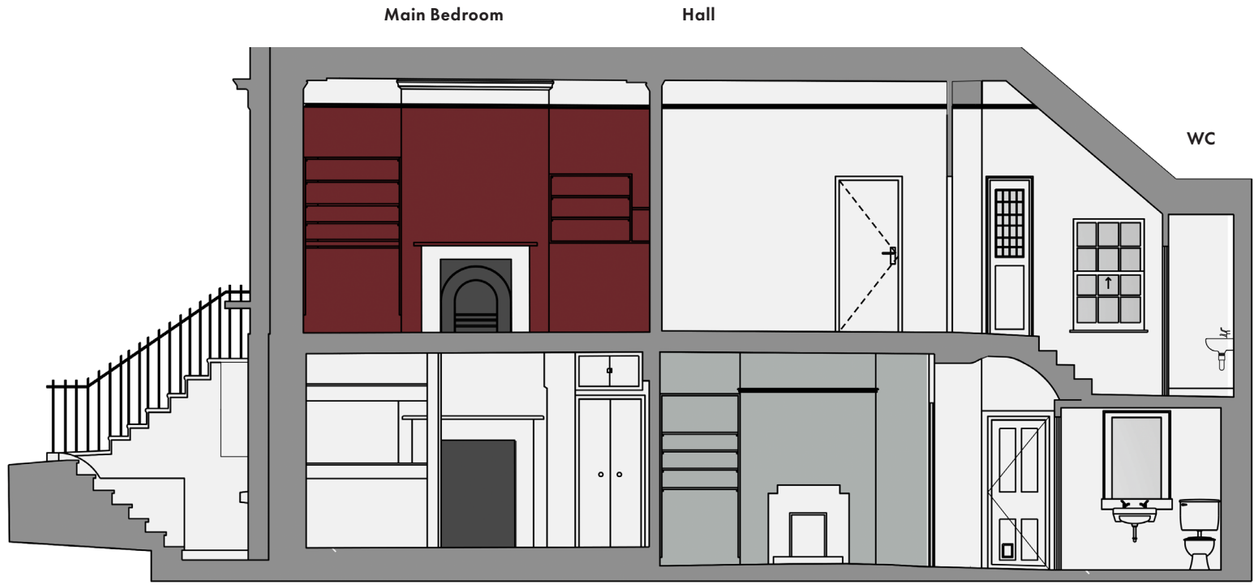
Proposed Extension

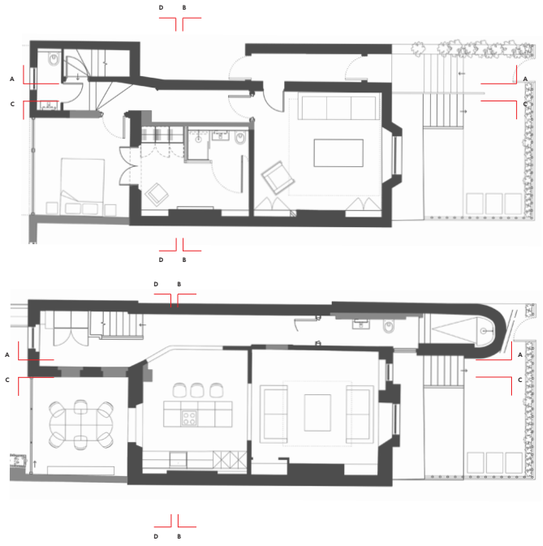
PROPOSED SECTION

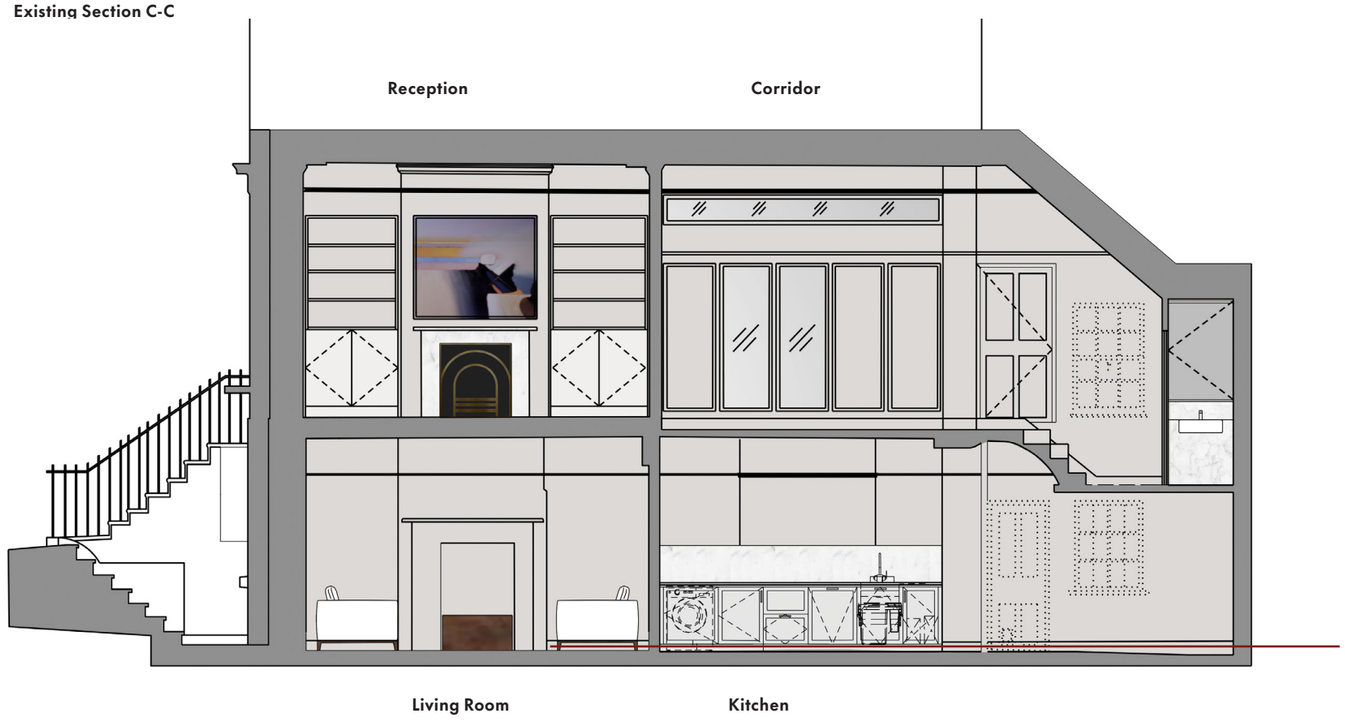
Design Intent

The proposed extension and renovation improves the layout and circulation of the existing space. The interventions are simple and sympathetic to the original design intent of the building.



Existing Section C-C





CDA proposes that the newly added platform is carefully removed, reinstating the original floor level of the Victorian House. This improves the circulation of the space.

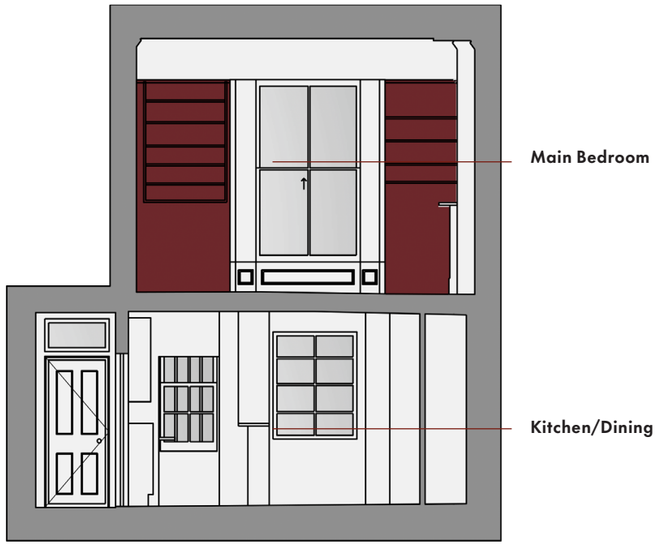
Proposed Section C-C

Proposed Extension

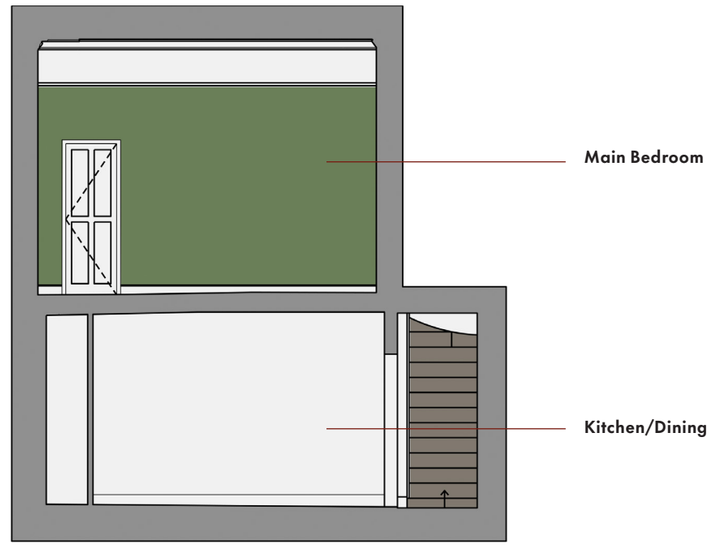
PROPOSED SECTION

Design Intent

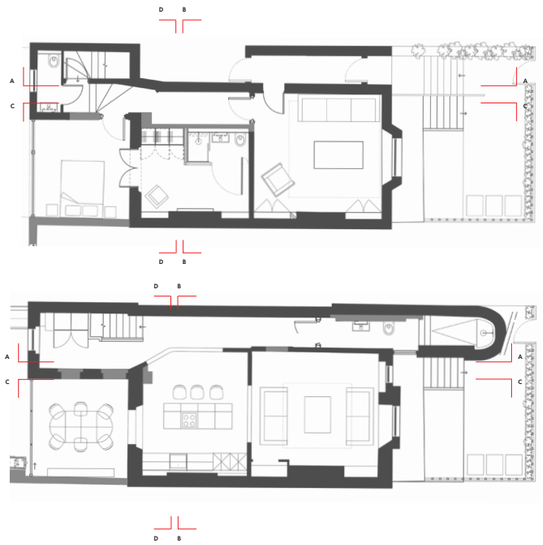
The proposed extension and renovation improves the layout and circulation of the existing space. The interventions are simple and sympathetic to the original design intent of the building.



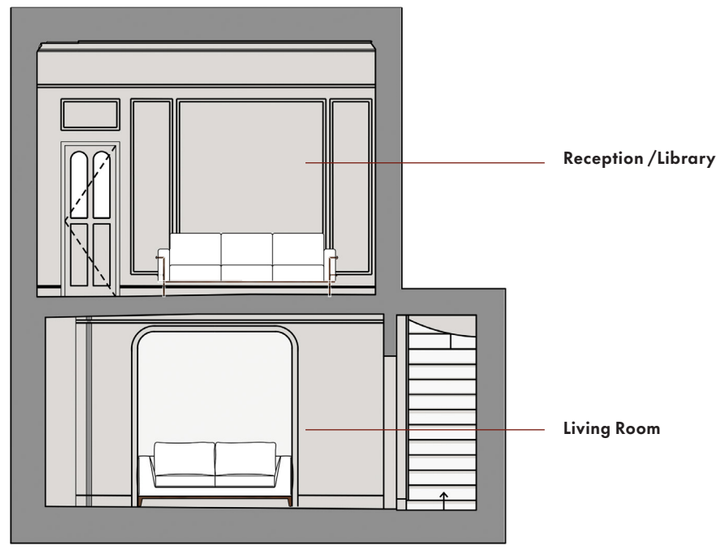
Existing Section B-B



Existing Section D-D



Proposed Section B-B

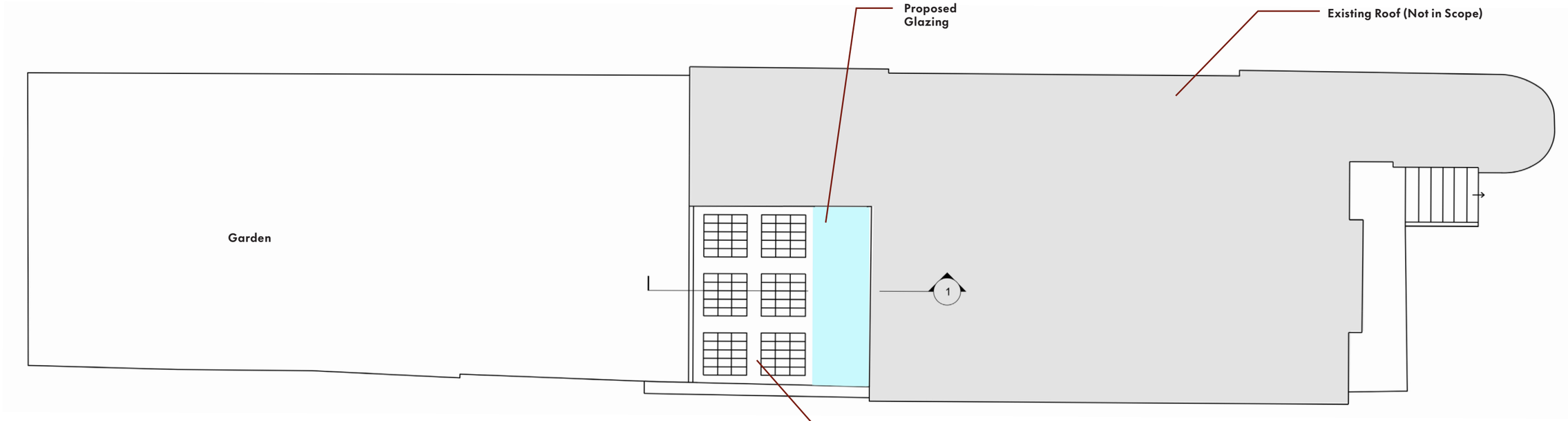


Proposed Section D-D

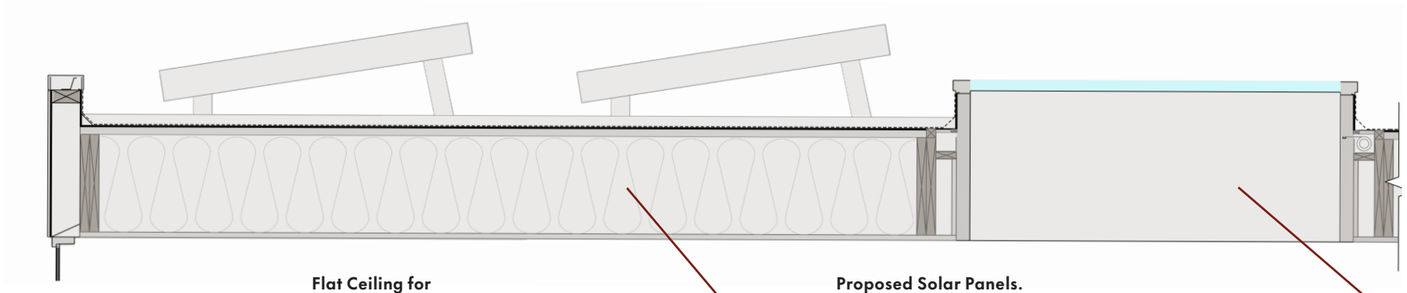
Proposed Extension

ROOF PLAN & ROOF LIGHT DETAIL

CDA proposes that photo voltaic solar panels are placed on the roof of the extension. CDA is also proposing of roof light, to add to the natural daylight inside the master bedroom and threshold between the dressing room and the extension. The added natural light in the ground floor space will enhance the spatial quality and character of the floor.



Proposed Roof Plan

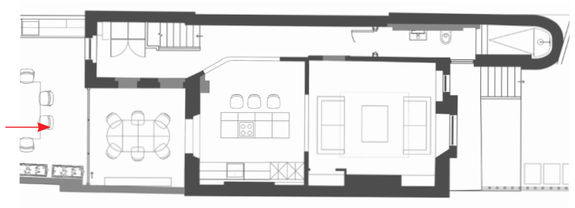


Proposed Detail Section 1

Proposed Extension

EXTERIOR RENDERING

Rear Elevation



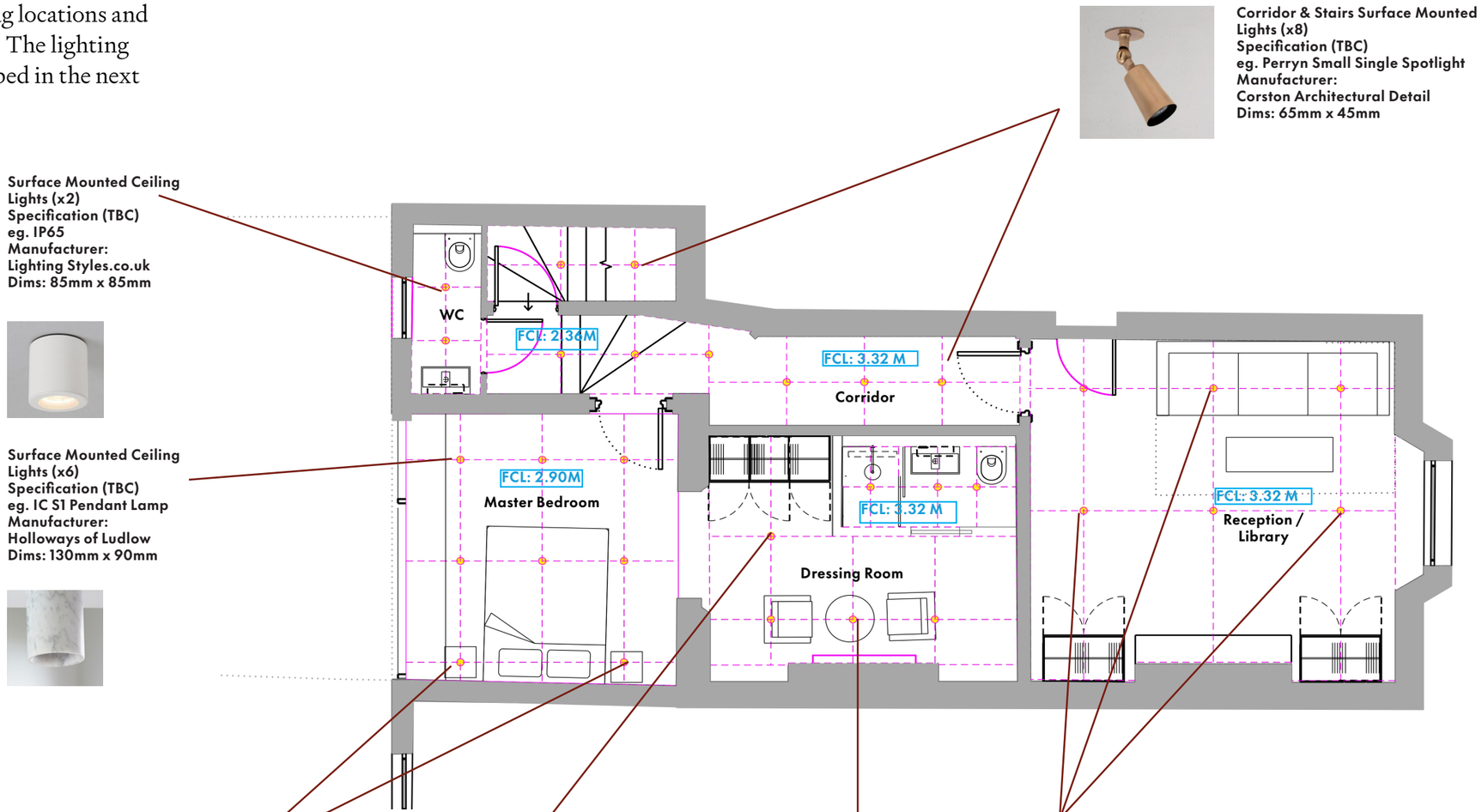
Section 8
Lighting

—Proposed Reflected Ceiling Plan
—Lighting Assessment

Lighting

GROUND FLOOR
REFLECTED CEILING PLAN

The reflected ceiling plan included shows an initial indication of the lighting locations and lighting fixture specifications. The lighting scheme will be further developed in the next stage of design.



Corridor & Stairs Surface Mounted Lights (x8)
Specification (TBC)
eg. Perryn Small Single Spotlight
Manufacturer:
Corston Architectural Detail
Dims: 65mm x 45mm

Surface Mounted Ceiling Lights (x2)
Specification (TBC)
eg. IP65
Manufacturer:
Lighting Styles.co.uk
Dims: 85mm x 85mm

Surface Mounted Ceiling Lights (x6)
Specification (TBC)
eg. IC S1 Pendant Lamp
Manufacturer:
Holloways of Ludlow
Dims: 130mm x 90mm

Bedside Pendants (x2)
Specification (TBC)
eg. IC S1 Pendant Lamp
Manufacturer: FLOS

Surface Mounted Ceiling Lights (x6)
Specification (TBC)
eg. IC S1 Pendant Lamp
Manufacturer:
Holloways of Ludlow
Dims: 130mm x 90mm

Dressing Room Pendant (x1)
Specification (TBC)

Small Spotlights (Group of 3 in each location)
Specification (TBC)
eg. Durham Small Spotlight
Manufacturer:
Corston Architectural Detail
Dims: 135mm, base diameter 60mm, tube diameter 40mm

Lighting

LOWER GROUND FLOOR REFLECTED CEILING PLAN

The reflected ceiling plan included shows an initial indication of the lighting locations and lighting fixture specifications. The lighting scheme will be further developed in the next stage of design.

Corridor Surface Mounted Lights (x3)
Specification (TBC)
eg. Perryn Small Single Spotlight
Manufacturer:
Corston Architectural Detail
Dims: 65mm x 45mm

Surface Mounted Ceiling Lights (x5)
Specification (TBC)
eg. IP65
Manufacturer:
Lighting Styles.co.uk
Dims: 85mm x 85mm

Surface Mounted Ceiling Lights (x2)
Specification (TBC)
eg. IP65
Manufacturer:
Lighting Styles.co.uk
Dims: 85mm x 85mm

Dining Room
Pendant (x1)
Specification (TBC)

Small Spotlights (6 x Group of 3 in each location)
Specification (TBC)
eg. Durham Small Spotlight
Manufacturer:
Corston Architectural Detail
Dims: 135mm, base diameter 60mm, tube diameter 40mm

Surface Mounted Ceiling Lights (x3)
Specification (TBC)
eg. IC S1 Pendant Lamp
Manufacturer:
Holloways of Ludlow
Dims: 130mm x 90mm

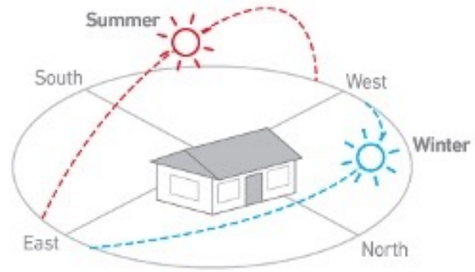
Surface Mounted Ceiling Lights (x9)
Specification (TBC)
eg. IC S1 Pendant Lamp
Manufacturer:
Holloways of Ludlow
Dims: 130mm x 90mm

Lighting

LIGHTING ASSESSMENT

This initial analysis shows how much light spillage is generated from the windows. 91a Belsize Lane is in environmental zone E3. It is recommended that are are maximum values of vertical illuminance on properties of 10lx (21x post-curfew). Values of 3-5 lux dissipated is acceptable and the light spillage of the application building falls well within this range

The reflected ceiling plan included shows an initial indication of the lighting locations and lighting fixture specifications. The lighting scheme will be further developed in the next stage of design.



SUMMMER vs WINTER SUN

This document sets out a review of light spill from internal lighting within the dining room and the master bedroom rear extension at 91 Belsize lane.
For context, our understanding is this site sits between 2 properties each with a rear glazed conservatory. The property at 91 Belsize lane only has one rear glazed elevation. Louvred blinds will be used on this window to minimise light spill along with architectural planting along boundary to further limit spill of light onto neighbouring properties.

Lighting

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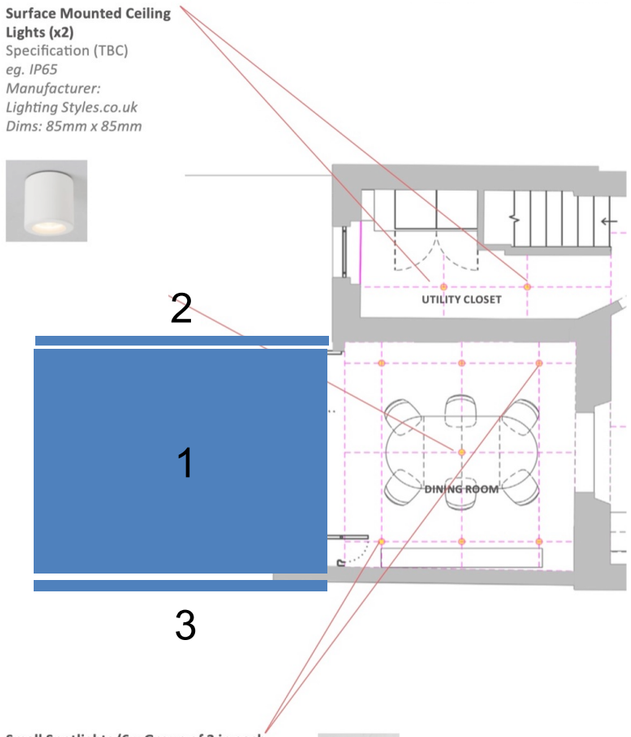
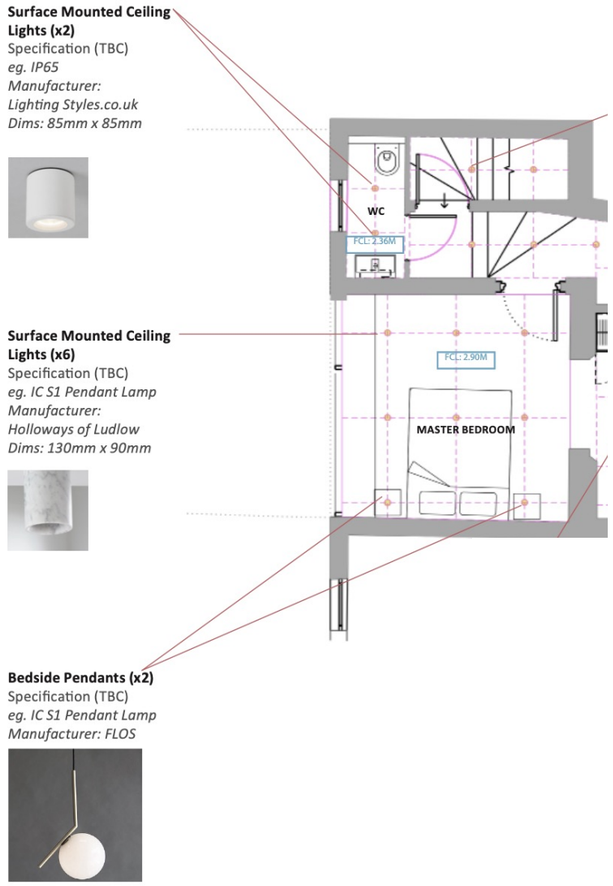
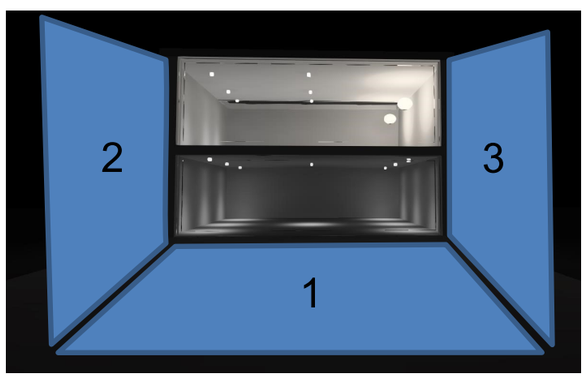






To ascertain the likely spill of light from this room the lighting design studio have run lighting calculations using Dialux Evo photometric software with 3 lighting calculation surfaces placed outside the rear extension:

Calculation surface 1 – Floor level
Calculation surface 2 – Vertical Left side
Calculation surface 3 – Vertical Right side

Lighting

LIGHTING ASSESSMENT

This initial analysis shows how much light spillage is generated from the windows. 91a Belsize Lane is in environmental zone E3. It is recommended that are are maximum values of vertical illuminance on properties of 10lx (21x post-curfew). Values of 3-5 lux dissipated is acceptable and the light spillage of the application building falls well within this range.

The reflected ceiling plan included shows an initial indication of the lighting locations and lighting fixture specifications. The lighting scheme will be further developed in the next stage of design.

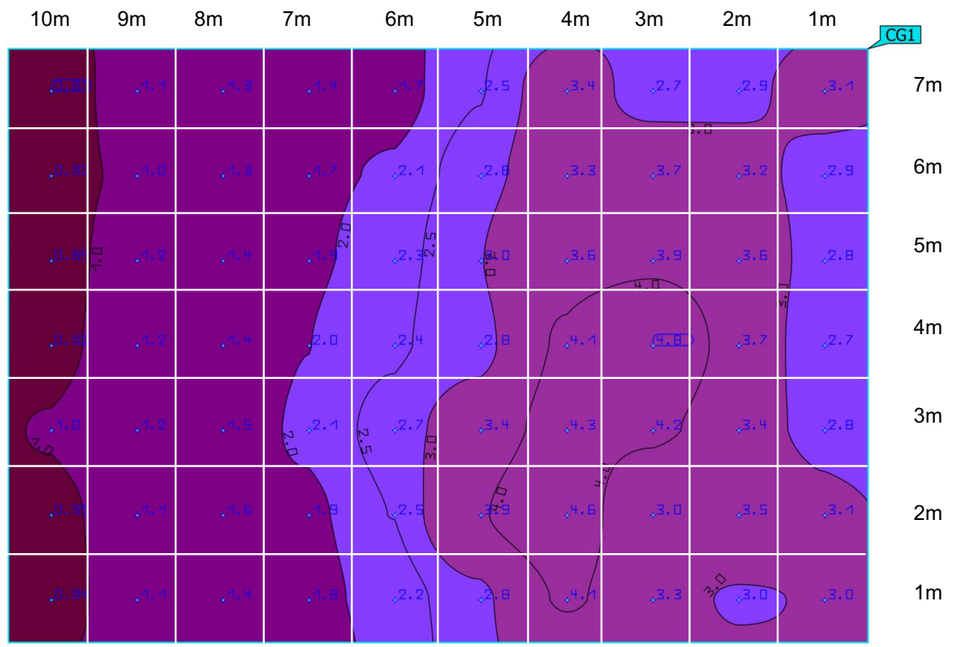
Calculation Surface 1 (floor level)

Results show the average maintained illuminance at floor level .

Average lux 2.44 – across 10m

Less than 4lux 1m away from window.

Maximum level 4.79lx (within 1m of window).



Properties	Ē	E_{min}	E_{max}	g_1	g_2	Index
Surface - Courtyard Floor Perpendicular illuminance	2.44 lx	0.87 lx	4.79 lx	0.36	0.18	CG1

Lighting

LIGHTING ASSESSMENT

This initial analysis shows how much light spillage is generated from the windows. 91a Belsize Lane is in environmental zone E3. It is recommended that are are maximum values of vertical illuminance on properties of 10lx (21x post-curfew). Values of 3-5 lux dissipated is acceptable and the light spillage of the application building falls well within this range.

The reflected ceiling plan included shows an initial indication of the lighting locations and lighting fixture specifications. The lighting scheme will be further developed in the next stage of design.

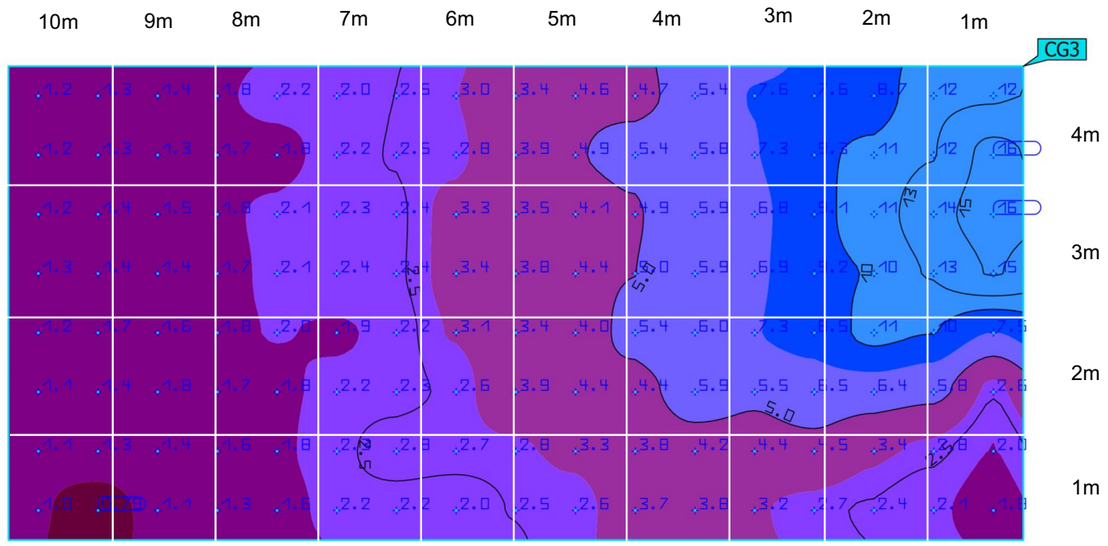
Calculation Surface 2 (Vertical on boundary)

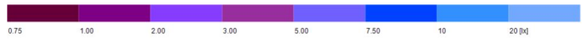
Results show the average maintained illuminance Average >4.5 lux

(Average 5lux from moon light)

Less than 15lux 1m away from window.

Maximum level >15.8lx





Properties	Ē	E_{min}	E_{max}	g_1	g_2	Index
A Perpendicular illuminance	4.22 lx	0.79 lx	15.8 lx	0.19	0.050	CG3

Lighting

LIGHTING ASSESSMENT

This initial analysis shows how much light spillage is generated from the windows. 91a Belsize Lane is in environmental zone E3. It is recommended that are are maximum values of vertical illuminance on properties of 10lx (21x post-curfew). Values of 3-5 lux dissipated is acceptable and the light spillage of the application building falls well within this range.

The reflected ceiling plan included shows an initial indication of the lighting locations and lighting fixture specifications. The lighting scheme will be further developed in the next stage of design.

Calculation Surface 3 (Vertical on boundary)

Results show the average maintained illuminance Average >2.53 lux

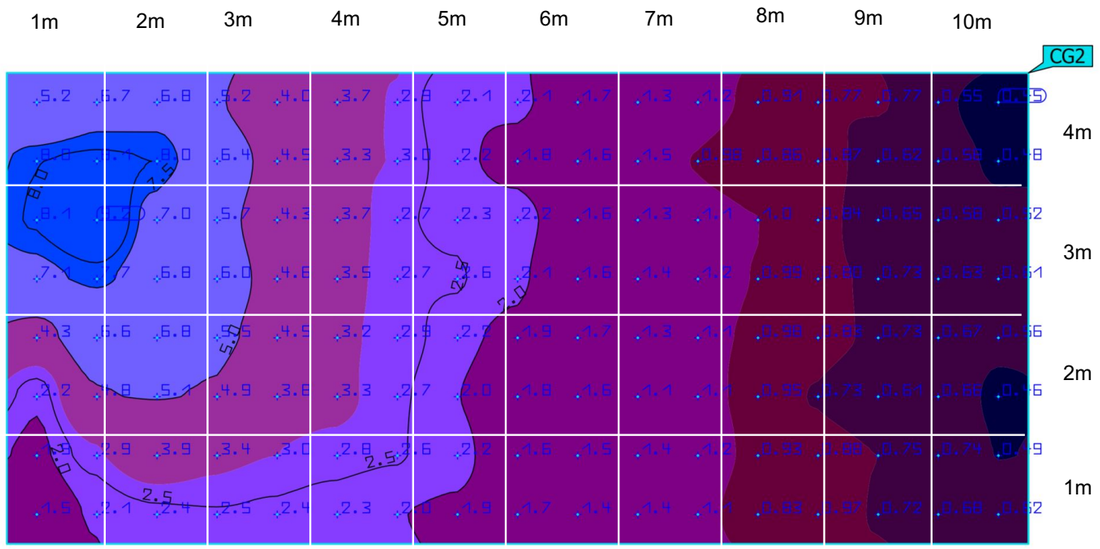
(Average 5lux from moon light)

Less than 9lux 1m away from window.

Maximum level >9.24lx

In Summary:

In the context of the lighting levels emitted by the neighbouring properties, via their fully glazed conservatories, the subject site has a significantly lower level of light emission and would not pose any light disturbance risks to the surrounding area. Based on our calculations using the lighting scheme provided there would no adverse impact on the immediate area.



Properties	$\bar{E}$	E_{min}	E_{max}	g_1	g_2	Index
B Perpendicular illuminance	2.53 lx	0.45 lx	9.24 lx	0.18	0.049	CG2

Lighting

LIGHTING ASSESSMENT

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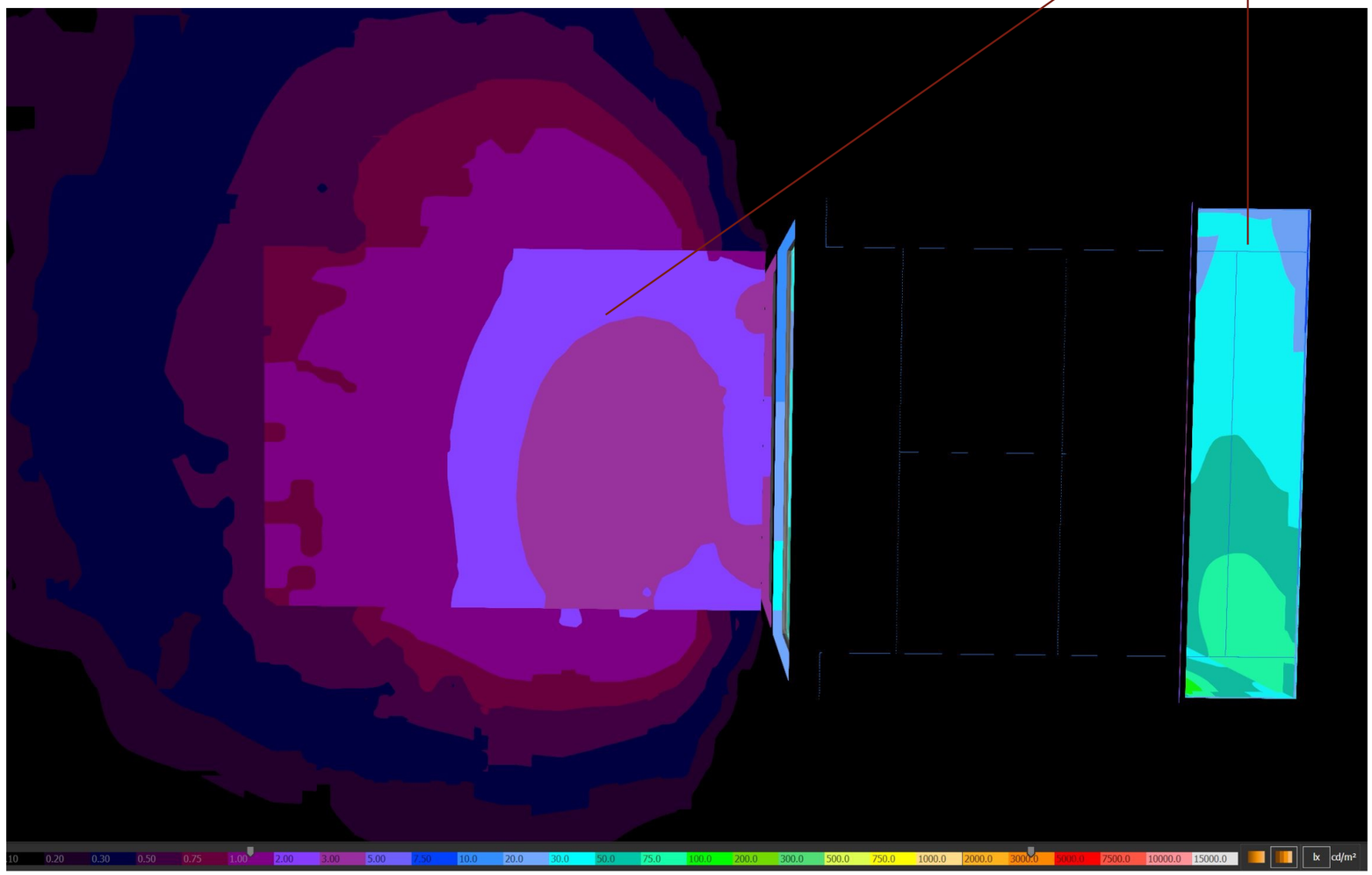
The reflected ceiling plan included shows an initial indication of the lighting locations and lighting fixture specifications. The lighting scheme will be further developed in the next stage of design.

The amount of light coming through the roof light will be much less. The simulation was taken from the floor of the master bedroom. In reality, the light levels will more resemble the purple tones of the false colour rendering.

False colour rendering of 91 Belsize Lane's illuminance distribution as seen from above.



Lighting

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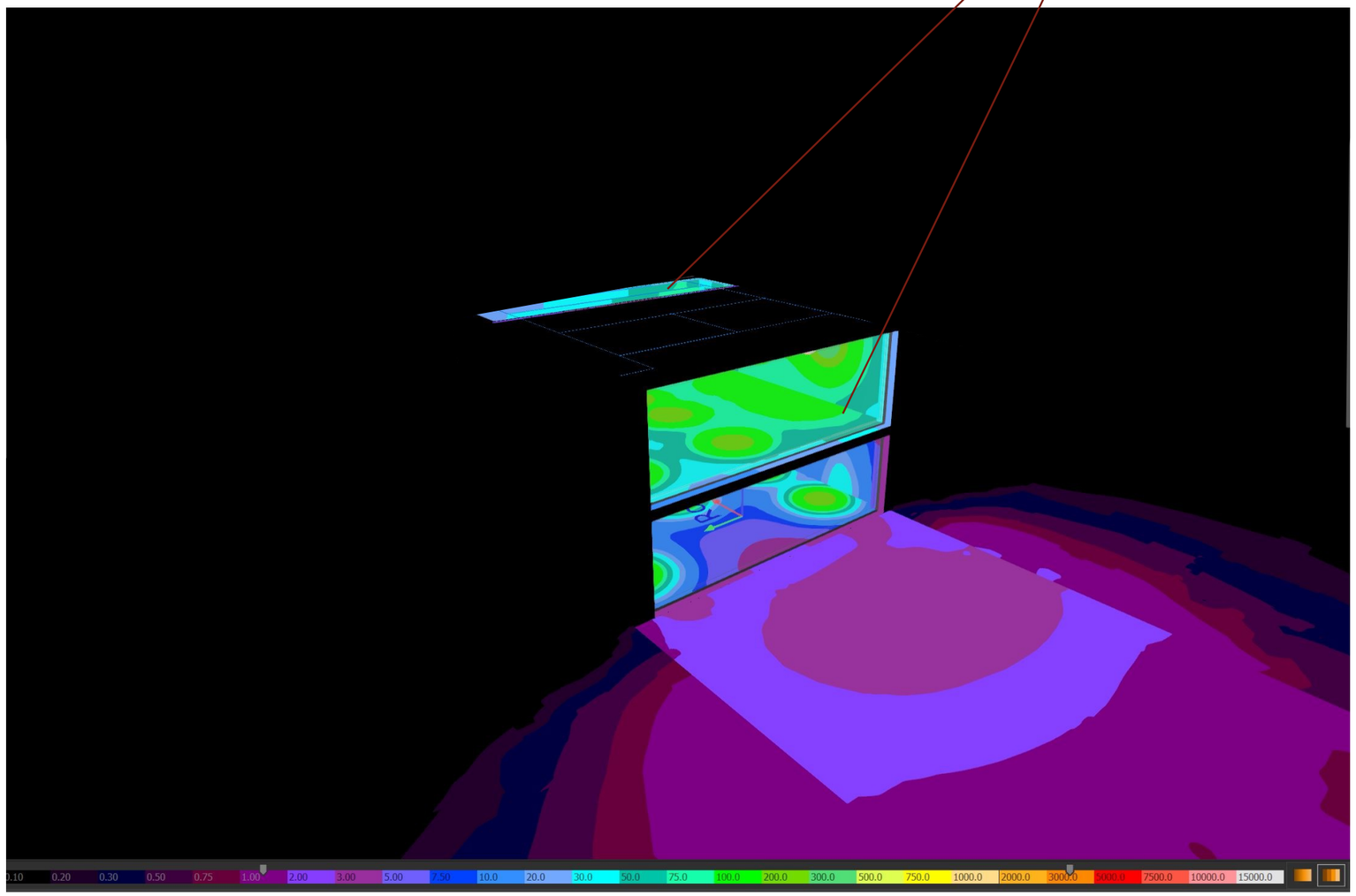
The amount of light coming through the roof light and master bedroom will be much less. The simulation was taken from the floor of the master bedroom. In reality, the light levels will more resemble the purple tones of the false colour rendering.

False colour rendering of illuminance distribution from the rear of 91 Belsize Lane.



Section 9

Comparitive Energy Report

Comparitive Energy Report

SUSTAINABILITY STATEMENT

With the proposed upgrades and thoughtful extension. The house will have a reduction of carbon emissions. In line with the energy analysis, the dwelling fabric energy efficiency improves by 32.15 percent.

The report was prepared by Jack Palmer of MES building solutions.

mes buildingsolutions
Part of the FOCUS consultancy group

Comparative Energy Report
91a BelsizeLane, NW3 5AU

02/09/2022

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Client:
Kris Engley
Flat 1
30a Rossyln Hill
London
NW3 1NH

Project:
91a Belsize Lane
Belsize Park
London
NW3 5AU

Date:
02/09/2022

Author:
Jack Palmer
Sustainability Consultant

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About *MES Building Solutions*

***MES Building Solutions* is an established consultancy practice specialising in providing sustainable building solutions throughout the UK.**

We offer a full range of services for both residential and commercial buildings, from small individual properties through to highly complex mixed use developments.

We are an industry leader in delivering a professional, accredited and certified service to a wide range of clients including architects, developers, builders, housing associations & the public sector.

Employing highly qualified staff, our team comes from a variety of backgrounds within the construction industry with combined knowledge of building design, engineering, assessment, construction, development, research and surveying.

We are renowned for our creative thinking and always provide a high quality, honest and diligent service. We achieve long-term relationships with our clients, with nearly all of our business coming from existing clients or recommendation.

MES Building Solutions maintains its position at the forefront of changes in building regulations as well as technological advances. Our clients, large or small, are therefore assured of a cost effective, cohesive and fully integrated professional service.

About the Author

Jack Palmer is a Sustainability Consultant within MES Building Solutions and has several years' experience in sustainable construction and is a fully qualified On Construction SAP energy assessor.

Comparitive Energy Report

SUSTAINABILITY STATEMENT

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The below table displays the increase in SAP rating and reductions in CO2 emissions, Dwelling Carbon Dioxide Emissions Rate and Dwelling Fabric Energy Efficiency when comparing the proposed extension dwelling to the existing dwelling and the notional counterpart (showing L1B compliance).

Table 1: **Comparison for Existing Property Against the Proposed Extension Property**

Property	SAP Rating	CO2 Emissions (t/yr)	Dwelling Carbon Dioxide Emissions Rate (DER) [kgC02/yr/m²]	Dwelling Fabric Energy Efficiency Rate (DFEE) [kWh/m²/yr]
Existing Property	58 D	4.83	52.37	198.69
Proposed Extension Property	68 D	4.50	36.51	134.81
Notional Extension Property	66D	4.77	38.44	141.11
Reduction over Existing (%):		6.83	30.28	32.15
Reduction over Notional (%):		5.66	5.02	4.46

When comparing the proposed property to the existing, in all four areas a significant improvement can be seen to the fabric, energy and cost efficiency of the property. The improvement in the SAP rating for the proposed extension property means that the overall cost efficiency of the property will financially benefit the end user on a day-to-day basis and allow for long term cost savings. The reductions displayed in the CO2 emissions, DER and DFEE mean that the proposed property operates on a more energy efficient basis than its existing counterpart. This is due to there being overall less heat loss, directly as a result from the proposed windows, wall, floor and roof area. The table also shows how the proposed extension also exceeds current L1B building regulations.

Please find the SAP calculations attached below.

Comparitive Energy Report

SUSTAINABILITY STATEMENT

With the proposed upgrades and thoughtful extension. The house will have a reduction of carbon emissions. In line with the energy analysis, the dwelling fabric energy efficiency improves by 32.15 percent.

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Summary for Input Data

elmhurst energy

Property Reference	91a-Belsize-Lane			Issued on Date	02/09/2022
Assessment Reference	Proposed			Prop Type Ref	Proposed
Property	91a, Belsize Lane, London, Greater London, NW3 5AU				
SAP Rating	68 D	DER	36.15	TER	8.88
Environmental	64 D	% DER<TER	-307.09		
CO_2 Emissions (t/year)	4.45	DFEE	133.36	TFEE	37.39
Compliance Check	See BREL	% DFEE < TFEE	-256.72		
% DPER < TPER	-323.74	DPER	196.83	TPER	46.45
Assessor Details	Mr. Jack Palmer			Assessor ID	U877-0001
Client	Kristian Engley				

SUMMARY FOR INPUT DATA FOR: New Build (As Designed)

Orientation	Northwest
Property Tenture	1
Transaction Type	6
Terrain Type	Urban
1.0 Property Type	House, Mid-Terrace
2.0 Number of Storeys	2
3.0 Date Built	2022
4.0 Sheltered Sides	3
5.0 Sunlight/Shade	Average or unknown
6.0 Thermal Mass Parameter	Precise calculation
7.0 Electricity Tariff	Standard
Smart electricity meter fitted	No
Smart gas meter fitted	No

7.0 Measurements

	Heat Loss Perimeter	Internal Floor Area	Average Storey Height
Ground Floor:	m	m²	m
1st Storey:	17.51 m	77.39 m²	2.75 m
2nd Storey:	23.83 m	64.58 m²	3.10 m
3rd Storey:	m	m²	m
4th Storey:	m	m²	m
5th Storey:	m	m²	m
6th Storey:	m	m²	m
7th Storey:	m	m²	m
8th Storey:	m	m²	m

8.0 Living Area 64.00 m²

9.0 External Walls

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Gross Area(m²)	Nett Area (m²)	Shelter Res	Shelter	Openings	Area Calculation Type
External Wall 1	Solid Wall	Solid wall : plasterboard on dabs, 210 mm brick, insulated externally	2.10	110.00	93.13	80.97	0.00	None	12.16	Enter Gross Area
New Extension Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.18	60.00	28.88	0.39	0.00	None	28.49	Enter Gross Area

9.1 Party Walls

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Area (m²)	Shelter Res	Shelter
Party Wall 1	Solid Wall	Single plasterboard on dabs on both sides, dense blocks, cavity or cavity fill	0.00	70.00	128.68		None

9.2 Internal Walls

Description	Construction	Kappa (kJ/m²K)	Area (m²)
Stud	Plasterboard on timber frame	9.00	201.64

10.0 External Roofs

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Gross Area(m²)	Nett Area (m²)	Shelter Code	Shelter Factor	Calculation Type	Openings
External Roof 1	External Flat Roof	Plasterboard, insulated flat roof	2.30	9.00	14.62	0.00	None	0.00	Enter Gross Area	0.00
NEW External Flat Roof	External Plane	Plasterboard, insulated at ceiling level	0.18	9.00	18.57	0.00	None	0.00	Enter Gross	0.00

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Summary for Input Data

elmhurst energy

Roof								Area

10.1 Party Ceilings

Description	Construction	Kappa (kJ/m²K)	Area (m²)
Party Ceiling 1	Concrete floor slab, carpeted	100.00	46.01

10.2 Internal Ceilings

Description	Storey	Construction	Area (m²)
Internal Ceiling 1	Lowest occupied	Plasterboard ceiling, carpeted chipboard floor	62.78

11.0 Heat Loss Floors

Description	Type	Storey Index	Construction	U-Value (W/m²K)	Shelter Code	Shelter Factor	Kappa (kJ/m²K)	Area (m²)
Existing Ground Floor	Ground Floor - Solid	Lowest occupied	Suspended concrete floor, carpeted	0.38	None	0.00	75.00	59.91
New Ground Floor	Ground Floor - Solid	Lowest occupied	Suspended concrete floor, carpeted	0.10	None	0.00	75.00	17.48

11.2 Internal Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
Internal Floor 1		Plasterboard ceiling, carpeted chipboard floor	9.00	62.78

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
NEW Window	Manufacturer	Window	Double glazed			0.76		0.85	1.40
NEW Glazed Door	Manufacturer	Window	Double glazed			0.76		0.85	1.40
New Roof Light	Manufacturer	Roof Light	Double glazed			0.76		0.70	1.40
Existing Window	Manufacturer	Window	Single glazed						4.80
Existing Door	Manufacturer	Solid Door							3.00

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
NW Window Exist	Existing Window	External Wall 1	North West	7.12	
NW Door Exist	Existing Door	External Wall 1	North West	2.88	
SE Window Exist	Existing Window	External Wall 1	South East	2.16	
SE New Window	NEW Window	New Extension Wall	South East	14.30	
SW Window NEW	NEW Window	New Extension Wall	South West	7.74	
NEW NE Window	NEW Window	New Extension Wall	North East	1.86	
SE Glazed Door NEW	NEW Glazed Door	New Extension Wall	South East	4.59	

14.0 Conservatory	None	
15.0 Draught Proofing	100	%
16.0 Draught Lobby	No	
17.0 Thermal Bridging	Default	
Y-value	0.20	W/m²K
18.0 Pressure Testing	No	
Test Method	Blower Door	
19.0 Mechanical Ventilation		
Mechanical Ventilation		
Mechanical Ventilation System Present	No	
20.0 Fans, Open Fireplaces, Flues		
21.0 Fixed Cooling System	No	
22.0 Lighting		
No Fixed Lighting	No	

Name	Efficacy	Power	Capacity	Count
Lighting 1	80.00	5	400	12

24.0 Main Heating 1	Manufacturer	
Description	Combi	
Percentage of Heat	100.00	%
Fuel Type	Mains gas	
SAP Code	113	
In Winter	89.00	
In Summer	89.00	
Model Name	tbc	

Comparitive Energy Report

SUSTAINABILITY STATEMENT

With the proposed upgrades and thoughtful extension. The house will have a reduction of carbon emissions. In line with the energy analysis, the dwelling fabric energy efficiency improves by 32.15 percent.

The report was prepared by Jack Palmer of MES building solutions.

Summary for Input Data

elmhurst energy

Manufacturer	tbc
System Type	Combi
Controls SAP Code	2110
Delayed Start Stat	Yes
Burner Control	On/Off
Flue Type	Balanced
Fan Assisted Flue	Yes
Is MHS Pumped	Pump in heated space
Heating Pump Age	2013 or later
Heat Emitter	Underfloor
Underfloor Heating	Yes - Pipes in thin screed
Flow Temperature	Unknown
Boiler Interlock	Yes
Combi boiler type	Standard Combi
Combi keep hot type	Gas/Oil, time clock
25.0 Main Heating 2	None
26.0 Heat Networks	None

	Heat Source	Fuel Type	Heating Use	Efficiency	Percentage Of Heat	Heat	Heat Power Ratio	Electrical	Fuel Factor	Efficiency type
Heat source 1										
Heat source 2										
Heat source 3										
Heat source 4										
Heat source 5										

28.0 Water Heating

Water Heating	Main Heating 1
SAP Code	901
Flue Gas Heat Recovery System	No
Waste Water Heat Recovery Instantaneous System 1	No
Waste Water Heat Recovery Instantaneous System 2	No
Waste Water Heat Recovery Storage System	No
Solar Panel	No
Water use <= 125 litres/person/day	No
Cold Water Source	From mains
Bath Count	1
28.3 Waste Water Heat Recovery System	
29.0 Hot Water Cylinder	None
In Airing Cupboard	No
34.0 Small-scale Hydro	None

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

	Typical Cost	Typical savings per year	Ratings after improvement SAP rating	Environmental Impact
			D 68	D 65
	£3,500 - £5,500	£151	C 72	D 65
			0	0

Comparitive Energy Report

SUSTAINABILITY STATEMENT

With the proposed upgrades and thoughtful extension. The house will have a reduction of carbon emissions. In line with the energy analysis, the dwelling fabric energy efficiency improves by 32.15 percent.

The report was prepared by Jack Palmer of MES building solutions.

Summary for Input Data

elmhurst energy

Property Reference	91a-Belsize-Lane			Issued on Date	02/09/2022
Assessment Reference	Existing			Prop Type Ref	Proposed
Property	91a, Belsize Lane, London, Greater London, NW3 5AU				

SAP Rating	58 D	DER	52.37	TER	11.28
Environmental	52 E	% DER<TER	-364.27		
CO_2 Emissions (t/year)	4.83	DFEE	198.69	TFEE	41.46
Compliance Check	See BREL	% DFEE < TFEE	-379.17		
% DPER < TPER	-381.33	DPER	284.56	TPER	59.12

Assessor Details	Mr. Jack Palmer	Assessor ID	U877-0001
Client	Kristian Engley		

SUMMARY FOR INPUT DATA FOR: New Build (As Designed)

Orientation	Northwest
Property Tenture	1
Transaction Type	6
Terrain Type	Urban
1.0 Property Type	House, Mid-Terrace
2.0 Number of Storeys	2
3.0 Date Built	1900
4.0 Sheltered Sides	2
5.0 Sunlight/Shade	Average or unknown
6.0 Thermal Mass Parameter	Precise calculation
7.0 Electricity Tariff	Standard
Smart electricity meter fitted	No
Smart gas meter fitted	No

7.0 Measurements

	Heat Loss Perimeter	Internal Floor Area	Average Storey Height
Ground Floor:	m	m²	m
1st Storey:	20.02 m	59.91 m²	2.75 m
2nd Storey:	24.34 m	46.00 m²	3.30 m
3rd Storey:	m	m²	m
4th Storey:	m	m²	m
5th Storey:	m	m²	m
6th Storey:	m	m²	m
7th Storey:	m	m²	m
8th Storey:	m	m²	m

8.0 Living Area 24.10 m²

9.0 External Walls

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Gross Area(m²)	Nett Area (m²)	Shelter Res	Shelter	Openings	Area Calculation Type
External Wall 1	Solid Wall	Solid wall : plasterboard on dabs, 210 mm brick, insulated externally	2.10	110.00	136.05	119.22	0.00	None	16.83	Enter Gross Area

9.1 Party Walls

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Area (m²)	Shelter Res	Shelter
Party Wall 1	Solid Wall	Single plasterboard on dabs on both sides, dense blocks, cavity or cavity fill	0.00	70.00	105.41		None

9.2 Internal Walls

Description	Construction	Kappa (kJ/m²K)	Area (m²)
Stud	Plasterboard on timber frame	9.00	178.72

10.0 External Roofs

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Gross Area(m²)	Nett Area (m²)	Shelter Code	Shelter Factor	Calculation Type	Openings
External Roof 1	External Flat Roof	Plasterboard, insulated flat roof	2.30	9.00	14.62	0.00	None	0.00	Enter Gross Area	0.00

10.1 Party Ceilings

Comparitive Energy Report

SUSTAINABILITY STATEMENT

With the proposed upgrades and thoughtful extension. The house will have a reduction of carbon emissions. In line with the energy analysis, the dwelling fabric energy efficiency improves by 32.15 percent.

The report was prepared by Jack Palmer of MES building solutions.

Summary for Input Data

elmhurst energy

Description	Construction	Kappa (kJ/m²K)	Area (m²)
Party Ceiling 1	Concrete floor slab, carpeted	100.00	46.01

10.2 Internal Ceilings

Description	Storey	Construction	Area (m²)
Internal Ceiling 1	Lowest occupied	Plasterboard ceiling, carpeted chipboard floor	45.29

11.0 Heat Loss Floors

Description	Type	Storey Index	Construction	U-Value (W/m²K)	Shelter Code	Shelter Factor	Kappa (kJ/m²K)	Area (m²)
Existing Ground Floor	Ground Floor - Timber	Lowest occupied	Other	0.38	None	0.00	75.00	59.91

11.2 Internal Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
Internal Floor 1		Plasterboard ceiling, carpeted chipboard floor	9.00	45.29

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Existing Window	Manufacturer	Window	Single glazed						4.80
Existing Door	Manufacturer	Solid Door							3.00

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
NW Window Exist	Existing Window	External Wall 1	North West	6.47	
NW Door Exist	Existing Door	External Wall 1	North West	2.40	
SE Window Exist	Existing Window	External Wall 1	South East	7.96	

14.0 Conservatory	None	
15.0 Draught Proofing	100	%
16.0 Draught Lobby	No	
17.0 Thermal Bridging	Default	
Y-value	0.20	W/m²K
18.0 Pressure Testing	No	
Test Method	Blower Door	
19.0 Mechanical Ventilation		
Mechanical Ventilation		
Mechanical Ventilation System Present	No	
20.0 Fans, Open Fireplaces, Flues		
21.0 Fixed Cooling System	No	
22.0 Lighting		
No Fixed Lighting	No	

Name	Efficacy	Power	Capacity	Count
Lighting 1	80.00	5	400	12

24.0 Main Heating 1	Manufacturer	
Description	Combi	
Percentage of Heat	100.00	%
Fuel Type	Mains gas	
SAP Code	113	
In Winter	89.00	
In Summer	89.00	
Model Name	tbc	
Manufacturer	tbc	
System Type	Combi	
Controls SAP Code	2110	
Delayed Start Stat	Yes	
Burner Control	On/Off	
Flue Type	Balanced	

Comparitive Energy Report

SUSTAINABILITY STATEMENT

With the proposed upgrades and thoughtful extension. The house will have a reduction of carbon emissions. In line with the energy analysis, the dwelling fabric energy efficiency improves by 32.15 percent.

The report was prepared by Jack Palmer of MES building solutions.

Summary for Input Data

elmhurst energy

Fan Assisted Flue	Yes
Is MHS Pumped	Pump in heated space
Heating Pump Age	2013 or later
Heat Emitter	Underfloor
Underfloor Heating	Yes - Pipes in thin screed
Flow Temperature	Unknown
Boiler Interlock	Yes
Combi boiler type	Standard Combi
Combi keep hot type	Gas/Oil, time clock
25.0 Main Heating 2	None
26.0 Heat Networks	None

	Heat Source	Fuel Type	Heating Use	Efficiency	Percentage Of Heat	Heat	Heat Power Ratio	Electrical	Fuel Factor	Efficiency type
Heat source 1										
Heat source 2										
Heat source 3										
Heat source 4										
Heat source 5										

28.0 Water Heating

Water Heating	Main Heating 1
SAP Code	901
Flue Gas Heat Recovery System	No
Waste Water Heat Recovery Instantaneous System 1	No
Waste Water Heat Recovery Instantaneous System 2	No
Waste Water Heat Recovery Storage System	No
Solar Panel	No
Water use <= 125 litres/person/day	No
Cold Water Source	From mains
Bath Count	1
28.3 Waste Water Heat Recovery System	
29.0 Hot Water Cylinder	None
In Airing Cupboard	No
34.0 Small-scale Hydro	None

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

	Typical Cost	Typical savings per year	Ratings after improvement SAP rating	Environmental Impact
			D 58	E 53
	£3,500 - £5,500	£143	D 63	E 53
			0	0

Comparitive Energy Report

SUSTAINABILITY STATEMENT

With the proposed upgrades and thoughtful extension. The house will have a reduction of carbon emissions. In line with the energy analysis, the dwelling fabric energy efficiency improves by 32.15 percent.

The report was prepared by Jack Palmer of MES building solutions.

Summary for Input Data

elmhurst energy

Property Reference	91a-Belsize-Lane	Issued on Date	02/09/2022
Assessment Reference	Notional	Prop Type Ref	Proposed
Property	91a, Belsize Lane, London, Greater London, NW3 5AU		

SAP Rating	66 D	DER	38.44	TER	9.25
Environmental	61 D	% DER<TER	-315.57		
CO_2 Emissions (t/year)	4.77	DFEE	141.11	TFEE	37.77
Compliance Check	See BREL	% DFEE < TFEE	-273.60		
% DPER < TPER	-331.16	DPER	209.24	TPER	48.53

Assessor Details	Mr. Jack Palmer	Assessor ID	U877-0001
Client	Kristian Engley		

SUMMARY FOR INPUT DATA FOR: New Build (As Designed)

Orientation	Northwest
Property Tenture	1
Transaction Type	6
Terrain Type	Urban
1.0 Property Type	House, Mid-Terrace
2.0 Number of Storeys	2
3.0 Date Built	2022
4.0 Sheltered Sides	3
5.0 Sunlight/Shade	Average or unknown
6.0 Thermal Mass Parameter	Precise calculation
7.0 Electricity Tariff	Standard
Smart electricity meter fitted	No
Smart gas meter fitted	No

7.0 Measurements

	Heat Loss Perimeter	Internal Floor Area	Average Storey Height
Ground Floor:	m	m²	m
1st Storey:	17.51 m	77.39 m²	2.75 m
2nd Storey:	23.83 m	64.58 m²	3.10 m
3rd Storey:	m	m²	m
4th Storey:	m	m²	m
5th Storey:	m	m²	m
6th Storey:	m	m²	m
7th Storey:	m	m²	m
8th Storey:	m	m²	m

8.0 Living Area 64.00 m²

9.0 External Walls

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Gross Area(m²)	Nett Area (m²)	Shelter Res	Shelter	Openings	Area Calculation Type
External Wall 1	Solid Wall	Solid wall : plasterboard on dabs, 210 mm brick, insulated externally	2.10	110.00	93.13	80.97	0.00	None	12.16	Enter Gross Area
New Extension Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.18	60.00	28.88	18.72	0.00	None	10.16	Enter Gross Area

9.1 Party Walls

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Area (m²)	Shelter Res	Shelter
Party Wall 1	Solid Wall	Single plasterboard on dabs on both sides, dense blocks, cavity or cavity fill	0.00	70.00	128.68		None

9.2 Internal Walls

Description	Construction	Kappa (kJ/m²K)	Area (m²)
Stud	Plasterboard on timber frame	9.00	201.64

10.0 External Roofs

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Gross Area(m²)	Nett Area (m²)	Shelter Code	Shelter Factor	Calculation Type	Openings
External Roof 1	External Flat Roof	Plasterboard, insulated flat roof	2.30	9.00	14.62	0.00	None	0.00	Enter Gross Area	0.00
NEW External Flat Roof	External Plane	Plasterboard, insulated at ceiling level	0.15	9.00	18.57	0.00	None	0.00	Enter Gross	0.00

Comparitive Energy Report

SUSTAINABILITY STATEMENT

With the proposed upgrades and thoughtful extension. The house will have a reduction of carbon emissions. In line with the energy analysis, the dwelling fabric energy efficiency improves by 32.15 percent.

The report was prepared by Jack Palmer of MES building solutions.

Summary for Input Data

elmhurst energy

Roof								Area

10.1 Party Ceilings

Description	Construction	Kappa (kJ/m²K)	Area (m²)
Party Ceiling 1	Concrete floor slab, carpeted	100.00	46.01

10.2 Internal Ceilings

Description	Storey	Construction	Area (m²)
Internal Ceiling 1	Lowest occupied	Plasterboard ceiling, carpeted chipboard floor	62.78

11.0 Heat Loss Floors

Description	Type	Storey Index	Construction	U-Value (W/m²K)	Shelter Code	Shelter Factor	Kappa (kJ/m²K)	Area (m²)
Existing Ground Floor	Ground Floor - Solid	Lowest occupied	Suspended concrete floor, carpeted	0.38	None	0.00	75.00	59.91
New Ground Floor	Ground Floor - Solid	Lowest occupied	Suspended concrete floor, carpeted	0.18	None	0.00	75.00	17.48

11.2 Internal Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
Internal Floor 1		Plasterboard ceiling, carpeted chipboard floor	9.00	62.78

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
NEW Window	Manufacturer	Window	Double glazed			0.76		0.70	1.40
NEW Glazed Door	Manufacturer	Window	Double glazed			0.76		0.70	1.40
New Roof Light	Manufacturer	Roof Light	Double glazed			0.76		0.70	1.40
Existing Window	Manufacturer	Window	Single glazed						4.80
Existing Door	Manufacturer	Solid Door							3.00

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
NW Window Exist	Existing Window	External Wall 1	North West	7.12	
NW Door Exist	Existing Door	External Wall 1	North West	2.88	
SE Window Exist	Existing Window	External Wall 1	South East	2.16	
SE New Window	NEW Window	New Extension Wall	South East	5.10	
SW Window NEW	NEW Window	New Extension Wall	South West	2.76	
NEW NE Window	NEW Window	New Extension Wall	North East	0.66	
SE Glazed Door NEW	NEW Glazed Door	New Extension Wall	South East	1.64	

14.0 Conservatory	None	
15.0 Draught Proofing	100	%
16.0 Draught Lobby	No	
17.0 Thermal Bridging	Default	
Y-value	0.20	W/m²K
18.0 Pressure Testing	No	
Test Method	Blower Door	
19.0 Mechanical Ventilation		
Mechanical Ventilation		
Mechanical Ventilation System Present	No	
20.0 Fans, Open Fireplaces, Flues		
21.0 Fixed Cooling System	No	
22.0 Lighting		
No Fixed Lighting	No	

Name	Efficacy	Power	Capacity	Count
Lighting 1	80.00	5	400	12

24.0 Main Heating 1	Manufacturer	
Description	Combi	
Percentage of Heat	100.00	%
Fuel Type	Mains gas	
SAP Code	113	
In Winter	89.00	
In Summer	89.00	
Model Name	tbc	

Comparitive Energy Report

SUSTAINABILITY STATEMENT

With the proposed upgrades and thoughtful extension. The house will have a reduction of carbon emissions. In line with the energy analysis, the dwelling fabric energy efficiency improves by 32.15 percent.

The report was prepared by Jack Palmer of MES building solutions.

Summary for Input Data

elmhurst energy

Manufacturer	tbc
System Type	Combi
Controls SAP Code	2110
Delayed Start Stat	Yes
Burner Control	On/Off
Flue Type	Balanced
Fan Assisted Flue	Yes
Is MHS Pumped	Pump in heated space
Heating Pump Age	2013 or later
Heat Emitter	Underfloor
Underfloor Heating	Yes - Pipes in thin screed
Flow Temperature	Unknown
Boiler Interlock	Yes
Combi boiler type	Standard Combi
Combi keep hot type	Gas/Oil, time clock
25.0 Main Heating 2	None
26.0 Heat Networks	None

	Heat Source	Fuel Type	Heating Use	Efficiency	Percentage Of Heat	Heat	Heat Power Ratio	Electrical	Fuel Factor	Efficiency type
Heat source 1										
Heat source 2										
Heat source 3										
Heat source 4										
Heat source 5										

28.0 Water Heating

Water Heating	Main Heating 1
SAP Code	901
Flue Gas Heat Recovery System	No
Waste Water Heat Recovery Instantaneous System 1	No
Waste Water Heat Recovery Instantaneous System 2	No
Waste Water Heat Recovery Storage System	No
Solar Panel	No
Water use <= 125 litres/person/day	No
Cold Water Source	From mains
Bath Count	1
28.3 Waste Water Heat Recovery System	
29.0 Hot Water Cylinder	None
In Airing Cupboard	No
34.0 Small-scale Hydro	None

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

	Typical Cost	Typical savings per year	Ratings after improvement SAP rating	Environmental Impact
			D 66	D 62
	£3,500 - £5,500	£151	C 70	D 62
			0	0

Section 10
Conclusion

—Area Schedule
—Drawing and Document Issue Sheet
—Plan Comparison
—Conclusion

AREA SCHEDULES

EXISTING

ROOM NO.	ROOM NAME	GROSS INTERNAL AREA (SQM)
	Lower Ground Floor	
LG-01	Existing Corridor & WC	33.47
LG-02	Existing Wet Room	5.23
LG-03	N/A (Part of Proposed Extension)	*N/A*
LG-04	Existing Rear Room	15.92
LG-05	Existing Front Room	19.72
	Total (Lower Ground Floor)	74.34
	Ground Floor	
G-01	Existing Corridor	16.75
G-02	Existing Front Room	40.13
G-03	Existing Rear Room	21.14
G-04	N/A (Part of Proposed Dressing Room)	*N/A*
G-05	N/A (Part of Proposed Extension)	*N/A*
G-06	Existing WC/Closet	1.91
	Total (Ground Floor)	79.93
	Total (Cumulative)	154.27

PROPOSED

ROOM NO.	ROOM NAME	GROSS INTERNAL AREA (SQM)
	Lower Ground Floor	
LG-01	Corridor	24.51
LG-02	Wet Room	13.25
LG-03	Dining Room	23.27
LG-04	Kitchen	31.75
LG-05	Living Room	39.05
	Total (Lower Ground Floor)	131.83
	Ground Floor	
G-01	Corridor	14.30
G-02	Reception & Library	40.13
G-03	Dressing Room	17.90
G-04	Bathroom	2.57
G-05	Master Bedroom	23.40
G-06	WC	1.91
	Total (Ground Floor)	100.21
	Total (Cumulative)	232.04

DRAWING AND DOCUMENT ISSUE SHEET

The Design and Access Statement provided as part of the briefing pack listed out a series of documents that will be required for planning. Not all of these will be produced by Chris Dyson Architects. The list on this page shows which documents are included within our scope of work.

DRAWING NO.	DOCUMENT TITLE	SCALE	SIZE
	Existing Plans		
0001	Existing Plans	1:50	A1
0002	Location Plan	1:1250	A4
0052	Demolition Plans	1:50	A1
	Existing Elevations		
0110	Existing Elevations	1:50	A1
0111	Existing Side Elevations	1:25	A1
0112	Existing Ground Floor Corridor	1:25	A1
0113	Existing Ground Floor Main Bedroom	1:25	A1
0114	Existing Ground Floor Bedroom 2	1:25	A1
0115	Existing Ground Floor WC/Closet	1:25	A1
0116	Existing Lower Ground Floor Corridor	1:25	A1
0117	Existing Lower Ground Floor Cold Store	1:25	A1
0118	Existing Lower Ground Floor Kitchen/Dining	1:25	A1
0119	Existing Lower Ground Floor Reception	1:25	A1
0120	Existing Lower Ground Floor WC	1:25	A1
0121	Existing Stair	1:25	A1
	Existing Sections		
0200	Existing Sections	1:50	A1
	Proposed Plans		
1000	Proposed Plans	1:50	A1
1001	Proposed Roof Plan & Parapet Detail	1:50 / 1:5	A1
	Proposed Elevations		
1100	Proposed Rear Elevation	1:50 / 1:5	A1
1101	Proposed Side Elevation	1:50	A1
	Proposed Sections		
1200	Proposed Sections	1:50	A1
	Proposed Interior Elevations		
1300	G-01 Corridor	1:25	A1
1301	G-02 Reception & Library	1:25	A1
1302	G-03 Dressing Room	1:25	A1
1303	G-04 Bathroom	1:25	A1
1304	G-05 Master Bedroom	1:25	A1
1305	G-06 WC	1:25	A1
1306	LG-01 Corridor	1:25	A1
1307	LG-02 Wet Room	1:25	A1
1308	LG-03 Dining Room	1:25	A1
1309	LG-04 Kitchen	1:25	A1
1310	LG-05 Living Room	1:25	A1
1311	LG-06 Stair	1:25	A1
	Proposed Details		
1400	Proposed Details (Raised Floor & Glazing)	1:10 / 1:5	A1