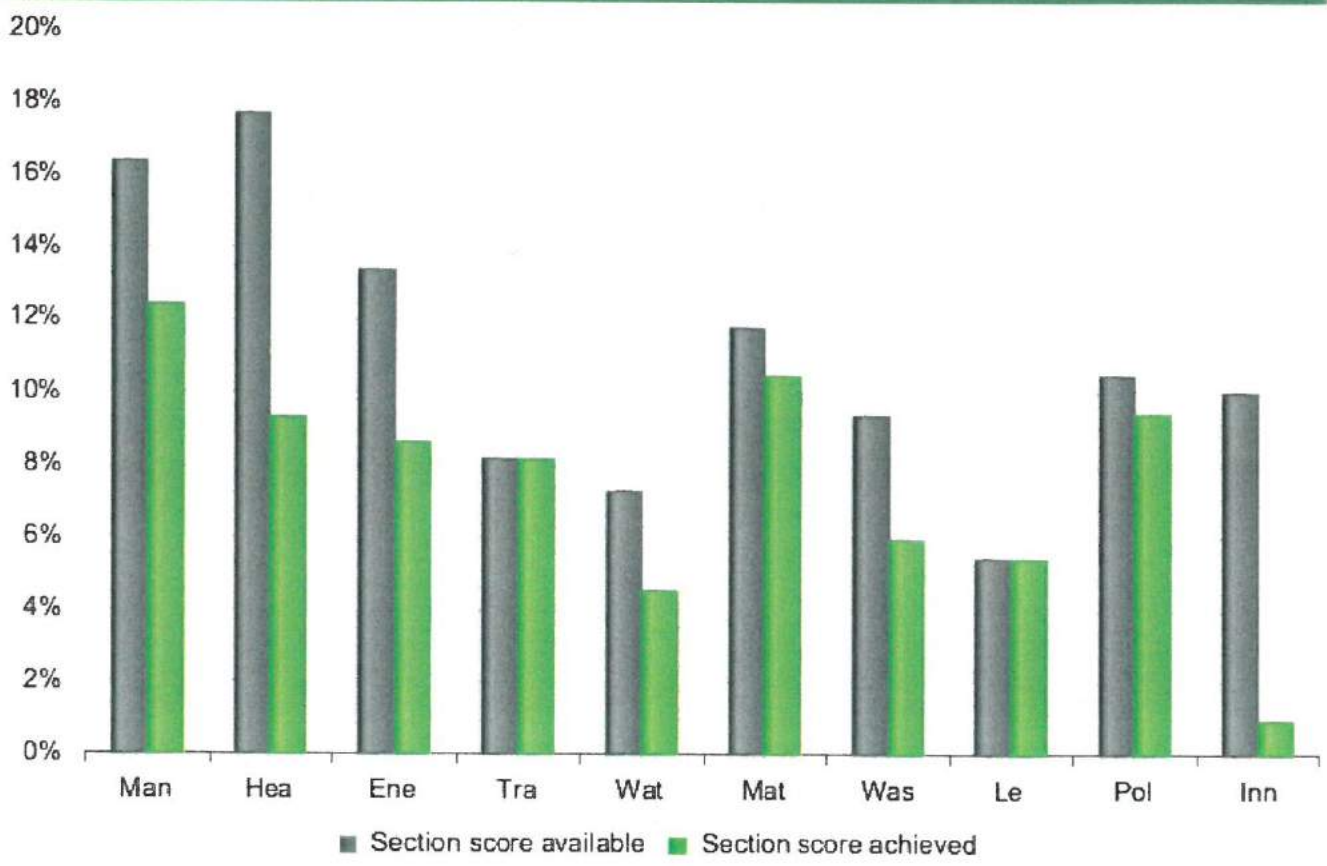
Site name:	Drummond Street
Address:	93 Drummond Street
	Kings Cross
Town:	London
County:	London
Post code:	NW1 2HJ
Country:	United Kingdom

BREEAM rating

BREEAM Rating

	Credits available	Credits achieved	% Credits achieved	Weighting	Category score
Man	21.0	16.0	76.19%	16.37%	12.47%
Hea	19.0	10.0	52.63%	17.67%	9.30%
Ene	17.0	11.0	64.71%	13.35%	8.64%
Tra	9.0	9.0	100.00%	8.19%	8.18%
Wat	8.0	5.0	62.50%	7.28%	4.54%
Mat	9.0	8.0	88.89%	11.81%	10.49%
Was	11.0	7.0	63.64%	9.38%	5.96%
Le	2.0	2.0	100.00%	5.46%	5.45%
Pol	10.0	9.0	90.00%	10.49%	9.44%
Inn	10.0	1.0	10.00%	10.00%	1.00%
Total	116.0	78.0	67.24%	-	75.51%
Rating	-	-	-	-	Excellent

Performance by environmental category



Issue scores

Please Note: X means the exemplary credit for the relevant issue

Management

Man Management	ManX
16 / 21	1 / 2

Health and Wellbeing

Hea Health & Wellbeing	HeaX
10 / 19	0 / 3

Energy

Ene Energy	EneX
11 / 17	0 / 5

Transport

Tra Transport
9 / 9

Water

Wat Water	WatX
5 / 8	0 / 1

Materials

Mat Materials	MatX
8 / 9	0 / 2

Waste

Was Waste	WasX
7 / 11	0 / 3

Land use and ecology

Le Land use and ecology
2 / 2

Pollution

Pol Pollution	PolX
9 / 10	0 / 1

Innovation

Inn Innovation	InnX
N/A	0 / 10

Initial details

93 Drummond Street

Stage 1 filtering: Scope of the assessment

Part 1 : Fabric and structure : Yes

Part 2 : Core services : Yes

Part 3 : Local services : Yes

Part 4 : Interior design : Yes

Stage 2 filtering: Project specific filtering

Is the project a change of use? (e.g. change from office to a hotel) : Yes

Are transportation systems specified or present within the refurbishment or fit-out zone? (lifts, escalators, moving walks) : No

Are there laboratories present and if so what % of total building area do they represent : No laboratories present

Project Type :

Laboratory containment area : No laboratories present

Is cold storage specified or present within the refurbishment or fit-out zone? : No

Are there landscaping areas within the refurbishment or fit-out zone/within developer control? : No

If the asset undergoing refurbishment or fit-out is part of a larger building, is the cooling generation plant centralised or localised? : Central

If the asset undergoing refurbishment or fit-out is part of a larger building, is the heating generation plant centralised or localised? : Central

Is Wat01 within the scope of the assessment in accordance with Table 42? : Yes

What is the building type? : Industrial

If Industrial, does the building have office areas? : Yes

Does the building have any unregulated water demands? e.g. irrigation, car washing, or other process related water use : No

Does the building have unregulated energy demands from significantly contributing systems? : No

Is the project a simple building? : No

Does the building have external lighting within the scope of works? : No

Does the building have any existing or newly specified externally mounted plant? : No

If undertaking a Part 4 assessment, is there any equipment specified that requires commissioning (see Man04 CN13) : Yes

Historic building (listed building or building in a conservation area) : No

Category assessment

Management | Man

Man Management

93 Drummond Street

MAN 01 PROJECT BRIEF AND DESIGN

Stakeholder consultation (project delivery) :	1
Stakeholder consultation (third party) :	1
Sustainability champion (design) :	1
Sustainability champion (monitoring progress) :	1

MAN 02 LIFECYCLE COST AND SERVICE LIFE PLANNING

Elemental lifecycle cost :	0
Componnent level LCC plan :	0
Capital cost reporting :	0

MAN 03 RESPONSIBLE CONSTRUCTION PRACTICES

Is all timber used in the project 'legally harvested and traded timber'? :	Yes
Environmental management :	1
Construction stage sustainability champion :	1
Considerate construction :	2
Exemplary level criteria :	
Has the project achieve the minimum standard for an Excellent or Outstanding rating? :	
Monitoring of refurbishment or fit-out site impacts :	2
Utility consumption :	Yes
Transport of construction materials and waste :	Yes

MAN 04 COMMISSIONING AND HANDOVER

Commissioning and testing schedule and responsibilities :	1
Commissioning building services :	1
Testing and inspecting building fabric :	0
Handover :	1
Has criterion 9 been met? :	Yes

MAN 05 AFTERCARE

Aftercare support :	1
Exemplary level criteria :	Yes
Seasonal commissioning :	1
Post occupancy evaluation :	1

Credits awarded : 16.0

Exemplary credits awarded : 1.0

Health and Wellbeing | Hea

Hea Health & Wellbeing

93 Drummond Street

HEA 01 VISUAL COMFORT

Glare control :	1
Daylighting :	2
Exemplary level criteria :	
View out :	0
Internal and external lighting :	1

HEA 02 INDOOR AIR QUALITY

Indoor air quality plan :	0
Ventilation :	1
Volatile organic compounds :	0
Exemplary level criteria :	0
Potential for natural ventilation :	0

HEA 03 SAFE CONTAINMENT IN LABORATORIES - NA

HEA 04 THERMAL COMFORT

Thermal modelling :	1
Adaptation - for a projected climate change scenario :	0
Thermal zoning and controls :	0

HEA 05 ACOUSTIC PERFORMANCE

Acoustic performance :	3

HEA 06 SAFETY AND SECURITY

Security of site and building :	1

Credits awarded : 10.0

Energy | Ene

Ene Energy

93 Drummond Street

ENE 01 ASSESSMENT OPTION

Which option is being followed :	Option 2: Elemental level energy model

GENERAL

In what year was the asset constructed? :	Pre 1920
What is the main asset building type? :	Retail - distribution warehouse
In what country is the asset located? :	United Kingdom

SERVICING STRATEGY

What building services will be present in the refurbished building? :	Heating and Cooling and Hot Water
What ventilation strategy will be used in the refurbished building? :	Mechanical or Mixed Mode
Is the asset being assessed part of a larger asset with central building services plant? :	Yes
For assets with heating, is the main heat generation plant 'local' or 'central'? :	Central
For assets with cooling, is the main cooling generation plant 'local' or 'central'? :	Central
For assets with domestic hot water, is the main hot water plant 'local' or 'central'? :	Local
For assets with mechanical ventilation, is ventilation provided by local supply/extract fans or a central air handling unit (AHU)? :	Central

EXISTING BUILDING PERFORMANCE - THE QUESTIONS BELOW SHOULD BE ANSWERED TO DESCRIBE THE EXISTING BUILDING PERFORMANCE

FABRIC - EXISTING

What is the total area (m2) of any external walls (not including glazing)? :	1000
What is the total area (m2) of all glazing? :	500
What is the total area (m2) of the roof? :	250
What is the total area (m2) of the ground floor? :	250
What is the U-value of the external walls? :	0.5
What is the U-value of the glazing? :	3.5
What is the U-value of the roof? :	0.5
What is the U-value of the ground floor? :	0.5
What is the result of the building pressure/air leakage test? :	15+ m3/m2@50Pa
What percentage of the external elevation on the east, south and west facades is glazed? :	25 %

HEATING - EXISTING

What is the main generation type for space heating? :	Boiler
For 'boiler', 'other on site', 'offsite', or other generation type, please enter efficiency, if known (enter as a decimal i.e. 70% = 0.7) :	0.7

For heat pump generation type, please enter Coefficient of Peformance (COP), if known :	
What is the main fuel used for heat generation? :	Gas
What is the predominant medium by which heat is distributed around the asset? :	Unknown
Is all heating pipework insulated in accordance with the recommendations outlined in the Non-Domestic Building Services Compliance Guide? :	Unknown
What is the main heat emitter type? :	Radiators
Are the heating controls in accordance with the recommendations outlined in the Non-Domestic Building Services Compliance Guide? :	No
In what year was the main heat generator/heating system last replaced (if known)? :	Pre 1920

COOLING - EXISTING

What is the main system type for generating cooling? :	Chiller
Please enter the Energy Efficiency Ratio (EER) of the cooling generator, if known. :	
What is the predominant medium by which cooling is distributed around the asset? :	Unknown
What is the system subtype for air distributed cooling systems? :	Unknown
What is the system subtype for refrigerant cooling systems? :	Unknown
Is all cooling pipework insulated in accordance with the recommendations outlined in the Non-Domestic Building Services Compliance Guide? :	Unknown
What is the main cooling emitter type? :	Unknown
Are the cooling controls in accordance with the recommendations outlined in the Non-Domestic Building Services Compliance Guide? :	Unknown
In what year was the main chiller/cooling system replaced (if known)? :	Pre 1920

VENTILATION - EXISTING

What is the specific fan power for air handling systems? :	Unknown
What are the results of duct and air handling leakage tests? :	Unknown
Are the ventilation controls in accordance with the recommendations outlined in the Non-Domestic Building Services Compliance Guide? :	Unknown
In what year was the main ventilation system replaced (if known)? :	Pre 1920

HOT WATER - EXISTING

What type of water heating is provided? :	Unknown
What energy source is used to heat water? If there is a mixture of centralised and point of use systems please select the energy source type of the centralised system :	Unknown
Are the hot water controls in accordance with the recommendations outlined in the Non-Domestic Building Services Compliance Guide? :	Unknown

LIGHTING - EXISTING

What proportion of fluorescent lamps have high frequency ballasts? :	None
Of all Internal lamps, what is the percentage of Compact Fluorescent type? :	0 %
Of all Internal lamps, what is the percentage of Tungsten Halogen? :	100 %
Of all Internal lamps, what is the percentage of Incandescent lamps? :	0 %
Of all internal lamps, what is the percentage of T12 type? :	0 %
Of all internal lamps, what is the percentage of T8 type? :	0 %
Of all internal lamps, what is the percentage of T5 type? :	0 %
Of all internal lamps, what is the percentage of LED lighting (with special design lighting control system)? :	0 %
Of all internal lamps, what is the percentage of LED lighting (with typical lighting control system)? :	0 %
Of all internal lamps, what is the percentage of metal halide type? :	0 %

What percentage of the building floor area (not accessible to clients/customers) with access to daylight has fully functioning daylight sensors for lighting? :	Unknown
What percentage of the building floor area (not accessible to client/customers) has fully functioning occupancy sensors for lighting? :	Unknown

REFURBISHED BUILDING PERFORMANCE - THE QUESTIONS BELOW SHOULD BE ANSWERED TO DESCRIBE THE REFURBISHED BUILDING PERFORMANCE

FABRIC - REFURBISHED

What is the total area (m2) of any external walls (not including glazing)? :	1000
What is the total area (m2) of all glazing? :	500
What is the total area (m2) of the roof? :	250
What is the total area (m2) of the ground floor? :	250
What is the U-value of the external walls? :	0.25
What is the U-value of the glazing? :	1.5
What is the U-value of the roof? :	0.25
What is the U-value of the ground floor? :	
What is the result of the building pressure/air leakage test? :	5 m3/m2@50Pa
What percentage of the external elevation on the east, south and west facades is glazed? :	25 %

HEATING - REFURBISHED

What is the main generation type for space heating? :	Boiler
For 'boiler', 'other on site', 'offsite', or other generation type, please enter efficiency, if known (enter as a decimal i.e. 70% = 0.7) :	0.98
For heat pump generation type, please enter Coefficient of Peformance (COP), if known :	
What is the main fuel used for heat generation? :	Gas
What is the predominant medium by which heat is distributed around the asset? :	Other
Is all heating pipework insulated in accordance with the recommendations outlined in the Non-Domestic Building Services Compliance Guide? :	Yes
What is the main heat emitter type? :	Radiators
Are the heating controls in accordance with the recommendations outlined in the Non-Domestic Building Services Compliance Guide? :	Yes
In what year was the main heat generator/heating system replaced (if known)? :	2013+

COOLING - REFURBISHED

What is the main system type for generating cooling? :	Ground cooling (air or water)
Please enter the Energy Efficiency Ratio (EER) of the cooling generator, if known. :	
What is the predominant medium by which cooling is distributed around the asset? :	Air
What is the system subtype for air distributed cooling systems? :	Dual duct
What is the system subtype for refrigerant cooling systems? :	Split system
Is all cooling pipework insulated in accordance with the recommendations outlined in the Non-Domestic Building Services Compliance Guide? :	Yes
What is the main cooling emitter type? :	Radiators
Are the cooling controls in accordance with the recommendations outlined in the Non-Domestic Building Services Compliance Guide? :	Yes
In what year was the main chiller/cooling system replaced (if known)? :	2013+

VENTILATION - REFURBISHED

What is the specific fan power for air handling systems? :	1 W/l/s to <3 W/l/s
What are the results of duct and air handling leakage tests? :	Class B
Are the ventilation controls in accordance with the recommendations outlined in the Non-Domestic Building Services Compliance Guide? :	Yes
In what year was the main ventilation system replaced (if known)? :	2013+

HOT WATER - REFURBISHED

What type of water heating is provided? :	Point of use
What energy source is used to heat water? If there is a mixture of centralised and point of use systems please select the energy source type of the centralised system :	Electric
Are the hot water controls in accordance with the recommendations outlined in the Non-Domestic Building Services Compliance Guide? :	Yes

LIGHTING - REFURBISHED

What proportion of fluorescent lamps have high frequency ballasts? :	100%
Of all Internal lamps, what is the percentage of Compact Fluorescent type? :	0 %
Of all Internal lamps, what is the percentage of Tungsten Halogen? :	0 %
Of all Internal lamps, what is the percentage of Incandescent lamps? :	0 %
Of all internal lamps, what is the percentage of T12 type? :	0 %
Of all internal lamps, what is the percentage of T8 type? :	0 %
Of all internal lamps, what is the percentage of T5 type? :	0 %
Of all internal lamps, what is the percentage of LED lighting (with special design lighting control system)? :	0 %
Of all internal lamps, what is the percentage of LED lighting (with typical lighting control system)? :	100 %
Of all internal lamps, what is the percentage of metal halide type? :	0 %
What percentage of the building floor area (not accessible to clients/customers) with access to daylight has fully functioning daylight sensors for lighting? :	>75%
What percentage of the building floor area (not accessible to client/customers) has fully functioning occupancy sensors for lighting? :	>75%

ENE 01 BUILDING SCORE

Elemental energy score :	59.9
Credits available :	12.0
Credits awarded :	8.0
% of available credits achieved :	66.66666666666667
Additional assessment criteria :	
Zero regulated carbon :	No
Equivalent % of the building's 'regulated' energy consumption generated by carbon neutral sources and used to meet energy demand from 'unregulated' building systems or processes? :	
Is the building designed to be carbon negative? :	No
If the building is defined as 'carbon negative' what is the total (modelled) renewable/carbon neutral energy generated and exported? :	
Exemplary credits scored :	0

ENE 02 ENERGY MONITORING

Sub-metering of major energy consuming systems :	1
Sub-metering of high energy load and tenancy areas :	1

ENE 03 EXTERNAL LIGHTING

ENE 04 LOW CARBON DESIGN

Passive design analysis :	0
Free cooling :	1
Low and zero carbon technologies :	0

ENE 05 ENERGY EFFICIENT COLD STORAGE - NA

ENE 06 ENERGY EFFICIENT TRANSPORTATION SYSTEMS - NA

ENE 07 ENERGY EFFICIENT LABORATORY SYSTEMS - NOTAPPLICABLE

ENE 08 ENERGY EFFICIENT EQUIPMENT

ENE 09 DRYING SPACE

Credits awarded : 11.0

Transport | Tra

Tra Transport

93 Drummond Street

TRA 01 SUSTAINABLE TRANSPORT SOLUTIONS

Sustainable transport options :	3

TRA 02 PROXIMITY TO AMENITIES

Proximity to amenities :	1

TRA 03 CYCLIST FACILITIES

Cycle storage :	1
Cylist facilities :	1

TRA 04 MAXIMUM CAR PARKING CAPACITY

Car parking capacity :	2

TRA 05 TRAVEL PLAN

Travel plan :	1

Credits awarded : 9.0

Water | Wat

Wat Water

93 Drummond Street

WAT 01 WATER CONSUMPTION

Water consumption :	3
Exemplary level criteria :	

WAT 02 WATER MONITORING

Water monitoring :	1
Has criterion 1 been met? :	Yes

WAT 03 LEAK DETECTION

Leak detection system :	1
Flow control devices :	0

WAT 04 WATER EFFICIENT EQUIPMENT - NA

Credits awarded : 5.0

Materials | Mat

Mat Materials

93 Drummond Street

MAT 01 ENVIRONMENTAL IMPACT OF MATERIALS

Options :	Option 1
Environmental impact of materials :	2
Exemplary level criteria :	

MAT 03 RESPONSIBLE SOURCING OF MATERIALS

Sustainable procurement plan :	1
Has criterion 1 been met? :	Yes
Responsible sourcing of materials :	2
Exemplary level criteria :	No

MAT 04 INSULATION

Insulation :	1

MAT 05 DESIGNING FOR DURABILITY AND RESILIENCE

Designing for durability and resilience :	1

MAT 06 MATERIAL EFFICIENCY

Material efficiency :	1

Credits awarded : 8.0

Waste | Was

Was Waste

93 Drummond Street

WST 01 CONSTRUCTION WASTE MANAGEMENT

Pre-refurbishment audit :	1
Re-use and direct recycling of materials :	2
Resource efficiency :	2
Diversion of waste from landfill :	1
Exemplary level criteria :	

WST 02 RECYCLED AGGREGATES

Recycled aggregates :	1
Exemplary level criteria :	

WST 03 OPERATIONAL WASTE

Operational waste :	1

WST 04 SPECULATIVE FINISHES

WST 05 ADAPTATION TO CLIMATE CHANGE

Adaptation to climate change - structural and fabric resilience :	0
Exemplary criteria: Responding to adaptation to climate change :	

WST 06 FUNCTIONAL ADAPTABILITY

Functional adaptabiliy :	0

Credits awarded : 7.0

Land use and ecology | Le

Le Land use and ecology

93 Drummond Street

LE 02 PROTECTION OF ECOLOGICAL FEATURES

Protecting ecological value : 1

LE 04 ECOLOGICAL ENHANCEMENT

Ecological enhancement : 1

LE 05 LONG TERM IMPACT ON BIODIVERSITY

Credits awarded : 2.0

Pollution | Pol

Pol Pollution

93 Drummond Street

POL 01 IMPACT OF REFRIGERANTS

Impact of refrigerants :	1
Leak detection :	1

POL 02 NOX EMISSIONS

NOx emissions :	2

POL 03 FLOOD RISK AND REDUCING SURFACE WATER RUN-OFF

Flood risk management :	2
Exemplary level criteria :	
Surface water run-off :	2
Minimising watercourse pollution :	1

POL 04 REDUCTION OF NIGHT TIME LIGHT POLLUTION

POL 05 NOISE ATTENUATION

Credits awarded : 9.0

Innovation | Inn

Inn Innovation

93 Drummond Street

INN 01 APPROVED INNOVATIONS

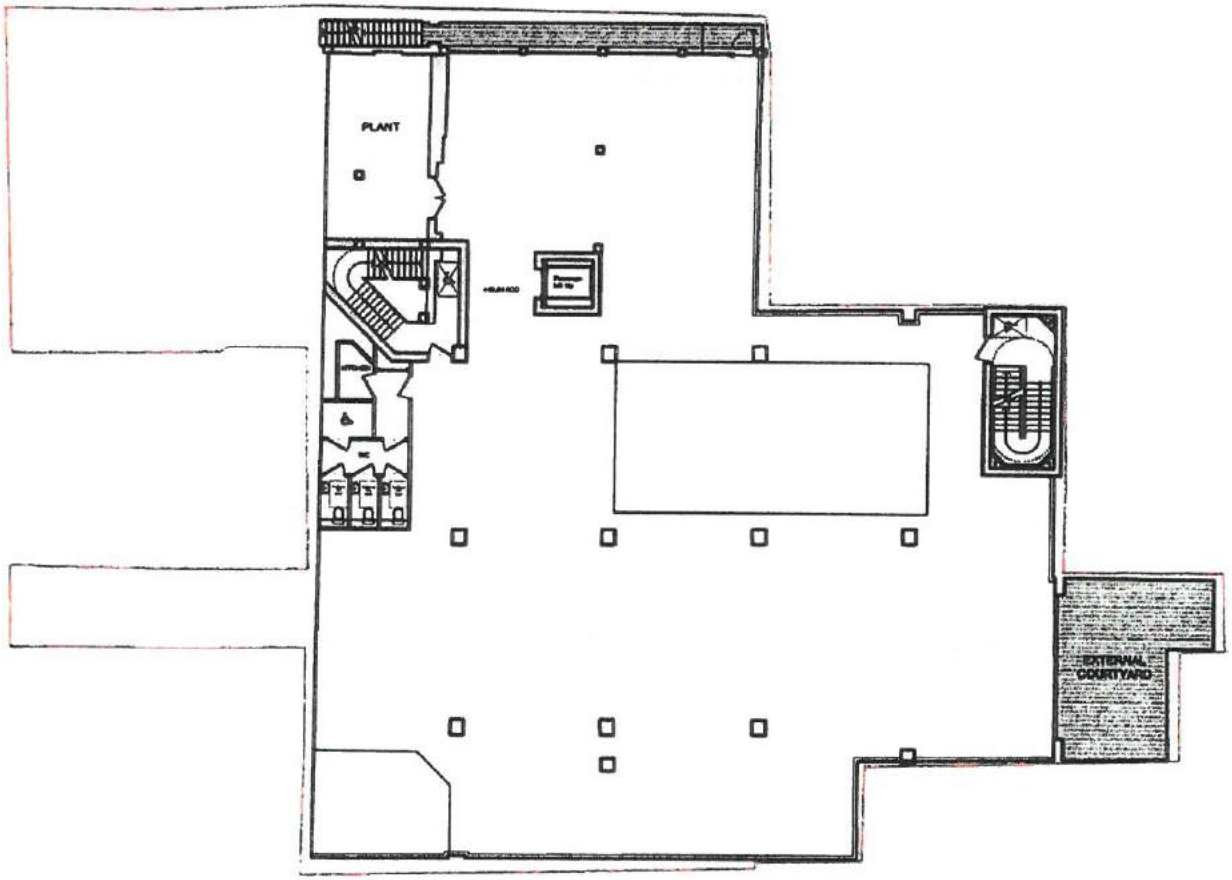
Approved innovations : 0

Credits awarded : 0.0

8. Appendix B – Existing Floor Layout

DRUMMOND STREET

COBOURG STREET



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Rev D02 Date:15.09.2016 Dwn: EF Chk: LD
Updated floor heights. Amended wall position.
Rev D01 Date:10.09.2016 Dwn: EF Chk: LD
Initial Issue.

Do not scale off this drawing
Report all errors and omissions to the Architect
Dimensions to be checked on site

SHEET INFORMATION:
Plotted by: CAD
Plot date : 07 September 2016 15:37:20

Client:

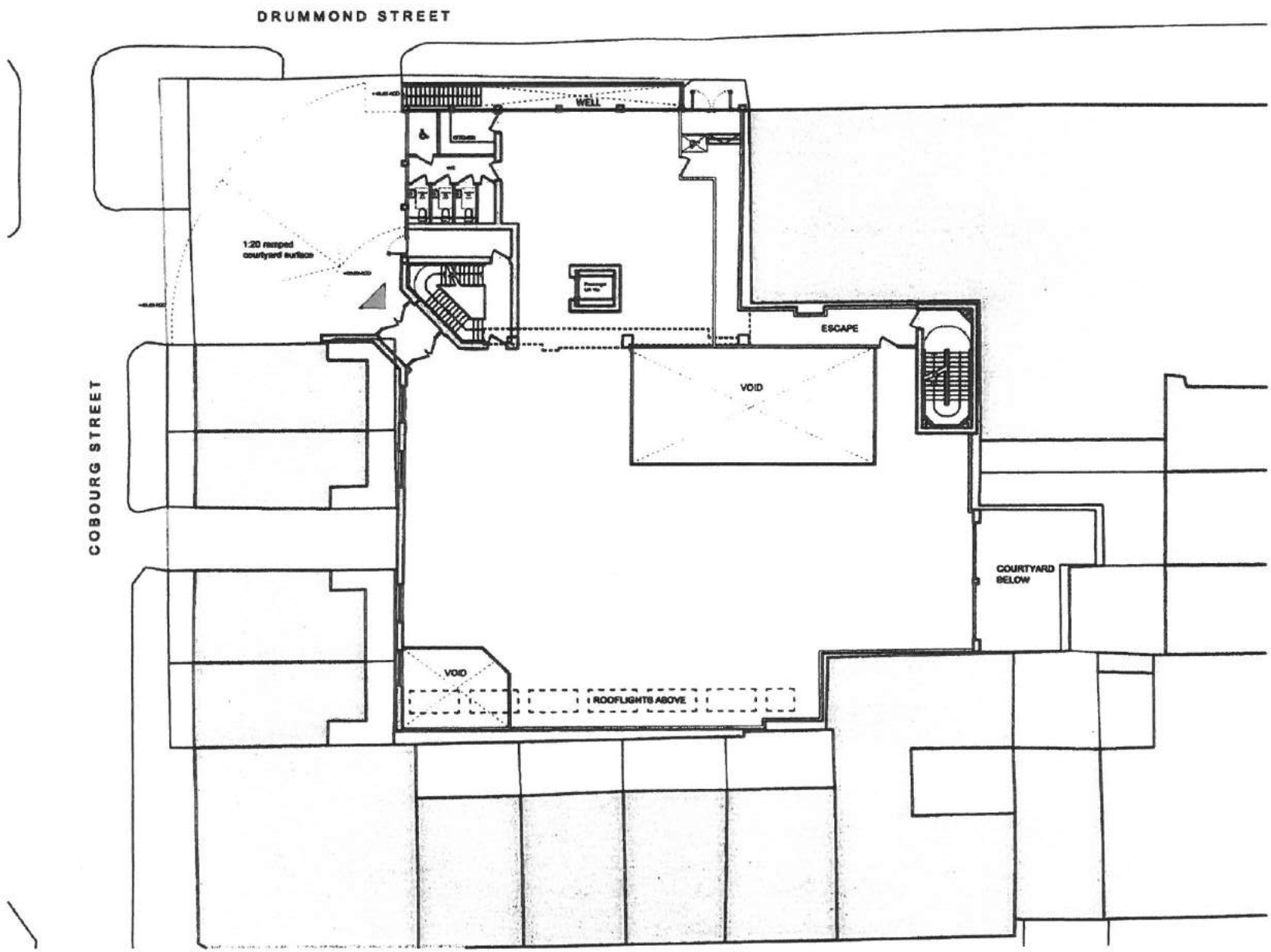
Project:
Drummond Street

Title:
Office Scheme
General Arrangement Plan
Level -01

Drawing status:
For Information

Scale @ A3
1:200

Drawing No: Rev:
2049-00-DR-0109 D02



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Rev D02 Date 16.03.2016 Drwn EP Chkd LD
Updated floor heights. Amended void position.
Rev D01 Date 16.03.2016 Drwn EP Chkd LD
Initial issue.

Do not scale off this drawing
Report all errors and omissions to the Architect
Dimensions to be checked on site

SHEET INFORMATION:
Plotted by: CAD
Plot date / time: 07 September 2016 15:37:40

Client:

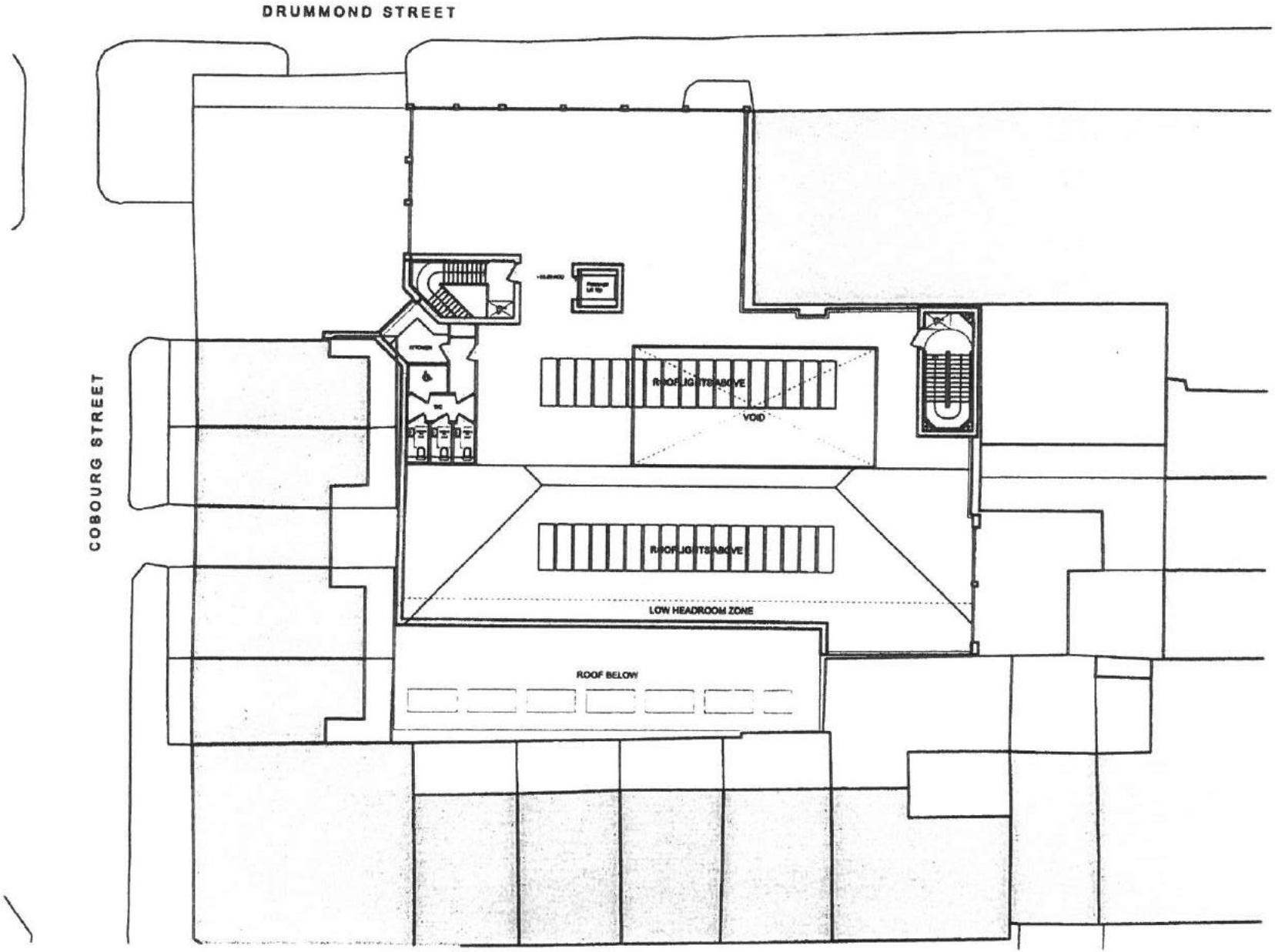
Project:
Drummond Street

Title:
Office Scheme
General Arrangement Plan
Level 00

Drawing status:
For Information

Scale @ A3
1:200

Drawing No: Rev:
2049-00-DR-0110 D02



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Rev 002 Date: 15.09.2015 Drwn: EF Chkd: LD
Updated floor heights. Amended void position.
Rev 001 Date: 10.09.2015 Drwn: EF Chkd: LD
Initial issue.

Do not scale off this drawing.
Report all errors and omissions to the Architect.
Dimensions to be checked on site.

SHEET INFORMATION:
Plotted by: CAD
Plot date : 07 September 2015 10:37:52

Client:

Project:
Drummond Street

Title:
Office Scheme
General Arrangement Plan
Level 01

Drawing status:
For Information

Scale @ A3
1:200

Drawing No: Rev:
2049-00-DR-0111 D02