47 Theobalds Rd, London WC1X 8SP

PLANNING APPLICATION

The London Borough of Camden

October 2021

REV B

MATHESON WHITELEY

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1.1 Site location - London WC1X

1. Introduction

This application is submitted by architects MATHESON WHITELEY.

The same applicant and design team submitted and were granted consent for change of use and conversion of the property consent ref 2019/6423/P granted by LB of Camden on 18.07.20. The consented project description was -

Alterations to shopfront and rear fenestration, replacement rear rooflights and rear roof extension at first floor all in association with the change of use from A2 (Solicitors) to D1 (Art Gallery).

Following this granting of consent ref 2019/6423/P, the building has been the home to the non-for-profit art gallery and cultural venue Mimosa House, making a vital contribution to the cultural life within Central London.

The applicant has hosted a number of exhibitions and art based educational functions in conjunction with major arts orgainisations including the Arts Council England and Hallett International. Dedicated to artistic experimentation and collaboration, Mimosa House supports dialogue between intergenerational women and queer artists. The venue is established to embrace inclusivity and sensitivity, to provide a safe and empowering space focused on the fluidity of identity and recognise the need for change.

The applicant has now engaged the same design team to assist with gaining permissions for the installation of a small air conditioning system internally. this system is to allow the space to achieve the specific environmental, temperature and humidity conditions that are required for the display of sensitive art works.

This application related to a single external condenser unit to be discretly located to the rear elevation of the building. It is envisaged that the air conditioning system will only be used in the summer months when the existing fabric of the building (a converted Georgian mid-terrace building) does not allow comfortable conditions despite the integrated natural ventilation that was allowed for in the conversion of the building.

Consent for this limited air-conditioning system will allow the applicant to provide for a much broader range of artworks and for those works to be sensitively displayed for the enjoyment and enrichment of all visitors.

2. Sustainability Statement

With our sustainability consultant Neil Ingham of Eb7 Sustainability we have prepared this statement setting out how the hierarchy has been followed and providing a justification for the proposed cooling equipment.

The previous consent 2019/6423/P granted by LB of Camden on 18.07.20, permitted a comprehensive refurbishment of the existing building. Much of the works undertaken in this phase of work carried out under the consent where in order to significantly improve the sustainability of the existing building.

- new insulating glazing to the shopfront
- new insulating glazing to the rear extension rooflights
- new insulation to the existing rear extension roof
- new underfloor heating throughtout with replacement of existing boiler with modern high effeciency heatimng system
- new glazing units g-value has been considered to balance solar control and daylight provision to the space
- installation of rooflight and window blinds to reduce heatgain from solar gain
- new water saving sanitaryware
- new rooflight opening sections to allow natural ventilation throughout the gallery space - however, there is potential for issues for the internal function that is focused on the display of, often fragile artworks, associated with relying solely on natural ventilation to provide thermal comfort
- draft proofing and enhanced thermal performance to all external doors and internal doors to common stairs
- installation of LED lighting with smart PIR controls reducing the internal heat gains within the space, where possible
- the building fabric and air tightness has been improved, where possible, to achieve improvements against the requirements or Part L2A.

In summary, the recent refurbishment undertaken in accordance with the consent ref 2019/6423/P has made large reductions in the energy comsuption and the CO2 emmissions for the building and the activities within.

The building has a specific use - the enjoyment and study of artworks. Some of the measures implemented to reduce energy comsumption while providing a good level of natural control for the users, do cause some issues for the artworks that are displayed or studies within the spaces in the building. The proposed small air conditioning system is to allow the space to achieve the specific environmental, temperature and humidity conditions that are required for the occasional display of sensitive art works. The system will not be used year round as is the case with equipment that is serving a constantly used space where a constant temperature is required.

The air conditioning is only required to the main gallery spaces and only in the peak summer months when the combination of ample daylight causes the space to heat up. While for some occasions this can be easiely managed by opening rooflights and windows and using natural ventilation, in some cases the flow of air into the space may cause issues for more sensitive artworks.

No air conditioning is proposed to the spaces in the building that are used for office and meeting space. The systems are not being proposed to provide environmental comfiort for individuals. The rooms that are used as offices will continue to be served by natural ventilation and will not place any demand on the air conditioning.

The system being proposed is for cooling only rather than heating and cooling. The previous refurbishment provided a low energy consumption underfloor heating system which provides a ambient steady temperature that is tempered overnight utilising the thermal mass of the existing building fabric. The applicant has secured energy contracts from suppliers using only renewable energy sources.

Overall, the air conditioning is for intermitant summer use and any energy it comsumes is far outweighed by the savings and reduction of emmisions made at all other times of the year when the buildimng environment is managed through passive and low energy measures.

In the following pages we have set out these points in relation to the criteria noted in 'Section 10 - Sustainable design and construction principals' in Camden Planning Guidance Energy Effeciency and Adaption - January 2021.

Overheating

10.4 *Where developments are likely to be at risk of overheating applicants will be required to complete dynamic thermal modelling to demonstrate that any risk to overheating has been mitigated.*

This requirement is related to schemes where there is a risk of the persons occupying the building experiencing overheating. For this application it is the risk to delicate artworks for a short period in high summer that gives rise for the need for cooling - therefore we do not consider it possible or necessary to demonstrate this with commissioning full dynamic thermal modelling.

10.5 See above

10.6 *Active cooling (such as air conditioning) is discouraged, unless the applicant can demonstrate exceptional circumstances where opportunities for cooling are unable to be controlled through passive measures alone.*

The site to which this application relates is an art gallery and its activities are for the display and study of artworks. In the refurbishment consented to convert the existing historic property for this purpose, a number of measures were carried out which improved the environmental performance of the building and allowed passive measures for cooling the interior to be relied upon for the majority of this year. However, for the higher temperatures now being experienced in London in the peak summer months, passive means cannot be fully relied upon as they require windows to be open and aire movement to be induced - this unfortunately is not fully compatible with the display of delicate artworks, which can be damaged by the excessive movement of air and by high temperatures and humidity. Therefore the only practical solution is to have some active cooling introduced to provide the correct conditions in these peak summer days.

This application refers to an existing bhistoric uilding. As such and in reference to the improvements in energy effeciency implemented in the previous refurbishment we believe this has complied well with the guidance in Section 8 of Camden Planning Guidance Energy Effeciency and Adaption - January 2021 in particular point 2 referring to recommended Minor interventions

10.7 All developments should follow the cooling hierarchy outlined below, to reduce the risk of overheating and subsequent reliance on active cooling:

1. Minimise internal heat generation through energy efficient design

The project is an existing/refurbished building with a fixed orientation (to the north west). There is very little on offer by way of topographical shading from surrounding buildings, but it does have very limited direct southern exposure.

Within the limitations of the existing building the following measures have been implemented in the previous consented refurbishment -

- Low energy lighting - LED bulbs and PIR controls
- Seal/ insulate heat generating processes - the gas fired boiler is insulated as is all hot water pipework - under floor heating is imstalled with insulation layers under
- Natural ventilation - opening sash windows and rooflights are provided to all rooms
- Night cooling - this has been considered with the opening of windows however is a security risk as the building is not occupied overnight

2. Reduce the amount of heat entering a building in summer:

- The design of the main gallery area was a northern light arrangement to minimise excessive solar gains
- All single glazing to vertical openings (replacement sash windows to existing building) has been replaced with building regulations compliant double glazed units with a low g-value of 0.7 (70%).
- All single glazing to rooflights over mezzanine gallery area have been replaced with building regulations compliant thermally broken aluminium framed double glazed units with solar control coating to outer leaf of glass providing a low g-value of 0.5 (50%).
- Additional thermal insulation has been installed in refurbished roofs and internal floors
- All windows to galleries and offices are fitted with manually operated blackout internal blinds to allow occupants to manage solar gains

3. Manage the heat within the building through exposed internal thermal mass and high ceilings

- The introduction of areas of additional areas of thermal mass has not been practical within the limitations of the existing building and its original construction however the original construction is of solid masonry and a ground floor bearing slab between the ground and lower ground floors and this does offer some internal temperature control through retained heat in the available existing thermal mass.

4. Passive Ventilation

- Natural ventilation - opening sash windows and rooflights are provided
- Night cooling - this has been considered with the opening of windows however is a security risk as the building is not occupied overnight

5. Mechanical Ventilation

- New equipment is selected for ventilation of WC in accordance with current building regulations ensuring efficient performance
- Mechanical fans to introduce internal air flow are not considered suitable as they may cause damage and interference to the delicate artworks that are displayed in the gallery spaces.
- This application is not for cooling to the office spaces of the building and in these areas where persons are working small table fans can be used to introduce air flow to provide summer time comfort. The requirement for A/C cooling is specifically for the gallery areas where fans are not an appropriate solution for the rerasons noted above.

6. Mechanical Cooling

- A dynamic overheating analysis has been undertaken following the methodology set out in CIBSE TM52 in line with London Plan/GLA guidance
- The technical note prepared by EB7 Sustainability is attached to be read in conjunction with this statement.
- In summary, due to the internal gains associated with the potential dense and variable occupation levels associated with the gallery spaces, there is a clear potential for the spaces to overheat.

6. Active Cooling

Refer to our reasoning for the need for active cooling in the gallery spaces. The amount of cooling is reduced to the minimum determined to maintain a appropriate conditions for the display of artworks in the high summer peak temperatures.

- To provide cooling other options have been considered - it is not feasible to use GSHP or ASHP due to the cost and the requirements for internal equipment. The building is already fitted with an energy effecient new underfloor heating system and it is not considered cost effective to replace this with other heating source from a GSHP or ASHP
- Water based cooling systems such as chilled ceilings are not considered suitable due to the limitations of the existing building and its construction

10.8 *The Council will discourage the use of air conditioning and excessive mechanical plant because of the additional energy consumption from operating the equipment, impacts on microclimate from the warm air expelled from the equipment, and because of the competition for plant space, which could otherwise be used for other renewables or green roofs*

The requirements for active cooling have been carefully assessed in order to reduce the amount and size of equipment to be located externally. The offices in the building will not be cooled only those spaces on the ground and first floor serving as galleries. The quanity of air-conditioing units interbnally is also lower than that required if the need was based on persons comfort so the corresponding external equipment is reduced in size as a result. The unit will be located on a small section of roof that is the overrun for a passanger lift installed in the building to improve accessibility. This roof does not therefore have the adequate size, depth or loading capacity to be used as a green roof.

10.9 *If active cooling is unavoidable, applicants need to identify the cooling requirement of the different elements of the development in the Energy Statement. Where cooling proposed, the efficiency of the system and details of controls should be provided, as well as Camden Planning Guidance | Energy efficiency and adaptation the ability to take advantage of free cooling and/or renewable cooling sources (e.g. ASHP)*

With reference to Section 6 of Camden Planning Guidance Energy Effeciency and Adaption - January 2021. Energy statements are required for developments involving 5 or more dwellings and/or more than 500sqm of any (gross internal) floorspace. With reference to Section 6 - Table 1b: Energy statement information, non-domestic. Energy Statement is not required for Minor Development (<500sq.m) Non-domestic Refurbishment (assessed under L2B).

Notwithstanding our understanding that this level of detail is not applicable or required for this application, we have provided details of the specification of the proposed cooling equipment.

10.10 *Where cooling is required in non-residential development, the cooling demand of the actual and notional buildings should be compared, with the aim of reducing the cooling demand below that of the notional building. If this is not possible, the applicant should provide a clear explanation of why it is not possible, and outline the implications for building design.*

This application relates to an existing building - it is not clear how this criteria might be applied and there is not opportunity for new build design as suggested by this section.

10.11 *Comfort cooling (air conditioning) should not be specified in developments where it has been demonstrated that passive or other measures proposed have successfully addressed the risk of overheating. The Council will resist applications proposing active cooling in residential developments to meet market expectations, where no risk of overheating is identified.*

The site to which this application relates is an art gallery and its activities are for the display and study of artworks. In the refurbishment consented to convert the existing historic property for this purpose, a number of measures were carried out which improved the environmental performance of the building and allowed passive measures for cooling the interior to be relied upon for the majority of this year. However, for the higher temperatures now being experienced in London in the peak summer months, passive means cannot be fully relied upon as they require windows to be open and aire movement to be induced - this unfortunately is not fully compatible with the display of delicate artworks, which can be damaged by the excessive movement of air and by high temperatures and humidity. Therefore the only practical solution is to have some active cooling introduced to provide the correct conditions in these peak summer days.

3. Manufacturers Specification

Below we have provided the manufacturers data for the proposed condenser unit - Panasonic CU-4Z80TBE. The external unit will be linked to 4no. internal wall mounted split units.

R32 | Free Multi System Z · R32 Refrigerant

Full flexibility up to 10kW and up to 5 ports with wide range of indoor units, including high performance Etherea indoor units, reaching up to A+++/A++ and using new generation R32 refrigerant

High Energy efficiency class A+++ and A++

Economical, environment-friendly operation high SCOP (Seasonal Coefficiency of Performance).
Original Panasonic Inverter technology and a high performance compressor provide top-class operating efficiency. This lets you enjoy lower electricity bills while contributing to environmental protection.

R32 refrigerant gas: A 'small' change that changes everything

Panasonic recommends R32 because it is comparably environmentally friendly. Compared to R22 and R410A, R32 has a very low potential impact on the depletion of ozone layer and global warming.

In line with the European countries who are concerned in protecting and maintaining the environment by participating in the Montreal Protocol to protect the Ozone Layer and prevent Global Warming, Panasonic is leading the switch to R32.

A wide range of possibilities

Panasonic offers you the solution that perfectly matches your project in terms of total capacity, single indoor capacity and indoor type choice. Size, performance, quiet operation and other exceptional features can be chosen amongst Panasonic's free multi range.

Outdoor Unit. System Capacity (Min - Max Indoor Cooling Capacity Nominal)

2 Rooms			3 Rooms		4 Rooms		5 Rooms
3,2 - 6,0kW	3,2 - 6,0kW	3,2 - 7,7kW	4,5 - 9,5kW	4,5 - 11,2kW	4,5 - 11,5kW	4,5 - 14,7kW	4,5 - 18,3kW
CU-2Z35TBE	CU-2Z41TBE	CU-2Z50TBE	CU-3Z52TBE	CU-3Z68TBE	CU-4Z68TBE	CU-4Z80TBE	CU-5Z90TBE

Indoor units • R32 GAS

Capacity		16	20	25	35	42	50	60	71
Etherea Silver / Pure White Matt		CS-MZ16VKE	CS-XZ20VKEW CS-Z20VKEW	CS-XZ25VKEW CS-Z25VKEW	CS-XZ35VKEW CS-Z35VKEW	CS-Z42VKEW	CS-XZ50VKEW CS-Z50VKEW		CS-Z71VKEW
Wall Mounted TZ Compact Style		CS-MTZ16WKE	CS-TZ20WKEW	CS-TZ25WKEW	CS-TZ35WKEW	CS-TZ42WKEW	CS-TZ50WKEW	CS-TZ60WKEW	CS-TZ71WKEW
Floor Console*			CS-MZ20UFEA	CS-Z25UFEAW	CS-Z35UFEAW		CS-Z50UFEAW		
4 Way 60x60 Cassette			CS-MZ20UB4EA / CZ-BT20EW	CS-Z25UB4EAW / CZ-BT20EW	CS-Z35UB4EAW / CZ-BT20EW		CS-Z50UB4EAW / CZ-BT20EW	CS-Z60UB4EAW / CZ-BT20EW	
Low Static Pressure Hide Away			CS-MZ20UD3EA	CS-Z25UD3EAW	CS-Z35UD3EAW		CS-Z50UD3EAW	CS-Z60UD3EAW	

EXTERNAL CONDENSER UNIT

INTERNAL UNITS

EXTERNAL CONDENSER UNIT

Panasonic | **R32**

Outdoor unit Free Multi System Z • R32 refrigerant

Indoor nominal capacity (Min - Max)			3,2 ~ 6,0 kW	3,2 ~ 6,0 kW	3,2 ~ 7,7 kW	4,5 ~ 9,5 kW	4,5 ~ 11,2 kW	4,5 ~ 11,5 kW	4,5 ~ 14,7 kW	4,5 ~ 18,3 kW
Unit			**CU-2Z35TBE**	**CU-2Z41TBE**	**CU-2Z50TBE**	**CU-3Z52TBE**	**CU-3Z68TBE**	**CU-4Z68TBE**	**CU-4Z80TBE**	**CU-5Z90TBE**
Cooling capacity	Nominal (Min - Max)	kW	3,50 (1,50 - 4,50)	4,10 (1,50 - 5,20)	5,00 (1,50 - 5,40)	5,20 (1,80 - 7,30)	6,80 (1,90 - 8,00)	6,80 (1,90 - 8,80)	8,00 (3,00 - 9,20)	9,00 (2,90 - 11,50)
EER [1]	Nominal (Min - Max)	W/W	4,86 (6,00 - 4,09)	4,56 (6,00 - 3,80)	4,24 (6,00 - 3,62)	4,77	3,66 (7,04 - 3,38)	4,39 (5,59 - 3,56)	4,04 (5,66 - 3,21)	4,09 (5,27 - 2,98)
SEER [2]			**8,50 A+++**	**8,50 A+++**	**8,50 A+++**	**8,50 A+++**	**8,00 A++**	**8,00 A++**	**7,90 A++**	**8,50 A+++**
Pdesign (cooling)		kW	3,50	4,10	5,00	5,20	6,80	6,80	8,00	9,00
Input power cooling	Nominal (Min - Max)	kW	0,72 (0,25 - 1,10)	0,90 (0,25 - 1,37)	1,18 (0,25 - 1,49)	1,09 (0,36 - 2,18)	1,86 (0,27 - 2,37)	1,55 (0,34 - 2,47)	1,98 (0,53 - 2,87)	2,20 (0,55 - 3,86)
Annual energy consumption [3]		kWh/a	144	169	206	214	298	298	990	1 100
Heating capacity	Nominal (Min - Max)	kW	4,20 (1,10 - 5,60)	4,60 (1,10 - 7,00)	5,60 (1,10 - 7,20)	6,80 (1,60 - 8,30)	8,50 (3,00 - 10,40)	8,50 (3,00 - 10,60)	9,40 (4,20 - 10,60)	10,40 (3,40 - 14,50)
Heating capacity at -7 °C		kW	—	—	—	3,95	4,45	4,45	—	—
COP [1]	Nominal (Min - Max)	W/W	4,88 (5,24 - 4,18)	4,79 (5,24 - 3,91)	4,63 (5,24 - 4,00)	4,63 (5,00 - 3,82)	3,95 (5,32 - 3,64)	4,47 (5,17 - 3,96)	4,43 (6,00 - 3,46)	4,84 (6,42 - 3,42)
SCOP [2]			**4,60 A++**	**4,60 A++**	**4,60 A++**	**4,20 A+**	**4,20 A+**	**4,20 A+**	**4,70 A++**	**4,68 A++**
Pdesign at -10 °C		kW	3,20	3,50	4,20	5,00	5,20	5,80	6,80	8,50
Input power heating	Nominal (Min - Max)	kW	0,86 (0,21 - 1,34)	0,96 (0,21 - 1,79)	1,21 (0,21 - 1,80)	1,47 (0,32 - 2,17)	2,15 (0,62 - 2,86)	1,90 (0,58 - 2,68)	2,03 (0,70 - 3,06)	2,15 (0,53 - 4,24)
Annual energy consumption [3]		kWh/a	974	1065	1278	1667	1733	1933	2026	2543
Current	Cool / Heat	A	3,35 / 4,00	4,15 / 4,45	5,35 / 5,50	5,00 / 6,70	8,40 / 9,70	7,00 / 8,60	9,50 / 9,50	10,50 / 10,10
Power source		V	230	230	230	230	230	230	230	230
Recommended fuse		A	16	16	16	16	16	20	20	25
Recommended power cable section		mm²	2,5	2,5	2,5	2,5	2,5	2,5	2,5	3,5
Sound pressure [4]	Cool / Heat (Hi)	dB(A)	48 / 50	48 / 50	50 / 52	47 / 48	51 / 52	49 / 50	51 / 52	53 / 54
Dimension [5]	H x W x D	mm	619 x 824 x 299	619 x 824 x 299	619 x 824 x 299	795 x 875 x 320	795 x 875 x 320	795 x 875 x 320	999 x 940 x 340	999 x 940 x 340
Net weight		kg	39	39	39	71	71	72	80	81
Piping connections	Liquid pipe	Inch (mm)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)
	Gas pipe	Inch (mm)	3/8 (9,52)	3/8 (9,52)	3/8 (9,52)	3/8 (9,52)	3/8 (9,52)	3/8 (9,52)	3/8 (9,52)	3/8 (9,52)
Pipe length range total [6]		m	6 ~ 30	6 ~ 30	6 ~ 30	6 ~ 50	6 ~ 60	6 ~ 60	6 ~ 70	6 ~ 80
Pipe length range to one unit		m	3 ~ 20	3 ~ 20	3 ~ 20	3 ~ 25	3 ~ 25	3 ~ 25	3 ~ 25	3 ~ 25
Elevation difference (in/out)		m	10	10	10	15	15	15	15	15
Pipe length for additional gas		m	20	20	20	30	30	30	45	45
Additional gas amount		g/m	15	15	15	20	20	20	20	20
Refrigerant (R32) / CO_2 Eq.		kg / T	1,12 / 0,756	1,12 / 0,756	1,12 / 0,756	2,10 / 1,418	2,10 / 1,418	2,10 / 1,418	2,72 / 1,836	2,72 / 1,836
Operating range	Cool Min ~ Max	°C	-10 ~ +46	-10 ~ +46	-10 ~ +46	-10 ~ +46	-10 ~ +46	-10 ~ +46	-10 ~ +46	-10 ~ +46
	Heat Min ~ Max	°C	-15 ~ +24	-15 ~ +24	-15 ~ +24	-15 ~ +24	-15 ~ +24	-15 ~ +24	-15 ~ +24	-15 ~ +24

1) EER and COP calculation is based in accordance to EN14511. 2) Energy Label Scale from A+++ to D. 3) The annual energy consumption is calculated in accordance to EU/626/2011. 4) The sound pressure of the units shows the value measured of a position 1 m in front and 1 m in rear side of the main body. The sound pressure is measured in accordance with JIS C 9612. 5) Add 70 or 95 mm for piping port. 6) Minimum piping length is 3 meters per indoor unit.

Possible outdoor / indoor units combinations • R32 refrigerant

Rooms	Model	Indoor capacity connected (Min - Max)	Wall-mounted Etherea Silver	Wall-mounted Etherea Pure White Matt	NEW Wall-mounted TZ super-compact	Floor Console*	4 Way 60x60 Cassette	Low Static Pressure Hide Away
			16 20 25 35 42 50 60 71	16 20 25 35 42 50 60 71	16 20 25 35 42 50 60 71	16 20 25 35 42 50 60 71	16 20 25 35 42 50 60 71	16 20 25 35 42 50 60 71
2	**CU-2Z35TBE**	**3,2 ~ 6,0 kW**	✔ ✔ ✔	✔ ✔ ✔ ✔	✔ ✔ ✔ ✔	✔ ✔ ✔	✔ ✔ ✔	✔ ✔ ✔
	CU-2Z41TBE	**3,2 ~ 6,0 kW**	✔ ✔ ✔	✔ ✔ ✔ ✔	✔ ✔ ✔ ✔	✔ ✔ ✔	✔ ✔ ✔	✔ ✔ ✔
3	**CU-2Z50TBE**	**3,2 ~ 7,7 kW**	✔ ✔ ✔ ✔[1] ✔[1]	✔ ✔ ✔ ✔ ✔[1] ✔[1]	✔ ✔ ✔ ✔ ✔[1] ✔[1]	✔ ✔ ✔ ✔[1]	✔ ✔ ✔ ✔[1]	✔ ✔ ✔ ✔[1]
	CU-3Z52TBE	**4,5 ~ 9,5 kW**	✔ ✔ ✔ ✔[1] ✔[1]	✔ ✔ ✔ ✔ ✔[1] ✔[1]	✔ ✔ ✔ ✔ ✔[1] ✔[1]		✔ ✔ ✔ ✔[1]	✔ ✔ ✔ ✔[1]
	CU-3Z68TBE	**4,5 ~ 11,2 kW**	✔ ✔ ✔ ✔[1] ✔[1]	✔ ✔ ✔ ✔ ✔[1] ✔[1]	✔ ✔ ✔ ✔ ✔[1] ✔[1] ✔[1]		✔ ✔ ✔ ✔[1] ✔[1]	✔ ✔ ✔ ✔[1] ✔[1]
4	**CU-4Z68TBE**	**4,5 ~ 11,5 kW**	✔ ✔ ✔ ✔[1] ✔[1]	✔ ✔ ✔ ✔ ✔[1] ✔[1]	✔ ✔ ✔ ✔ ✔[1] ✔[1] ✔[1]		✔ ✔ ✔ ✔[1] ✔[1]	✔ ✔ ✔ ✔[1] ✔[1]
	CU-4Z80TBE	**4,5 ~ 14,7 kW**	✔ ✔ ✔ ✔[1] ✔[1]	✔ ✔ ✔ ✔ ✔[1] ✔[1] ✔[1]	✔ ✔ ✔ ✔ ✔[1] ✔[1] ✔[1]		✔ ✔ ✔ ✔[1] ✔[1]	✔ ✔ ✔ ✔[1] ✔[1]
5	**CU-5Z90TBE**	**4,5 ~ 18,3 kW**	✔ ✔ ✔ ✔[1] ✔[1]	✔ ✔ ✔ ✔ ✔[1] ✔[1] ✔[1]	✔ ✔ ✔ ✔ ✔[1] ✔[1] ✔[1]		✔ ✔ ✔ ✔[1] ✔[1]	✔ ✔ ✔ ✔[1] ✔[1]

1) A CZ-MA1P pipe reducer is needed on the 42 and 50, a CZ-MA2P pipe expander is needed on the 60 and 71, and CZ-MA3P pipe reducer on the 71.
* Compatible only with 2 ports R32 outdoor CU-2Z35TBE / CU-2Z41TBE / CU-2Z50TBE. Minimum quantity of connection: 2 indoor units. Floor console indoor unit is compatible with R410A outdoors with 3, 4 or 5 ports: CU-3E18PBE, CU-3E23SBE, CU-4E23PBE, CU-4E27PBE and CU-5E34PBE.

Outdoor Multi combination model

	Model	
CS-MZ16VKE / CS-MTZ16WKE CS-XZ20VKEW / CS-Z20VKEW / CS-TZ20WKEW / CS-MZ20UFEA / CS-MZ20UB4EA / CS-MZ20UD3EA CS-XZ25VKEW / CS-Z25VKEW / CS-TZ25WKEW / CS-Z25UFEAW / CS-Z25UB4EAW / CS-Z25UD3EAW CS-XZ35VKEW / CS-Z35VKEW / CS-TZ35WKEW / CS-Z35UFEAW / CS-Z35UB4EAW / CS-Z35UD3EAW	CU-2Z35TBE / CU-2Z41TBE / CU-2Z50TBE / CU-3Z52TBE / CU-3Z68TBE / CU-4Z68TBE / CU-4Z80TBE / CU-5Z90TBE	—
CS-Z42VKEW / CS-TZ42WKEW CS-Z50VKEW / CS-Z50VKEW / CS-TZ50WKEW / CS-Z50UFEAW / CS-Z50UB4EAW / CS-Z50UD3EAW	CU-2Z50TBE / CU-3Z52TBE / CU-3Z68TBE / CU-4Z68TBE / CU-4Z80TBE / CU-5Z90TBE	CZ-MA1P
CS-TZ60WKEW / CS-Z60UB4EAW / CS-Z60UD3EAW	CU-3Z68TBE / CU-4Z68TBE / CU-4Z80TBE / CU-5Z90TBE	CZ-MA2P
CS-Z71VKEW / CS-TZ71WKEW	CU-4Z80TBE / CU-5Z90TBE	CZ-MA2P / CZ-MA3P*

* For CZ-MA3P necessary to use adaptor CZ-MA2P too.

CZ-MA1P is to be used to reduce the connection size on the indoor unit from 1/2" to 3/8".

CZ-MA2P is to be used to increase the connection size on the outdoor unit from 3/8" to 1/2".

CZ-MA3P is to be used to reduce the connection size on the indoor unit from 5/8" to 1/2".

4. Submitted Existing and Proposed Drawings

N

0.0 10.0 20.0 30.0 40.0 50.0 60.0 70.0 80.0 90.0 100.0 m

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Revision:

/ 20.12.2019
PLANNING-APPLICATION

Client: CLIENT

Project: 113 MIMOSA HOUSE

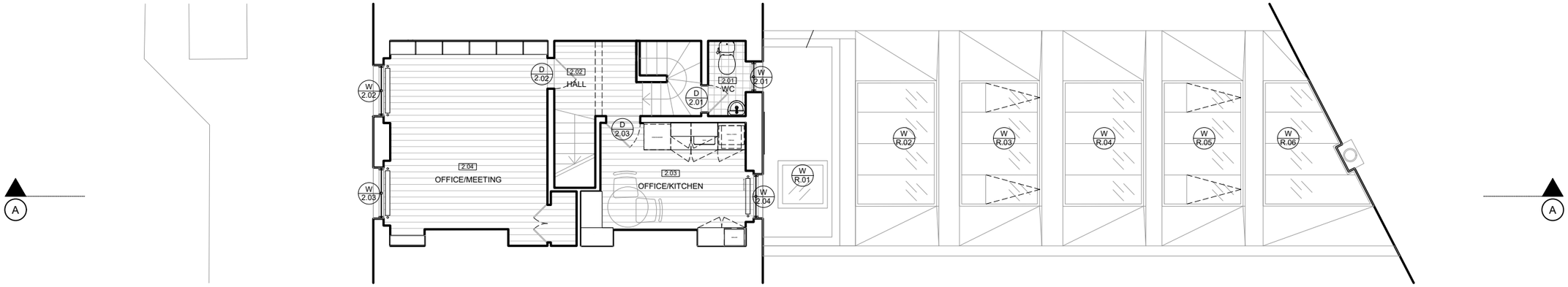
Status: PLANNING

Scale: 1:500 | Drw: EV

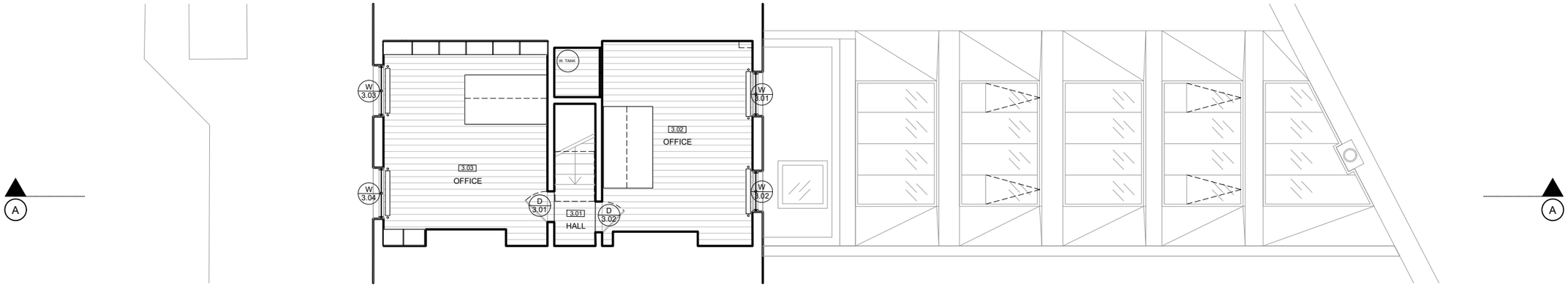
Date: DEC 2019 | Chk: DM

Title: SITE LOCATION PLAN

Drawing no: 001 | Rev: -



2 SECOND FLOOR



3 THIRD FLOOR

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Revision:
/ 20.10.21
CONDENSER PLANNING APPLICATION

Client:
CSII (UK) LTD.

Project:
113
47 THEOBALDS ROAD

Status:
PLANNING

Scale: 1:100
Drw: EV
Date: OCTOBER 2021
Chk: DM

Title:
EXISTING SECOND AND THIRD FLOOR PLANS

Drawing no: 016
Rev: / -

0 500 1000 2000 5000 10000
mm

NOTE -
NO CHANGES
PROPOSED

132.68
L04-B-PA
124.35
L04-ROOF
98.43
L03-FFL
71.23
L02-FFL
REINTEGRATED REPLICA OF CORBEL DETAIL
36.20
L01-B-FFL
26.70
L01-A-FFL
NEW PROPOSED TRADITIONAL SHOP FRONT FROM TIMBER AND GLASS
00.00
GF-FFL
SOLID TIMBER PLINTH AS PART OF SHOP FRONT PACKAGE

FASCIA PRESERVED AND CORRESPONDING WITH NEIGHBORING PROPORTIONS (DOES NOT EXCEED EXISTING CORBEL)

FIXED WINDOW OVER DOOR

NEW ENTRANCE DOOR WITH LETTER BOX AND IRONMONGERY 1000mm width, opens out towards exterior)

EXTERIOR ACCESSIBLE RAMP IN RECESS OF SHOPFRONT

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Revision:
/ 20.10.21
CONDENSER PLANNING APPLICATION

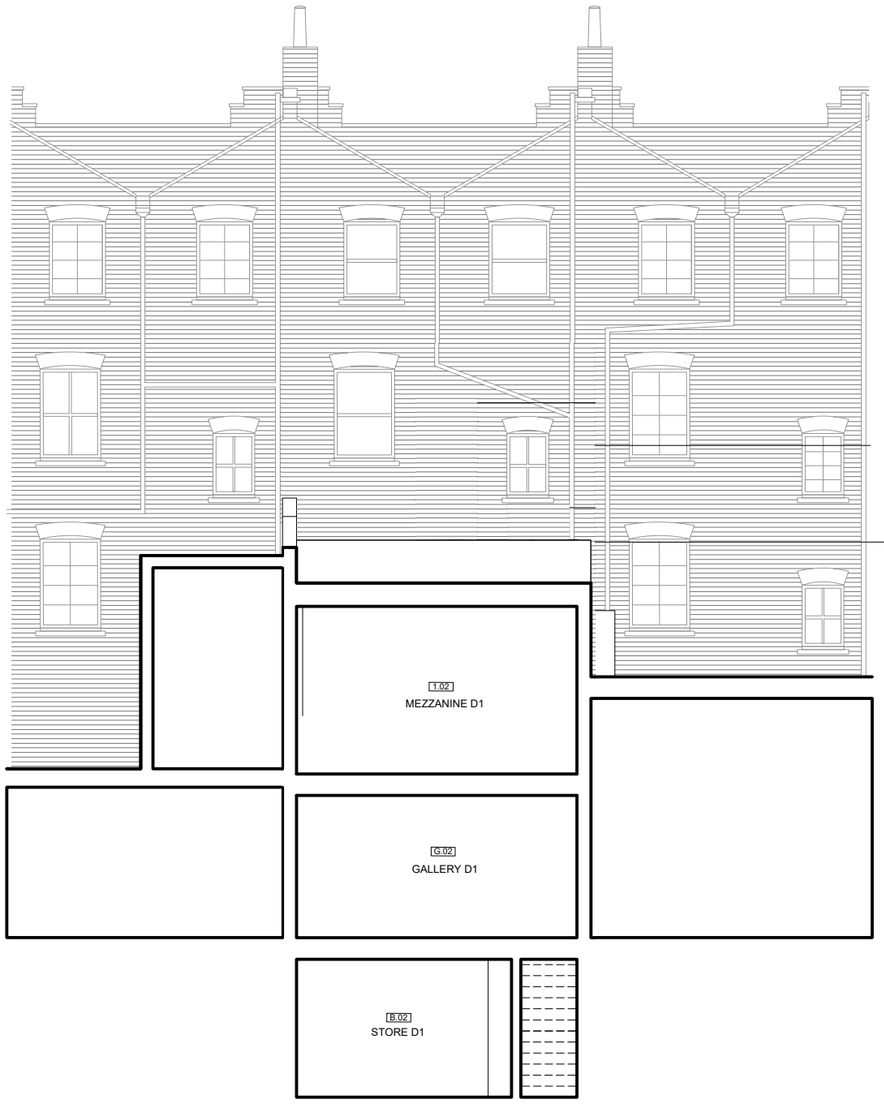
Client: CSII (UK) LTD.

Project: 113
47 THEOBALDS ROAD

Status: PLANNING

Scale: 1:100 @ A3
Drw: RD
Date: OCTOBER 2021
Chk: DM
Title: EXISTING THEOBALDS RD ELEVATION
Drawing no: 012
Rev: /

0.0 1.0 2.0 3.0 4.0 5.0



132.68
L04-B-PA

124.35
L04-ROOF

98.43
L03-FFL

71.23
L02-FFL

REFURBISHED WATERPROOFING MEMBRANE (WHOLE ROOF)

39.63
L01-A-FFL

27.35
L01-B-FFL

00.00
GF-FFL

-26.14
BS-FFL

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Revision:
/ 20.10.21
CONDENSER PLANNING APPLICATION

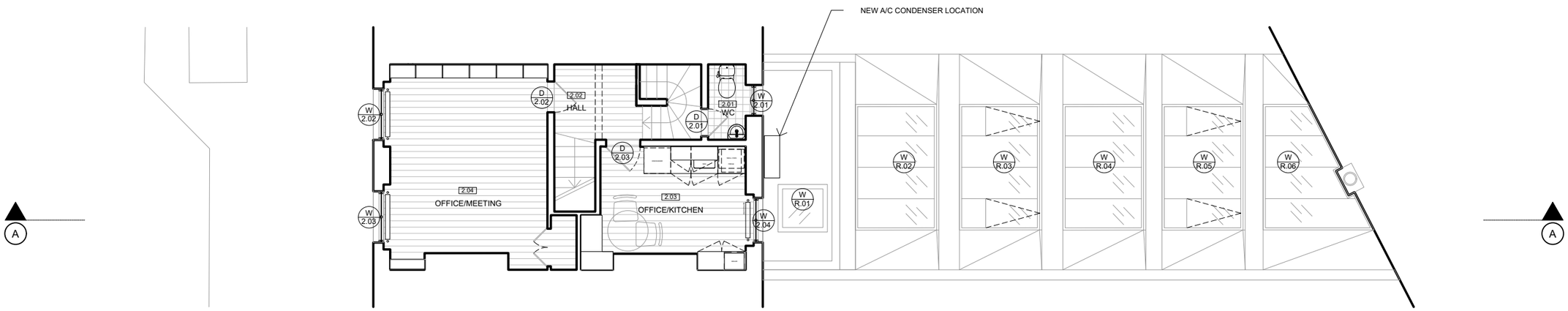
Client:
CSII (UK) LTD.

Project:
113
47 THEOBALDS ROAD

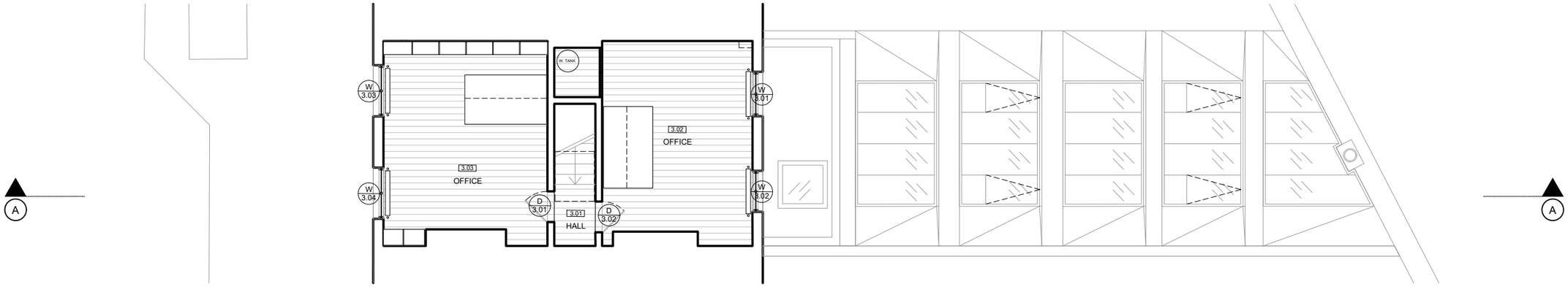
Status:
PLANNING

Scale: 1:100
Drw: EV
Date: OCTOBER 2021
Chk: DM
Title: EXISTING REAR ELEVATION
Drawing no: 013
Rev: / -

0 500 1000 2000 5000 10000 mm



2 SECOND FLOOR



3 THIRD FLOOR

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Revision:
/ 20.10.21
CONDENSER PLANNING APPLICATION

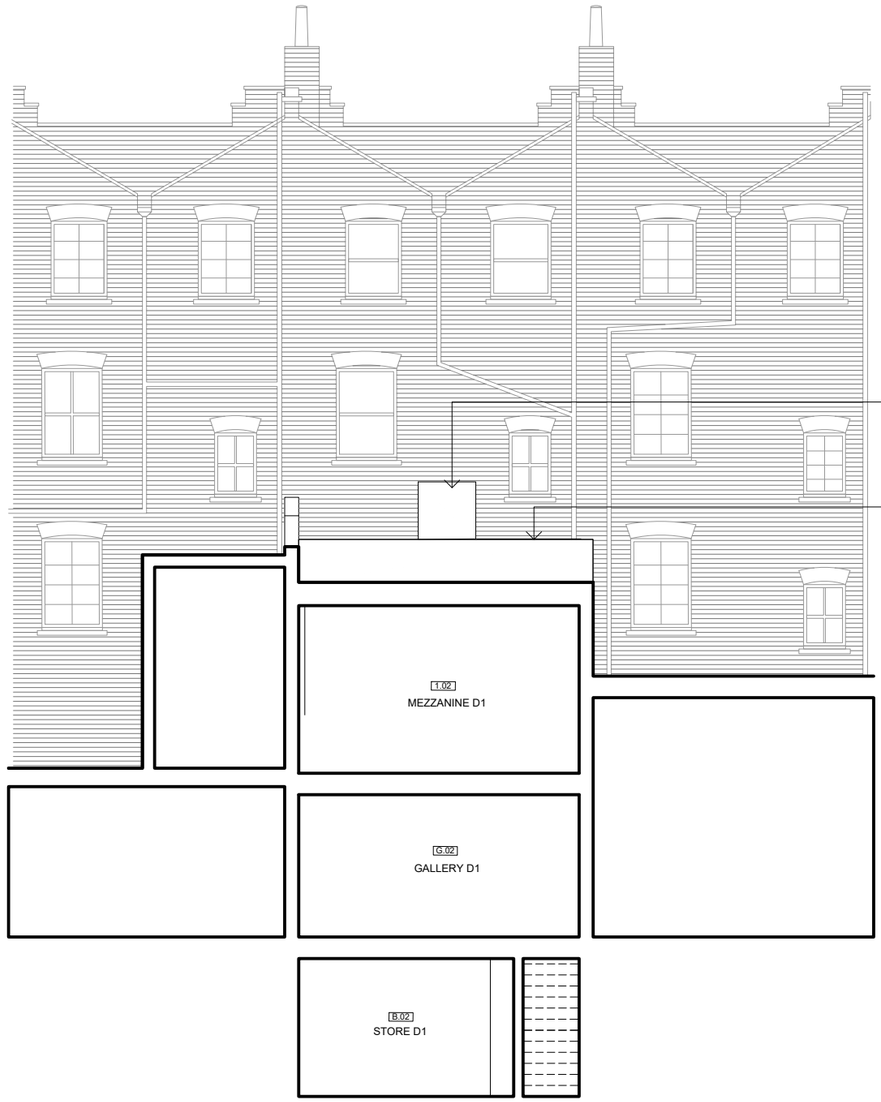
Client: CSII (UK) LTD.

Project: 113
47 THEOBALDS ROAD

Status: PLANNING

Scale: 1:100 @ A3
Drw: EV
Date: OCTOBER 2021
Chk: DM
Title: PROPOSED SECOND AND THIRD FLOOR PLANS
Drawing no: 116
Rev: /

0.0 1.0 2.0 3.0 4.0 5.0



132.68 L04-B-PA

124.35 L04-ROOF

98.43 L03-FFL

NEW A/C LOCATION
TO BE LOCATED ON EXISTING FLAT ROOF

71.23 L02-FFL

EXISTING FLAT ROOF

36.20 L01-B-FFL

26.70 L01-A-FFL

00.00 GF-FFL

-26.14 BS-FFL

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Revision:
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CONDENSER PLANNING APPLICATION

Client: CSII (UK) LTD.

Project: 113
47 THEOBALDS ROAD

Status: PLANNING

Scale: 1:100 | Drw: EV
Date: OCTOBER 2021 | Chk: DM
Title: PROPOSED REAR ELEVATION
Drawing no: 113 | Rev: / -