



**Management
and
Engineering
Services Ltd**

LORDSHIP LANE LONDON

ENERGY STATEMENT

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PROJECT REVISION SHEET

Version	Details	Comments	Prepared by	Checked by	Issued
1.0	First Issue	First issue	DLM	CC	06.12.23
2.0	Second Issue	Preliminary issue for discussion.	DLM	CC	19.01.24
3.0	Third Issue	Updated in line with comments.	DLM	CC	02.02.24
3.1	Third Re-Issue	Updated massing figure.	DLM	CC	13.02.24



Executive Summary

This Statement of Energy outlines the proposed development's energy efficiency and low/zero carbon technology strategies to meet the requirements of the London Plan Policies:

- SI2: Minimising Greenhouse Gas Emissions. Through an overall 74 % residential and 41% non-residential Part L betterment, complying with the policy requirement for a minimum 35% betterment.
- SI3: Energy Infrastructure taking into consideration masterplans and energy supply strategies such as district heat connection. The Wood Green district heat network has been given a thorough appraisal in section 3.0, with provision for future inclusion included within the plant room design.
- Other relevant London Plan policies that have been outlined further in section 2.2 and considered throughout the report.

The proposed redevelopment involves the construction of 623 beds of Purpose Build Student Accommodation (PBSA), which makes up Building A. The PBSA bed spaces are provided with en-suite facilities and are arranged in a mix of en-suites, social studios, duplex studios, studios & accessible studios. Building A also contains a shell and core non-residential retail space on the ground floor.

Buildings B-D make up the domestic dwelling section of the development. Building B is composed of Shared Ownership units including one beds, 2 beds (3 persons), 2 beds (4 persons) and 3 beds (5 persons). Building C is composed of social rent including one beds (2 persons), 2 beds (3 persons), 2 beds (4 persons) and 3 beds (5 persons). Building D is composed of 7 number 5 beds (8 persons).

An iterative approach has been used to formulate the energy strategy for the proposed development by implementing a passive first approach following the be lean, be clean, be green hierarchy. This has targeted the thermal performance of the building fabric and controlling the air permeability.

Energy efficiency was then approached to ensure all technologies employed for lighting, ventilation and energy distribution were appropriate.

Finally, low and zero carbon technologies were explored to assess which would be the most effective for this bespoke development. Due to the continued decarbonisation of the electricity network the use of electrical energy as a fuel source for all building requirements was deemed most appropriate.

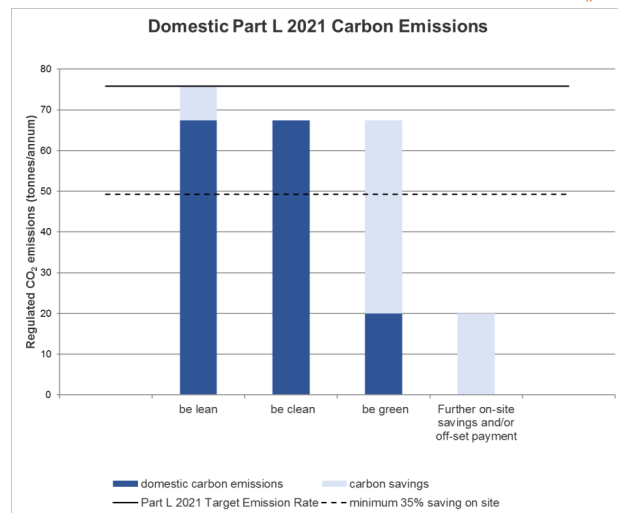
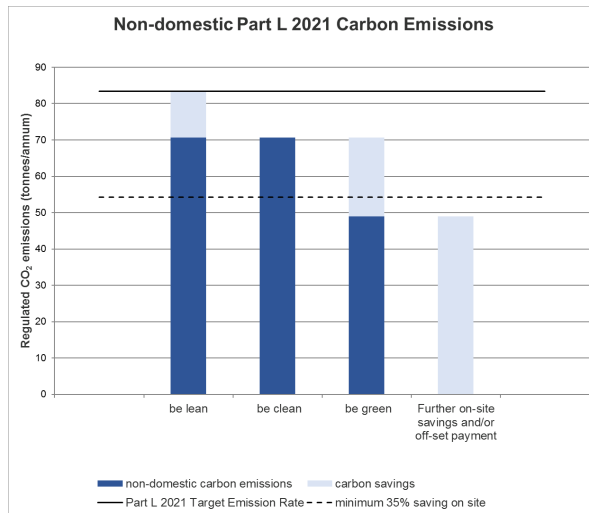
Therefore, air source heat pumps have been selected to produce low temperature hot water for space heating and domestic hot water generation. This is deemed particularly suitable due to the high seasonal efficiencies of the heat pumps and their ability to produce in excess of three units of heat for every unit of electricity consumed.

Despite the fact that the massing of the building provides relatively little roof area in relation to the total usable floor area, the provision of roof mounted solar PV will also benefit the building, providing zero carbon baseload electricity during the day. An approximate number of panels has been assessed at this stage but this will be subject to detailed review at further design stages.

Technologies such as wind turbines, biomass heating, ground source heat pump and solar hot water have been deemed inappropriate for this development due to local site constraints and conflicts with other, more appropriate technologies.



Carbon Offset:



Non Residential:

Development Carbon Dioxide Emissions at each stage of the Energy Hierarchy			
	Total Regulated Emissions (Tonnes CO ₂ /year)	CO ₂ Savings (Tonnes CO ₂ /year)	% Saving
Part L 2021 Baseline	83.4	-	-
Be Lean	70.6	23.3	15
Be Clean	70.6	-	-
Be Green	49.0	6.0	26
Total Saving	-	29.3	41

Cumulative emissions to be off-set (over 30 years) = **1,471 Tonnes CO₂**

Cash in-lieu contribution = **£139,704 ***

Residential:

Development Carbon Dioxide Emissions at each stage of the Energy Hierarchy			
	Total Regulated Emissions (Tonnes CO ₂ /year)	CO ₂ Savings (Tonnes CO ₂ /year)	% Saving
Part L 2021 Baseline	75.8	-	-
Be Lean	67.4	8.4	11
Be Clean	67.4	0.0	-
Be Green	19.9	47.5	63
Total Saving	-	55.9	74

Cumulative emissions to be off-set (over 30 years) = **598 Tonnes CO₂**

Cash in-lieu contribution = **£56,821 ***

Site Wide:

Total savings for off-set payment (over 30 years) = **2,069 Tonnes CO₂**

Total cash in-lieu contribution = **£196,555 ***

*Carbon price is based on GLA recommended price of £95 per tonne of CO₂.

This Statement of Energy has been prepared for Fusion Students to support their planning application for the redevelopment of the site on Lordship Lane, London. It has been developed by Amber Management and Engineering Services Limited as a response to the local planning requirements. The statement is intended to respond to the issues raised in the London Plan, and provide the information required within an Energy Statement.

1.1 Site Location

The site is currently a Mecca Bingo Hall south of Lordship Lane and north of Wellesley Road. There are residential buildings adjoined to the development to the east and a large residential building with a ground floor gym to the west.

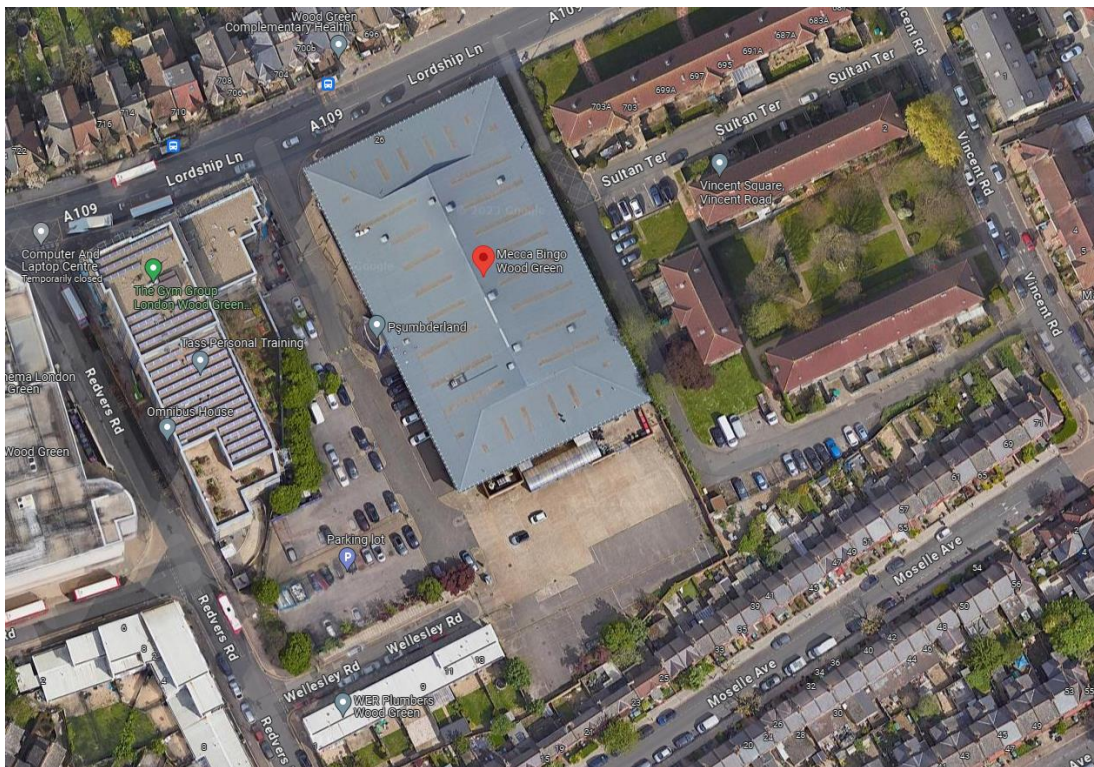


Figure 1.2 – Site Location

1.2 Development Proposal

The proposed redevelopment involves the construction of 623 beds of Purpose Build Student Accommodation (PBSA), which makes up Building A. The PBSA bed spaces are provided with en-suite facilities and are arranged in a mix of en-suites, social studios, duplex studios, studios & accessible studios. Building A also contains a shell and core non-residential retail space on the ground floor.

Buildings B-D make up the Purpose Built Residential Dwelling section of the development. Building B is composed of Shared Ownership units including one beds, 2 beds (3 persons), 2 beds (4 persons) and 3 beds (5 persons). Building C is composed of social rent including one beds (2 persons), 2 beds (3 persons), 2 beds (4 persons) and 3 beds (5 persons). Building D is composed of 7 number 5 beds (8 persons).

The gross floor area of the PBSA is circa 19,500m², inclusive of various communal student facilities. The Residential buildings gross floor area is 5767m².



Figure 1.3 – Proposed Site Plan



2.0 Planning Policy Compliance & Analysis

The London Plan, last updated in March 2021, outlines the councils land use strategy and provides the criteria to assess planning applications through a series of development policies. This Energy Statement uses the guidance of Policy SI2 (Minimising Greenhouse Gas Emissions), which illustrates the sustainable and resilient energy strategy for the city.

2.1 National Planning

The government has outlined planning policy guidance in the National Planning Policy Framework (NPPF) as of July 2021, serving as a framework for planning authorities to formulate and implement their development plans. Central to this guidance is the drive to achieve sustainable development goals.

The NPPF addresses various planning issues, ranging from promoting sustainable transport to facilitating the responsible utilization of minerals. Section 14 of the framework, titled 'Meeting the challenge of climate change, flooding, and coastal change,' specifically focuses on climate change. In essence, the framework recommends the following:

1. Plans should adopt a proactive stance in mitigating and adapting to climate change, considering the long-term implications for flood risk, coastal change, water supply, biodiversity, and landscapes. Policies should support measures ensuring the future resilience of communities and infrastructure to climate change impacts.
2. New developments should be planned to avoid increased vulnerability to climate change impacts, particularly in vulnerable areas. Care should be taken to manage risks through suitable adaptation measures, including green infrastructure planning. Additionally, developments should aim to reduce greenhouse gas emissions through thoughtful location, orientation, and design.
3. Local requirements for the sustainability of buildings should align with national technical standards.
4. Plans should have a positive strategy for renewable and low carbon energy, maximizing development potential while addressing adverse impacts. Identifying suitable areas for such energy sources and supporting infrastructure is crucial. Moreover, plans should explore opportunities for drawing energy supply from decentralized, renewable, or low carbon systems and consider co-locating potential heat customers and suppliers.
5. Local planning authorities should endorse community-led initiatives for renewable and low carbon energy, even beyond areas specified in local plans or strategic policies.

When evaluating planning applications, authorities should expect new development to comply with decentralised energy supply policies, unless the applicant demonstrates, considering the type of development and its design, that this is not feasible or viable. Additionally, authorities should consider factors such as landform, layout, building orientation, massing, and landscaping to minimize energy consumption.

For renewable and low carbon development applications, authorities should not demand an overall demonstration of the need for such energy but recognize the valuable contribution of even small-scale projects to reducing greenhouse gas emissions. Approvals should be granted if the impacts are acceptable, and subsequent applications for commercial-scale projects outside identified suitable areas should meet specific criteria used in identifying those areas.

2.2 London Planning Policy

In March 2021, London Mayor Sadiq Khan formally adopted London Plan Spatial Development Strategy for Greater London. This plan outlines legislation regarding Housing, Spatial Development, Social Infrastructure, Sustainable Infrastructure, and cultural conservation. It is a legal part of each of London's Local Planning Authorities' Development Plan and must be taken into account when planning decisions are taken in any part of Greater London.



The driving principle of the London Plan is to provide a transition to a net zero carbon economy through delivering sustainable buildings, alongside conserving the culture and history of Greater London. There are a variety of policies within the London Plan to ensure the delivery of sustainable buildings, some have been outlined below:

- Policy SI2 – Minimising Greenhouse Gas Emissions: Reducing Greenhouse Gas emissions by using less energy during operation, exploiting local energy resources such as secondary heat, maximising renewable energy, and monitoring energy performance. Future developments must consider the energy hierarchy:
 - 1) be lean: use less energy by managing demand during operation.
 - 2) be clean: exploit local energy resources, such as secondary heat, and supply efficient and clean energy.
 - 3) be green: maximise opportunities for renewable energy by producing, storing and using renewable energy on-site
 - 4) be seen: monitor, verify and report on energy performance.

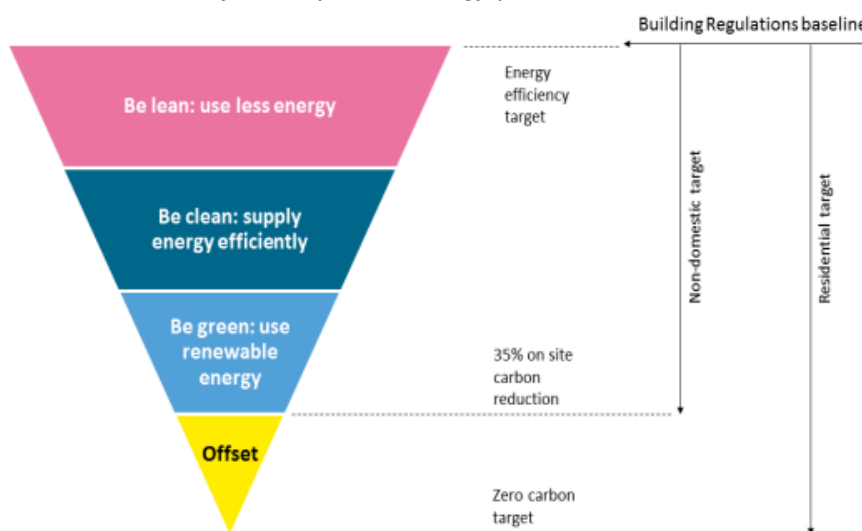


Fig 2.1 The London Plan Energy Hierarchy

- Policy SI3 – Energy Infrastructure: Establishing the future energy and infrastructure requirements of a large scale development whilst utilising energy masterplans that establish the most effective energy supply options. This may include identifying major heat loads and assessing possible heating and cooling network routes.
- Policy SI4 – Managing Heat Risk: Design, Layout, orientation, and green infrastructure to be utilised with the goal of minimising adverse impacts on the urban island. Energy strategies must be used to highlight how the development will reduce the adverse effects of internal overheating.
- Policy S7 – Smart Infrastructure and Utilities: developments are expected to minimise the demand for power, water & utility services. Incorporate energy demand management measures & sustainable building design. Provide high quality utility infrastructure.
- BREEAM Excellent must be targeted as a minimum to comply with the London Plan.
- Policy 5.9 relates to overheating and reducing reliance on air-conditioning systems through use of the cooling hierarchy:
 - 1) minimise internal heat generation through energy efficient design.
 - 2) reduce the amount of heat that can enter the building through orientation, shading, insulation, green roofs & walls.
 - 3) passive or mechanical ventilation.
 - 4) active cooling systems (where absolutely necessary from an overheating perspective).

The proposed development on Lordship Lane will consider the policy requirements of the London Plan as part of its sustainability and energy strategies.



2.2.1 Carbon Targets

London Plan policy 5.2 outlines CO₂ emission reduction targets for new builds.

The objectives involve promoting the creation of energy-efficient new buildings and investing in infrastructure to efficiently supply energy to existing buildings. These measures can offer additional advantages to occupants, such as affordable energy and enhanced energy security, while also minimizing the impact of new developments on the energy network.

The carbon reduction targets outlined in the London Plan impose a target of 35 percent beyond the new national standards for both residential and non-domestic buildings.

In cases where developments prove incapable of meeting the onsite carbon reduction target due to site-specific constraints, the London Plan mandates developers to either make a cash contribution to the borough's carbon offset fund or implement off-site carbon-saving measures in agreement with the local borough.

This compensates for the shortfall in CO₂ emission reductions, as specified in London Plan Policy 5.2E. The contributed funds are set aside by the borough to ensure the realization of carbon dioxide savings elsewhere.

2.3 London Energy Transition Initiative (LETI) and Sustainability Aspects.

Compliance with Policy SI2 can be achieved by default through LETI. LETI is a network of built environment professionals that are collaborating in an effort to push London towards net-zero carbon emissions.

LETI publishes papers to act as recommendations for the London Plan. And as such, the guidance outlined within the LETI protocols are more stringent than those found within the current London Plan. LETI conclude that to avoid the devastating effects of climate change, all new buildings must operate at net zero by 2030, and existing buildings by 2050. Some practical examples of how they believe this can be achieved are outlined below.

As an example one section highlights limitation of peak heat loss for heating (including ventilation) to 10W/m² for medium to large scale housing. This is done through substantial thermal fabric enhancements (air permeability and improved U-values), application of Low and Zero-carbon technologies (LZCGT) and the use of high efficient systems (BMS and lighting).

Fabric U-Value (W/m ² *k) limits for:	Medium to Large Scale Housing	Commercial Offices
Walls	0.13-0.15	0.12-0.15
Floor	0.08-0.10	0.10-0.12
Roof	0.10-0.12	0.10-0.12
Exposed Ceiling/Floor	0.13-0.18	1.0 (triple Glazed) 1.2 (double glazed)
Windows	1.0 (Triple Glazed)	1.2
Doors	1.0	0.12-0.15
Efficiency Measures for		
Air Tightness	<1 (m ³ /h*m ² @50pa)	<1 (m ³ /h*m ² @50pa)
Thermal Bridging	0.04 (y-value)	0.04 (y-value)
G-Value of Glass	0.6-0.5	0.4-0.3
MVHR	90% Efficiency <2m (Duct length from unit to external wall)	90% Efficiency
Heat Pump SCoP	-	> 2.8
Chiller SEER	-	> 5.5
Central AHU SFP	-	1.5-1.2 W/L*S

Table 2.1 LETI recommended U values & Efficiency measures



It is worth noting that a commercial purpose built student accommodation (PBSA) does not fit into either of the categories in Table 2.1. However, these values are still useful as compliance with LETI will pass the London Plan by default.

2.4 Low and Zero Carbon Generation Technologies (LZCGT)

Local policy requires developments to include LZCGTs as part of compliance with LETI and the London Plan. Carbon Emissions 35 per cent below the baseline of Part L of the current Building Regulations is required and must be achieved through one of the following eligible technologies:

- Fuel Cells
- Biomass
- Solar Thermal
- Heat Exchange & Recovery Systems
- Solar PV Panels
- Geothermal
- Water/Ground Source Heat Pumps
- Air Source Heat Pumps
- Combined Heat Power (CHP)
- Micro-Hydro or Micro-Wind

Justification for the chosen LZCGT/s must be provided in a feasibility study including consideration of the design alongside aesthetical impact of intended solution.

2.5 District Heating

The application of district heating networks based on low carbon and renewable sources are supported by Policy SI2. The London Plan and LETI has a drive towards low carbon network heat networks, with the aim Net-Zero by 2050. The policy outlines priority areas of the city that the council have identified as having the highest potential for implementation, these areas are being developed in an order to suit their level of potential.

To comply with the requirements outlined in SI3, new applications must submit a district heating evaluation, specific to the development, to the planning authority. The applicant must consider and examine if there is any existing or proposed heat network capacity that the development could utilise. This is achieved through using the London Heat Map and the latest London Borough of Haringey Energy Masterplan.

3.0 District Heat Appraisal

This district heating analysis will be completed in accordance with Policy SI3 and with the guidance contained in the London Plan.

3.1 Site Heat Demand

The London Heat Map illustrates that this development is not within an area of high heat demand. An area of high heat demand is classified as being greater than 625,000kWh/year. This area has a demand of 250,000+ kWh/year.



Figure 3.1 – London Heat Map, Lordship lane
<https://apps.london.gov.uk/heatmap/>



Figure 3.2 - The area is detailed as Sport and Leisure
<https://apps.london.gov.uk/heatmap/>

3.2 Existing Heat Networks – Heat Map

There is no existing District Energy Network in the vicinity of the proposed development but one is currently in the planning stage with the earliest 'heat on' date of 2027 but this is currently in review and awaiting approval of the scheme and funding streams. If the scheme proceeds, the closest point of connection will be approximately 67 metres away as seen in Figure 3.3. As it has not yet been built, the connection points and connection cost is currently unknown.

Figure 3.4 shows the development is within reasonable proximity from the Wood Green heat network, which is currently under development by Haringey Council. In terms of the District Energy Network (DEN) programme, it is expected that a decision by the Council on whether or not it will build the DEN by early 2025. It is believed that, if built, it will utilise the low carbon technology of Energy from Waste (EfW). This would make it one of 53 EfW sites in the UK when completed.



Figure 3.3 – Future Closest District Heat Network Connection Point. (circa 67 metres away)



Following a preliminary meeting between Amber and Haringey Council on the 14th December 2023 further information has been appraised regarding the planned network. The information gained is summarised below:

- The “energy from waste” centre will take waste from approximately 2 million homes in London and convert it into useable heat energy.
- The carbon factor is anticipated to be 0.015kgCO₂/kWh.
- The COP of the heat production is expected to be 7:1.
- No waste will need to be imported for the heat generation, adding to the sustainability of the process.
- It is planned that the heat sources will be diversified as time goes on.
- In the first year, the tariff will be indexed to gas. In the following years the price will become indexed to electricity as gas prices rise with lack of availability. There is scope for adjustment if the price trends act in a more unpredictable nature.
- There is a guaranteed standard of service. This means it is expected that the main energy centre will have 99.9% reliability. However, back up boilers are incorporated into the system and can supply 80% of the max energy demand of the centre.

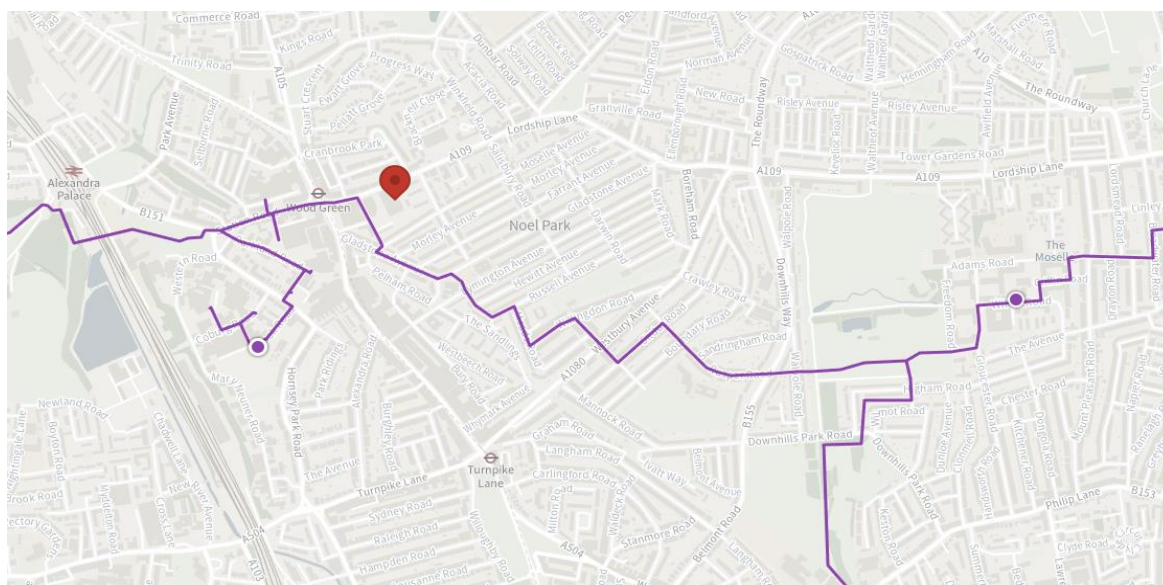
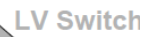


Figure 3.4 - Location of development with regards to existing heat network information. Close to future network.

As the proposed DEN is still in the planning and consultation phase and the project is not absolutely certain to proceed. Then this proposed development needs to factor that in and ensure it has an independent energy strategy but still remain flexible to allow future consideration of connection to the DEN once further timescales and commercial considerations are available.

Therefore, this development proposes to install a low carbon and renewable technologies to provide energy to the buildings. The internal services of the buildings will be designed to allow for a potential future connection with an amount of on-site connectivity between the buildings to form a centralised energy network between buildings C and D. Additionally, space in some buildings shall be allowed to allow future installation of district heat substations.

Figure 3.5 shows a section of the plant room drawings. An area has been kept in reserve to cater for potential future inclusion of a DHN substation and pipework intake, as these facilities would be necessary in the event that DHN connection was made.



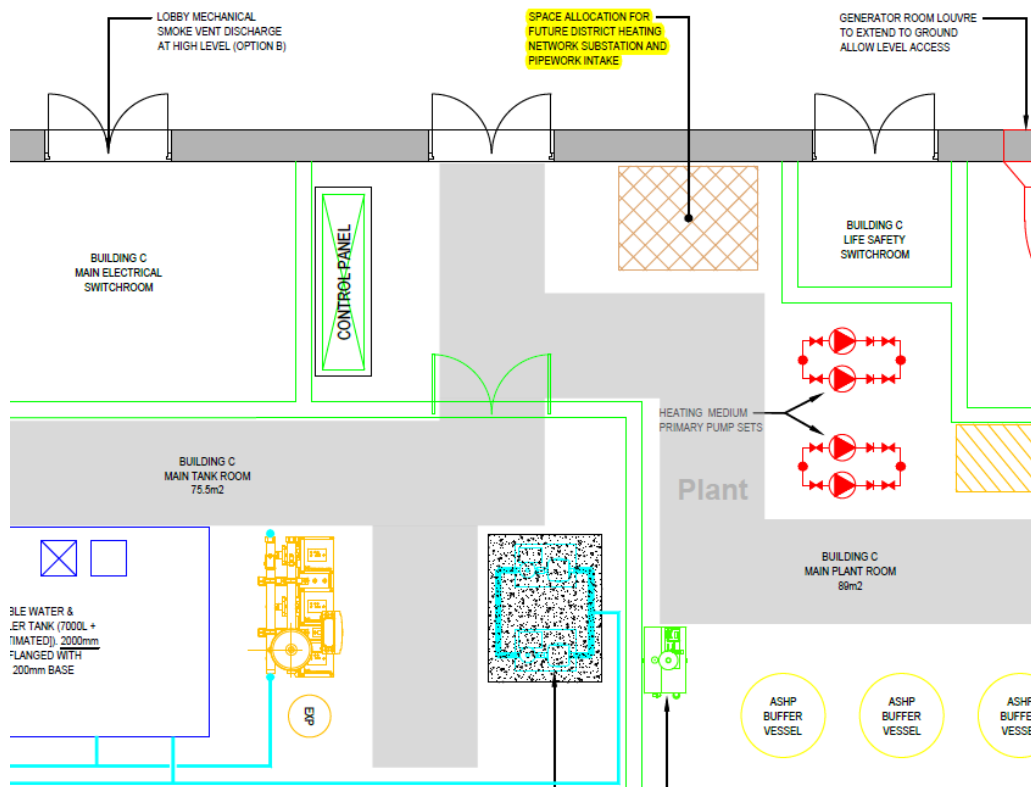


Figure 3.5 – Example of Plant Room Drawings to show ample space allocation for future DHN substation & pipework intake. Building A (top), Building B (middle) & Building C (bottom).

Figure 3.6 shows the routing of the proposed DHN pipework from singular connection point to each building.

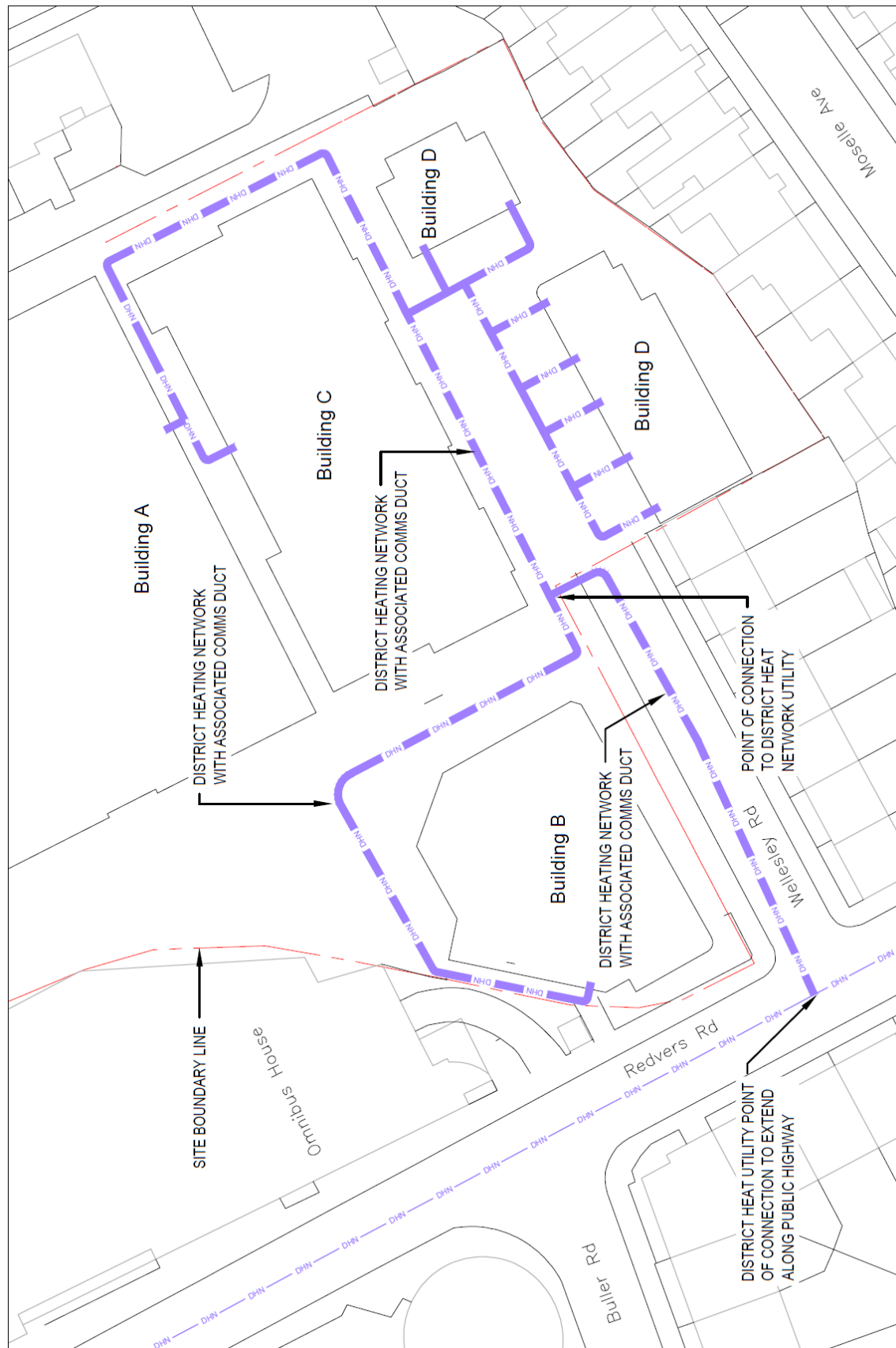


Figure 3.6 – Drawing to show proposed routing for future DHN pipework.

4.0 Low/Zero Carbon Technologies

Each of the following technologies has been assessed for the potential implementation within the development.

4.1 Wind Turbines

Wind turbines in city centre locations experience poor yields for electricity generation as the obstruction caused by similar height buildings, and natural variations in topography, inevitably lead to turbulent air flow around the building.

In reaction to this, the invention and development of Vertical-Axis Wind Turbines (VAWTs) has arisen. They require far less space than their horizontal-axis (HAWTs) counterparts, are unaffected by changes in wind direction and are much more quiet making them perfect for residential/urban areas. VAWTs are also cheaper and easier to maintain as they only have 2 main components, HAWTs have 4. The drawback is that the technology is still relatively new and commercial availability is currently scarce. On average, wind turbines harness 60% of the energy that passes through them, a far greater efficiency than solar panels, which average 18-22% energy capture.

HAWTs are less expensive (circa £20,000 for a 6kW turbine) but produce vibration, VAWTs are approximately 10% more expensive but are almost vibration free.

The British Wind Energy Association recommends that a site be monitored over the course of a year to assess the potential efficacy of a wind turbine.

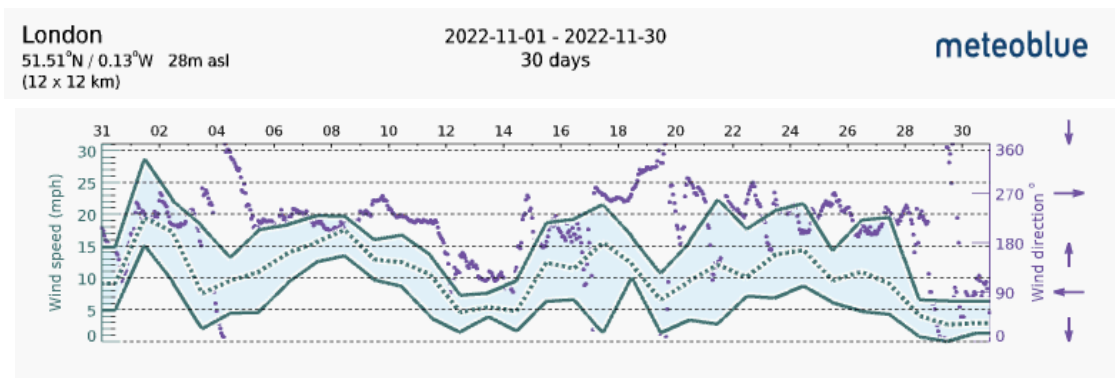


Figure 4.1 – Data for Average Wind Speed in London.

Wind turbines are generally considered to have a negative visual impact, and therefore wind turbines are not considered to be viable for this development.

Selected: **No**

4.2 Solar Photovoltaic Panels

Roof mounted photovoltaic panels have been identified as a possible means of generating zero carbon electrical energy. Due to the wide variation in occupancy of student accommodation, the electrical base load is generally constant throughout the day. This can be, in part, covered by the output of the photovoltaic system.

The lower sections of the building will be used as accessible terraces for occupants, while the higher elevations of the building will be available for PV arrays. The higher elevations will also be less prone to overshadowing.

Once the photovoltaic panels are installed, there are minimal maintenance requirements. However, access will be needed to roof level for annual cleaning of the panels and to enable panel replacement should any fail. Installation of technology subject to approval for embedded generators.

The provision of roof mounted solar PV may also benefit the building, providing zero carbon baseload electricity during the day. Buildings A, B, and C are all planned to have solar panels on the roof. Building D may also have solar panels pending further enquiry.

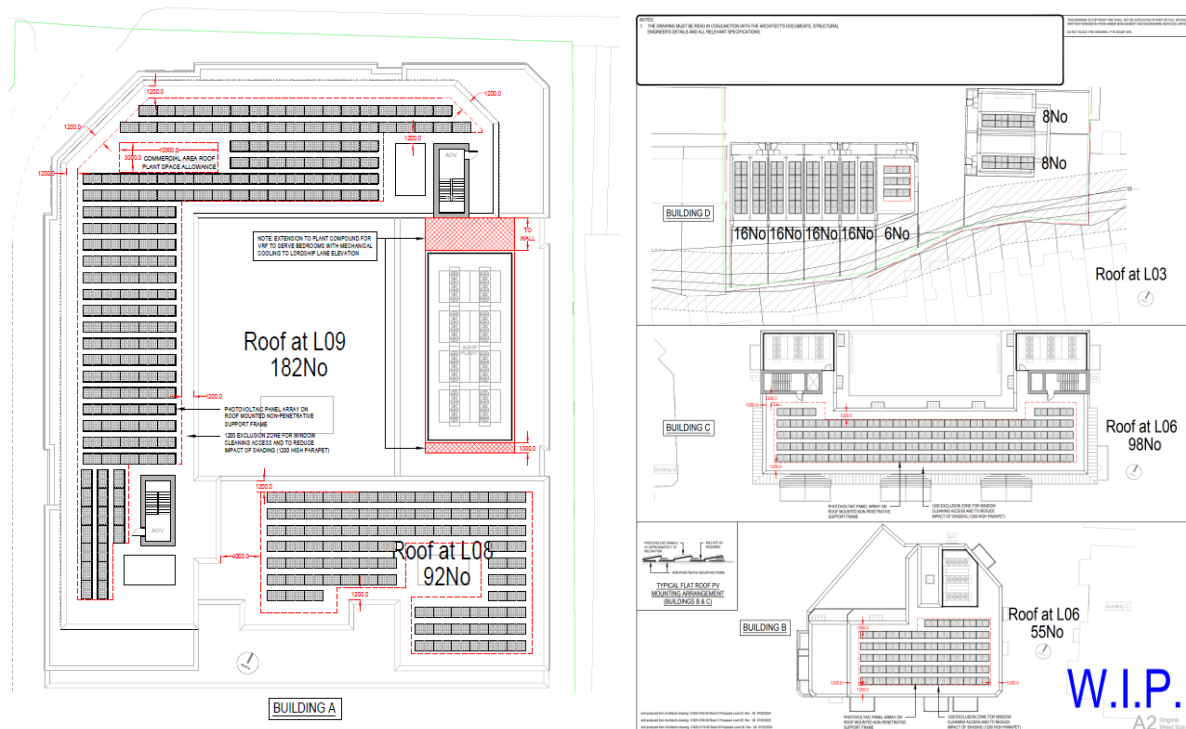


Figure 4.2 – Currently Selected Roof Areas for PV Array

An allowance of 516 panels at 440Wp has been allowed for within the modelling at this stage. This array has been allowed for in the design at current and has a total capacity of 227kWp. We have incorporated PV in the design at this stage in order to adhere to the energy hierarchy initiative – be green. This details the importance of maximising opportunities for renewable energy by producing, storing and using renewable energy on-site.

Selected: **Yes**



4.3 Combined Heat and Power (CHP)

A CHP unit generates electricity on-site, and recovers the waste heat from this process to be used for heating or domestic hot water generation.

To ensure that a CHP is running as efficiently as possible, a steady, continuous heat demand is required. The large quantity of domestic hot water required for high density residential developments satisfies this requirement. The electricity generated will also contribute to the building base load.

However, due to the ongoing decarbonisation of the UK electricity generating network, the carbon factor for electricity is now less than natural gas and therefore the carbon impact of using gas as an energy source is far higher, especially when using heat pumps with a Coefficient of Performance in the region of 300%. A CHP does not comply as an eligible LZCGT under Policy SI2 or LETI. Therefore, CHP machines are not deemed to be a viable technology for this development as per the London plan energy hierarchy.

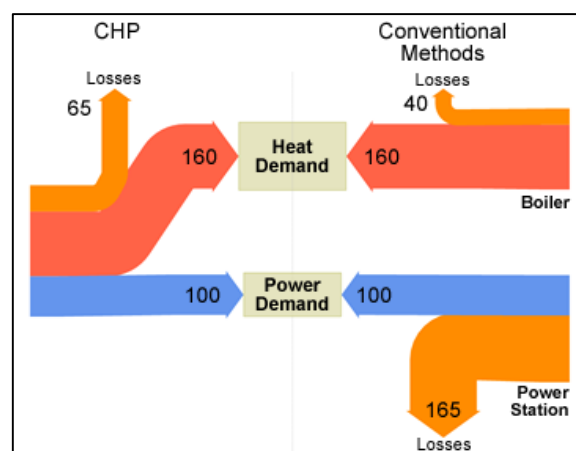


Figure 4.3 – Sankey diagram illustrating CHP energy flows

Selected: **No**

4.4 Solar Hot Water

Roof mounted solar thermal collectors are used to provide a pre-heat to the domestic hot water requirements from solar energy. The proposed development will have a high domestic hot water demand and so a solar hot water system has the potential to provide a significant reduction in CO₂ emissions.

However, a solar hot water system would reduce the roof space available for photovoltaic panels.

Additionally, when the building may be experiencing periods of low occupancy due to student summer holidays, this aligns with the highest yields which are very difficult to manage once all hot water storage requirements are satisfied and therefore complicated and expensive heat rejection plant is required which in theory 'wastes' the energy.

For these reasons, solar hot water is not deemed suitable for this development.

Selected: **No**

4.5 Air Source Heat Pump

An air source heat pump (ASHP) extracts heat energy from the ambient air and uses this to provide space heating and/or domestic hot water, via either an air system or a wet system with radiators/underfloor heating

and calorifiers for domestic hot water generation. The cool refrigerant enters the compressor which decreases the volume, thus raising the temperature. The hot refrigerant is then circulated through the internal heat exchanger for space heating, as seen in Figure 3.4. The process can also be reversed during summer months to remove heat from the building.

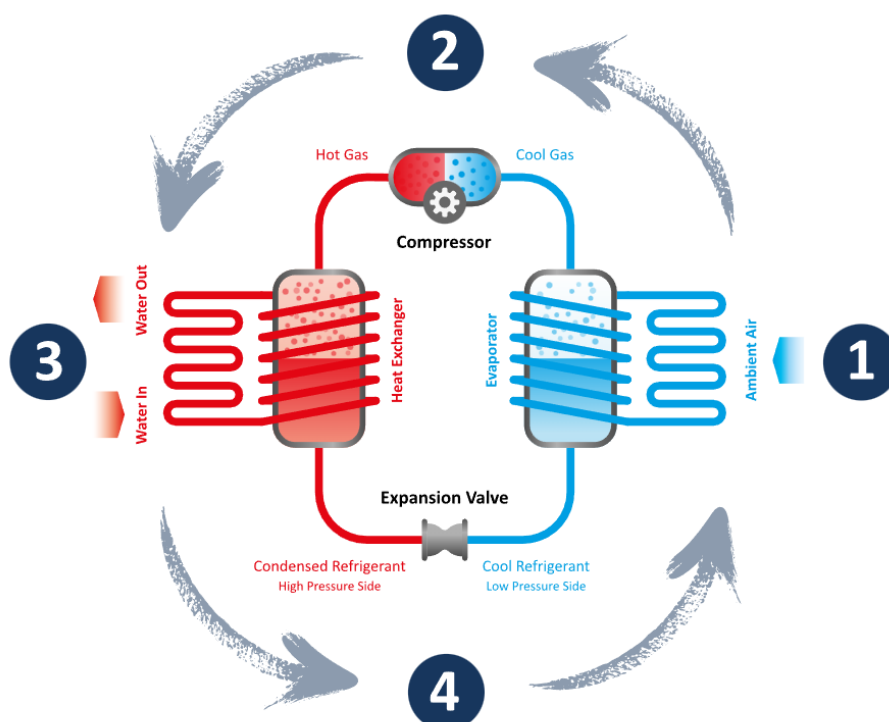


Figure 4.4 – Air Source Heat Pump Functionality Diagram

The heat pumps operate on grid-supplied electricity and often have seasonal coefficients of performance (SCoP) in excess of 3. This efficiency coupled with the decarbonised electricity grid means that ASHP can provide a highly energy efficient means of supplying heat energy.

Further recent developments with ASHP technology has optimised designs to better suit the higher temperature requirements of domestic hot water generation which generally requires storing water over 60°C. Additionally, the refrigerant used in modern heat pumps have lower a Global Warming Potential (GWP) than they have previously. With the rise in commercial availability of the refrigerant known as R32, heat pumps have become even more of an eco-friendly option. R32 is now the most used refrigerant with a GWP of 675 replacing the former most popular refrigerant of R410A which had a GWP of 2088. Another benefit of R32 is that it can deliver improved efficiency, meaning the heat pump is able to recharge and recycle heat more with less losses, saving energy and making the heat pump greener in its operation.

At the time of producing this document, Amber Management is taking note of the increasing availability of natural refrigerants such as CO₂ & Propane. CO₂/propane heat pumps incredibly versatile, with a wider range of ambient temperature applications. In response to environmental regulations and the phase-out of high GWP refrigerants, CO₂/propane heat pumps are becoming a much more attractive option.

As an air source heat pump is an LZCT, it adheres to the energy hierarchy outlined in the London Plan.

Therefore, it is proposed that ASHP technology would be extremely suitable for space heating and domestic hot water production on this development. It is also proposed that Variable Refrigerant Flow heat pump comfort cooling and heating systems would be provided to offices and social spaces.

Selected: **Yes**



4.6 Ground/Water Source Heat Pump

Due to the fact that the ground remains at a stable temperature of between 10-12°C, a ground source heat pump (GSHP) can be used to extract heat energy from the ground in winter and reject unwanted heat energy into the ground during summer. A water source heat pump (WSHP) works by extracting heat from a body of water.

The proposed development site has a large footprint with the potential to provide the required space to install a closed loop ground collector for a GSHP. However, due to the high cost of installation and internal plant space requirements, this system has been deemed inappropriate for the development.

Selected: **No**

4.7 Biomass Heating

Biomass in the form of logs, wood pellets or wood chips is classified as a renewable energy source because the CO₂ emitted during burning has been taken out of the atmosphere by the plant while it was growing. Therefore, locally sourced biomass fuel has the potential to significantly reduce the CO₂ emissions related to heating and hot water generation.

Due to the complicated feeding mechanisms and reduced availability, the cost of an automated biomass heating system is far greater than that of a more conventional heating system. The use of a biomass heating system also invites debate about how sustainable the fuel used truly is and because of this, such systems should only be selected following caution.

The UK sources only 18% of its consumed liquid biofuels domestically, with 30% originating from Brazil, sparking a broader discussion on the sustainability of their production due to the resulting deforestation. This information is made readily available by the Renewables Fuels Agency.

However, due to the location of the development site, a number of difficulties exist in relation to the delivery and storage of the fuels and operation of the boiler. Biomass heating can result in air quality problems, especially in city centre locations such as this development.

A large fuel store will be needed, requiring regular deliveries to keep the building operational. The Clean Air Act would also require a detailed analysis of the dispersal of the flue emissions to be carried out to ensure there are no air quality issues. Therefore, this technology is not proposed to form part of the development.

Selected: **No**

4.8 Geothermal

Geothermal technology uses deep geothermal boreholes in the Earth's surface, along with a thermodynamic refrigeration cycle to generate hot water. This technology requires a lot of capital expenditure, time and space to drill the boreholes. Space is not a commodity in this development due to its location in the city centre and thus this technology is not recommended for the development.

Selected: **No**

4.9 Fuel Cells

A fuel cell is an electrochemical device that converts chemical energy directly into electrical energy through a reaction between a fuel (such as hydrogen) and an oxidizing agent (usually oxygen). It produces electricity, water, and heat as by-products, offering a clean and efficient power generation method.



This technology is only appropriate for inclusion in developments that have continuous access to chemical energy and as such is not suitable for this development.

Selected: **No**

4.10 Heat Recovery Systems

A heat recovery system captures and reuses waste heat from industrial processes to enhance energy efficiency. By identifying and utilizing sources of waste heat, such as exhaust gases or hot water runoff, the system aims to reduce carbon emissions.

This technology is only appropriate for inclusion in developments that either directly or indirectly come into contact with industrial waste and as such is not suitable for this development.

Selected: **No**

4.11 Micro Hydro/ Micro Wind

Micro hydro refers to small-scale hydroelectric power systems that generate electricity from flowing water, typically streams or rivers. Micro wind refers to small-scale wind turbine systems that harness wind energy to generate electricity. Both micro hydro and micro wind are decentralized, renewable energy solutions suitable for smaller-scale applications.

These technologies are more suitable to small scale residential developments so have been ruled out of this development.

Selected: **No**



5.0 Design Principles

The design intent of the development is to reduce the annual energy consumption, whilst ensuring that the energy that is consumed is consumed in the most efficient manner possible, minimising CO₂ emissions. The services strategy to achieve this and to comply with the Building Regulations has followed the following principles:

- Incorporate passive design measures into the building design to reduce the energy requirement.
- Incorporate energy efficiency design measures into the services design to ensure energy is consumed as efficiently as possible.
- Assess the viability of low/zero carbon technologies to reduce the requirement for grid supplied energy.

5.1 Passive Design Measures

5.1.1 Building Fabric

The thermal insulation standards will be specified to exceed the minimum standards contained within the Part L Document to limit the heat loss through the building fabric. This will reduce the heat energy required to maintain internal comfort levels and so reducing the CO₂ emissions associated with space heating.

The building will also be designed to achieve air permeability standards in excess of the Part L Requirements, targeting an air permeability of 2 m³/(h.m²) at 50 Pa for non-residential and 2.5 m³/(h.m²) at 50 Pa for residential. This will reduce the infiltration of external ambient air and so reduce the heating requirement of the building.

5.1.2 Solar Gain

Solar control glazing will be provided throughout the development to limit summertime solar gains and overheating, so reducing the requirement for mechanical cooling systems and increased mechanical ventilation rates.

Table 4.1 – Building Fabric Performance

Parameter	Part L Minimum Standard	Design Proposal
Ground Floor U-Vales (W/m ² K)	0.18	0.12
Roof U-Value (W/m ² K)	0.16	0.1
External Wall U-Value (W/m ² K)	0.21	0.14
Window U-Value (average including frame) (W/m ² K)	1.6	1.21
Glazing G-Value	-	0.35
Glazing Visible Light Transmission	-	0.7
Air Permeability (m ³ /hr/m ² @50 Pa)	8.0	2.0 (2.5 for residential)

5.2 Energy Efficiency Design Measures

5.2.1 Heating Plant

Heating and hot water will be provided by centralised high efficiency Air Source Heat Pumps (ASHP). These will be selected to have an efficiency that exceeds the minimum standards required by the Building Standards Technical Handbook – Non-domestic Edition. Heating will be supplied to each room via a central distribution network feeding high efficiency radiators. TRV's will be provided to each radiator, with weather



compensated controls varying the boiler flow temperatures. All central controls will be linked to the Building Management System to provide central monitoring and control. The dwellings will follow the same approach but will utilise Heat Interface Units to deliver heating energy to the units for space heating and instantaneous domestic hot water generation.

5.2.2 Mechanical Ventilation

The majority of areas are proposed to be naturally ventilated, with extract only ventilation provided to bathroom pods and kitchen areas. These systems will be selected to have a specific fan power (SFP) equal to or in excess of the requirements of the Building Standards Technical Handbook – Non-domestic Edition. Some areas, such as perimeter facing bedrooms on the Lordship Lane elevation, shall require Mechanical Ventilation with Heat Recovery (MVHR) to combat higher ambient acoustic issues, these shall incorporate high efficiency heat exchangers to minimise the CO₂ emissions related to heating the incoming fresh air to the room temperature.

5.2.3 Mechanical Cooling

Careful consideration has been given to the architectural aesthetic of the Lordship Lane façade with close liaison between the project team and the Council, this has resulted in an elevational design with limited opportunities for ventilation openings. The project team has considered the cooling hierarchy for all spaces and has used natural ventilation wherever possible, followed by mechanical ventilation. However, on the Lordship Lane elevation these technologies have not been successful in controlling thermal comfort due to the need to keep windows closed due to higher than acceptable acoustics. This has resulted in the small percentage of rooms on this elevation proposed to be provided with mechanical cooling to ensure internal thermal comfort levels are achieved.

5.2.4 Internal Lighting

Internal lighting contributes to a significant proportion of the operational energy requirements of buildings of this type, and so offers significant scope for the reduction of annual CO₂ emissions. The energy consumption associated with internal lighting will be minimised by using efficient LED luminaires wherever possible, with high frequency fluorescent luminaires elsewhere.

Automatic lighting controls will be provided, via passive infra-red detectors (PIR's), throughout all communal and circulation spaces to ensure lighting is not left on unnecessarily, preventing electrical energy from being wasted.

5.2.5 External Lighting

The external areas of the development will be lit via high efficiency luminaires controlled via a combination of 7-day programmable time clock and photocell to ensure the lighting is only on when required.

5.2.6 Energy Metering

All main incoming utilities, major energy consuming plant, and individual electrical distribution boards will be metered to enable the end use to be identified. All meters will be linked to the Building Management System (BMS) to provide central monitoring. While metering does not in itself reduce energy consumption, this will allow high energy consumption to be identified and targeted for improvements.

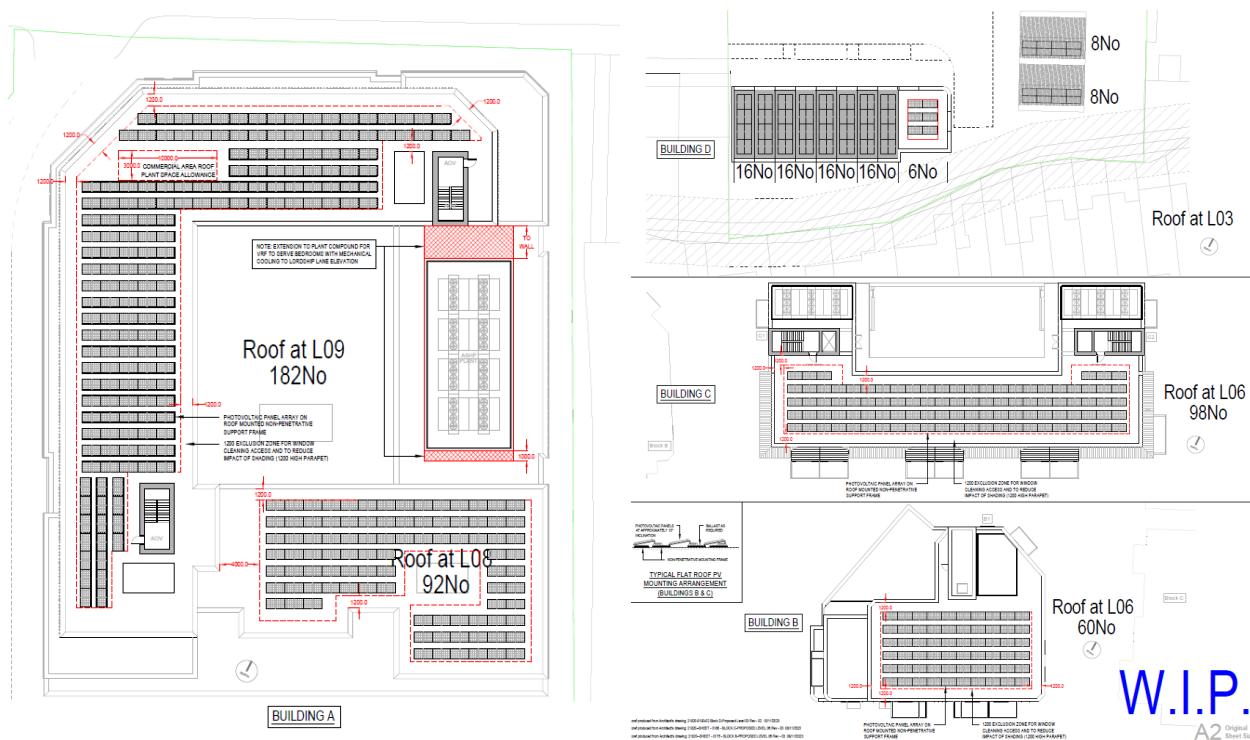
6.0 Proposed Strategy

This report has calculated the about of energy consumed by the proposed building, and the associated CO₂ emission, through the use of SBEM calculations and detailed the passive design measures and energy efficiency design measures that will be employed to minimise the operational energy use as far as reasonably possible.

In addition to the measures employed to reduce energy consumption, this report has also analysed the feasibility of various renewable and low/zero carbon energy sources. A number of potential renewable and low/zero carbon energy sources, such as biomass, wind turbines, solar hot water and ground source heat pumps, have been shown to not be technically or financially feasible for this development.

Roof mounted photovoltaic panels may be provided to generate zero carbon electricity and an air source heat pump will provide low carbon heating and domestic hot water generation. VRF systems shall provide heating and cooling to the back of social space areas.

The proposed strategy includes a centralised energy plant in Buildings A, B & C (With the plant in building C also serving building D). This allows for future flexibility of site with cognisance of varying building use classifications.



The images above show possible positions of roof plant equipment (namely ASHP compressor units) on the roof.

Provision will be included for district heat network connection to be introduced in the future, with routing through site from point of connection. Potential inclusion will be subject to carbon intensity of the Wood Green energy centre and its ability to decarbonise as effectively as high efficiency air source heat pumps.

Table 6.1 demonstrates compliance with The London Plan policy 5.2 with 41% reduction in carbon emissions when compared to the notional baseline for the PBSA unit. Table 6.6 demonstrates compliance with a 74% betterment on the residential side of the development.



Policy SI4 – Managing heat risk stresses the importance of reducing internal overheating in the form of a cooling hierarchy, with point one on the aforementioned hierarchy including fabric efficiency. The table below shows that the building fabric is 5% more energy efficient than the target. In addition to this, natural ventilation has been included wherever possible – with mechanical ventilation only being used in certain areas due to site constraints. Please see document *LLWGSA-AMEX-00-XX-RP-ME-002* for more information relating to policy compliance & CIBSE TM59 report.

Table 6.0 – Fabric Energy Efficiency Report			
	Target Fabric Energy Efficiency (kWh/m2)	Dwelling Fabric Energy Efficiency (kWh/m2)	% Improvement
Development total	35.74	34.00	5

The cumulative/ set-wide cash in-lieu contribution to achieve net zero is a total of £199,214. This value is broken down in the following sections.



6.1 Non Residential Energy Hierarchy Targets:

Table 6.1 - Development Carbon Dioxide Emissions at each stage of the Energy Hierarchy			
	Total Regulated Emissions (Tonnes CO ₂ /year)	CO ₂ Savings (Tonnes CO ₂ /year)	% Saving
Part L 2021 Baseline	83.4	-	-
Be Lean	70.6	23.3	15
Be Clean	70.6	-	-
Be Green	49.0	6.0	26
Total Saving	-	29.3	41

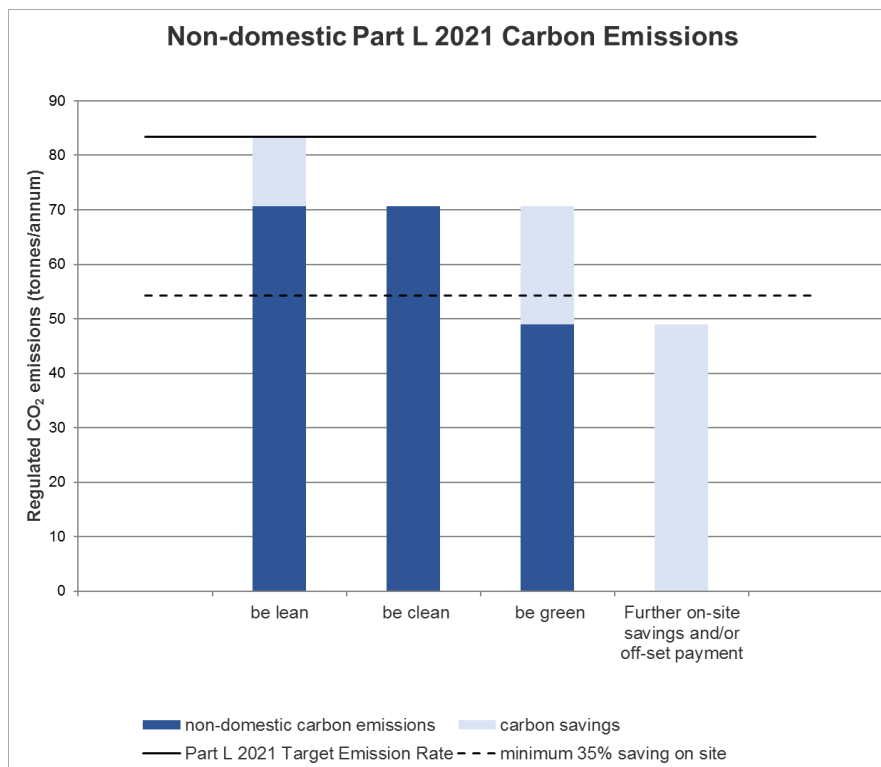


Figure 6.2 – Graph to show non-domestic emission reduction at each stage of the energy hierarchy.

This leaves a carbon shortfall of 49 tonnes CO₂/year above net-zero. Meaning a cash in lieu contribution of £139,704 to offset to net-zero. This is based on £95 per tonne, over a 30-year period.

Table 6.3 – Energy Demand from PBSA BRUKL – Be Green		
Energy Use	Energy Demand (kWh/yr)	CO ₂ Emissions (kg/yr)
Heating	161,362	31,143
Hot Water	2,265	437
Lighting	40,199	7,758
Auxiliary (Fans, pumps etc.)	103,422	19,961
Cooling	124,749	24,076
Equipment (<i>not included within calculation</i>)	374,812	72,339
Displaced Electricity (PV generation)	-105,876	20,434
Total	326,120	62,941

Under 2021 building regulations, this gives a Building Emission Rate (BER) of **2.51 kgCO₂/m²/yr** against a Target Emission Rate (TER) of **4.32 kgCO₂/m²/yr**.



This represents an improvement of **41%**.

This aligns with the London plan requirement for the actual building emission rate to represent a minimum of 35% increase over the notional energy rate.

Target CO ₂ emission rate (TER), kgCO ₂ /m ² :annum	4.32
Building CO ₂ emission rate (BER), kgCO ₂ /m ² :annum	2.51
Target primary energy rate (TPER), kWh _{PE} /m ² :annum	45.63
Building primary energy rate (BPER), kWh _{PE} /m ² :annum	26.02
Do the building's emission and primary energy rates exceed the targets?	BER =< TER BPER =< TPER

Figure 6.4 - BER/TER and BPER/TPER comparison showing 2021 building regulation compliance – Be Green PBSA Only BRUKL

6.1.1 Commercial Unit

A ground floor commercial unit within building A makes up a part of the non-residential side of the development. This was modelled independently against the London Plan Energy Hierarchy as seen in figures 6.5 as well as Appendices C & D. The section was modelled as a retail/financial space using VRF + MVHR and its impact is included within table 6.1 & figure 6.2.

Target CO ₂ emission rate (TER), kgCO ₂ /m ² :annum	2.7
Building CO ₂ emission rate (BER), kgCO ₂ /m ² :annum	2.42
Target primary energy rate (TPER), kWh _{PE} /m ² :annum	29.1
Building primary energy rate (BPER), kWh _{PE} /m ² :annum	26.05
Do the building's emission and primary energy rates exceed the targets?	BER =< TER BPER =< TPER

Figure 6.5 - BER/TER and BPER/TPER comparison showing 2021 building regulation compliance – Be Green Commercial Unit Only BRUKL



6.2 Residential Energy Hierarchy Targets:

	Total Regulated Emissions (Tonnes CO2/year)	CO2 Savings (Tonnes CO2/year)	% Saving
Part L 2021 Baseline	75.8	-	-
Be Lean	67.4	8.4	11
Be Clean	67.4	0.0	-
Be Green	19.9	47.5	63
Total Saving	-	55.9	74

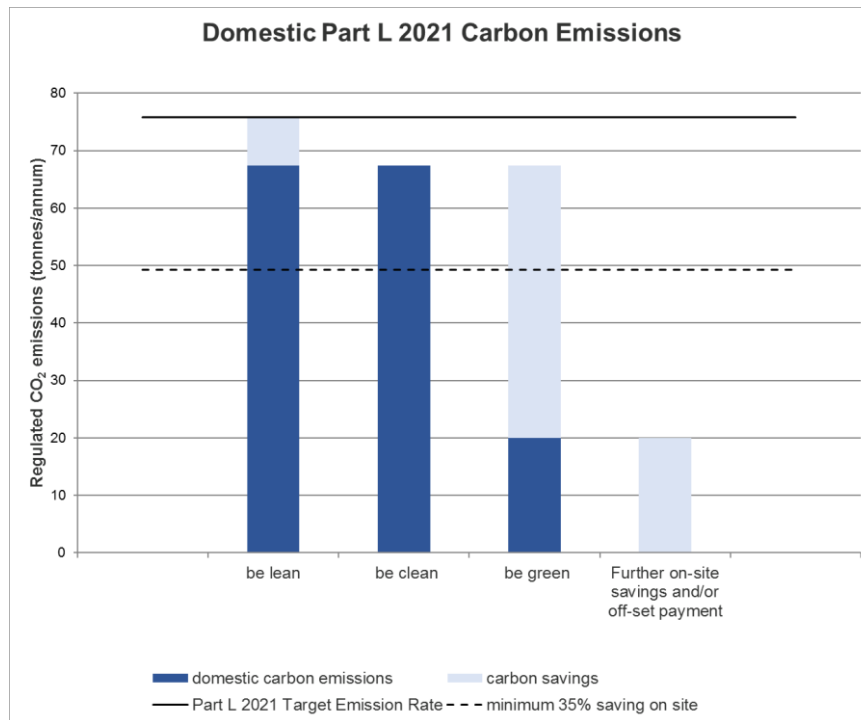


Figure 6.7 – Graph to show domestic emission reduction at each stage of the energy hierarchy.

LETI recommends a >50% betterment on the Part L Target Emission Rate for residential developments, the current model is showing a 74% betterment, complying with LETI in addition to the London Plan.

This leaves a carbon shortfall of 19.9 tonnes CO₂/year above net-zero. Meaning a cash in lieu contribution of £56,821 to offset to net-zero. This is based on £95 per tonne, over a 30-year period.

Table 6.8 shows the breakdown of emission rates and emission savings at each stage of the Energy Hierarchy.

	Baseline	Be Lean		Be Green	
Unit	Emissions (kgCO ₂ p.a.)	Emissions (kgCO ₂ p.a.)	Saving (kgCO ₂ p.a.)	Emissions (kgCO ₂ p.a.)	Saving (kgCO ₂ p.a.)
GF end terrace duplex	8,362	7,972	976	2,133	5,253
GF mid terrace duplex	7,751	7,822	558	2,137	5,056
MF end terrace apartment	17,906	18,681	585	4,731	12,590
MF mid terrace apartment	16,217	16,507	1,262	4,453	10,502
TF end terrace apartment	9,068	7,281	2,372	1,919	4,777



TF mid terrace apartment	6,136	5,289	1,288	1,404	3,444
End terrace town house	6,295	6,748	830	1,880	3,585
Mid terrace town house	4,097	4,517	527	1,281	2,289
Total	75,831	74,817	8,398	19,938	47,496

6.3 Site-wide energy targets:

This section outlines the cumulative targets including the total of the residential buildings, alongside the non-residential (PBSA & commercial units) ...

Total Site-Wide Off-set Annually: **69.0 Tonnes CO2**

Total Site-Wide Emission Reduction Annually – Be Lean: **21.1 Tonnes CO2** (13%)

Total Site-Wide Emission Reduction Annually – Be Green: **69.1 Tonnes CO2** (43%)

Total Site-Wide Emission Reduction Annually: **90.2 Tonnes CO2** (57%)

Total Site-Wide Emission reduction (over 30 years): **2,706 Tonnes CO2**

Total savings for off-set payment (over 30 years): **2,069 Tonnes CO2**

Total cash in-lieu contribution: **£196,555 ***



6.3 Utilities

6.3.1 Electricity

The existing building is currently provided with HV electricity infrastructure with several transformers. To serve the new development, this infrastructure shall be reconfigured to suit the new requirements but all of the measures noted above shall keep demand on the utility as low as possible.

Initial pre-app dialogue has occurred with both the local DNO (UKPN) and other iDNO's to progress suitable electricity connection strategies for this development. It is proposed to form a new transformer arrangement within the development to meet the needs of the proposed buildings. Transformer capacity may then be available by UKPN to deploy elsewhere to allow other adjoining and surrounding properties to decarbonise and move away from fossil fuels.

6.3.2 Potable Water

The proposed development shall utilise low flow water appliances and sanitaryware across the scheme and is targeting BREEAM Excellent for which water conservation and sustainability forms a large aspect. Impact to the adjoining Thames Water infrastructure will be minimised by employing large capacity potable water storage tanks that shall fill at a steady rate to remove high peaks and troughs on the water network reducing the impact on the network.

A pre-planning enquiry has been made to Thames Water and they have highlighted that their initial rough calculations indicate that there may be a shortfall in available capacity in the adjacent infrastructure to service this development. This now requires more in depth modelling by Thames Water to assess what, if any, reinforcement works may be necessary.

Normally, this modelling would commence post planning award but the developer is seeking to proceed with this now to understand the potential implications and carry out any necessary reinforcement works.



Appendix A – Be Lean BRUKL Non-Residential – PBSA Only

Project name

2347 Fusion LL - Be Lean**As designed**

Date: Wed Jan 31 16:49:55 2024

Administrative information

Building Details

Address: Lordship Lane, London,

Certifier details

Name: Name

Telephone number: Phone

Address: Street Address, City, Postcode

Certification tool

Calculation engine: Apache

Calculation engine version: 7.0.24

Interface to calculation engine: IES Virtual Environment

Interface to calculation engine version: 7.0.24

BRUKL compliance module version: v6.1.e.1

Foundation area [m²]: 1626.92The CO₂ emission and primary energy rates of the building must not exceed the targets

Target CO ₂ emission rate (TER), kgCO ₂ /m ² annum	4.49
Building CO ₂ emission rate (BER), kgCO ₂ /m ² annum	3.65
Target primary energy rate (TPER), kWh _{PE} /m ² annum	47.42
Building primary energy rate (BPER), kWh _{PE} /m ² annum	38.73
Do the building's emission and primary energy rates exceed the targets?	BER ≤ TER BPER ≤ TPER

The performance of the building fabric and fixed building services should achieve reasonable overall standards of energy efficiency

Fabric element	U _a -Limit	U _a -Calc	U _i -Calc	First surface with maximum value
Walls*	0.26	0.14	0.15	0000000F:Surf[1]
Floors	0.18	0.13	0.35	06000436:Surf[10]
Pitched roofs	0.16	-	-	No pitched roofs in building
Flat roofs	0.18	0.1	0.1	0000000E:Surf[4]
Windows** and roof windows	1.6	1.21	1.6	00000016:Surf[4]
Rooflights***	2.2	-	-	No roof lights in building
Personnel doors^	1.6	1.04	1.6	00000016:Surf[4]
Vehicle access & similar large doors	1.3	-	-	No vehicle access doors in building
High usage entrance doors	3	1.2	1.2	00000004:Surf[5]

U_a-Limit = Limiting area-weighted average U-values [W/(m²K)]U_i-Calc = Calculated maximum individual element U-values [W/(m²K)]U_a-Calc = Calculated area-weighted average U-values [W/(m²K)]

* Automatic U-value check by the tool does not apply to curtain walls whose limiting standard is similar to that for windows.

** Display windows and similar glazing are excluded from the U-value check.

*** Values for rooflights refer to the horizontal position.

^ For fire doors, limiting U-value is 1.8 W/m²K

NB: Neither roof ventilators (inc. smoke vents) nor swimming pool basins are modelled or checked against the limiting standards by the tool.

Air permeability	Limiting standard	This building
m ³ /(h.m ²) at 50 Pa	8	2

Building services

For details on the standard values listed below, system-specific guidance, and additional regulatory requirements, refer to the Approved Documents.

Whole building lighting automatic monitoring & targeting with alarms for out-of-range values	NO
Whole building electric power factor achieved by power factor correction	>0.95

1- ASHP + MVHR (Be Lean)

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	2.64	-	0.2	0	-
Standard value	2.5*	N/A	N/A	N/A	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					

2- VRF + MVHR (Be lean)

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	2.64	6	0	0	0.8
Standard value	2.5*	5	N/A	N/A	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					

3- ASHP + MEV (Be Lean)

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	2.64	-	0.2	-	-
Standard value	2.5*	N/A	N/A	N/A	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					

1- ASHP DHW High Usage (Be Lean)

	Water heating efficiency	Storage loss factor [kWh/litre per day]
This building	2.64	-
Standard value	1	N/A

2- ASHP DHW Low usage (Be Lean)

	Water heating efficiency	Storage loss factor [kWh/litre per day]
This building	2.64	0.008
Standard value	1	N/A

Zone-level mechanical ventilation, exhaust, and terminal units

ID	System type in the Approved Documents
A	Local supply or extract ventilation units
B	Zonal supply system where the fan is remote from the zone
C	Zonal extract system where the fan is remote from the zone
D	Zonal balanced supply and extract ventilation system
E	Local balanced supply and extract ventilation units
F	Other local ventilation units
G	Fan assisted terminal variable air volume units
H	Fan coil units
I	Kitchen extract with the fan remote from the zone and a grease filter
NB: Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.	

[illegible]

Zone name	SFP [W/(l/s)]										HR efficiency	
ID of system type	A	B	C	D	E	F	G	H	I			
Standard value	0.3	1.1	0.5	2.3	2	0.5	0.5	0.4	1	Zone	Standard	
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
06 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
06 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
06 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
06 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
06 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
06 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
06 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
06 Studio 02	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
06 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
06 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
06 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
06 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
06 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
06 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
06 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
08 Accessible Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 E.S. Common Area	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Ensuite	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Ensuite	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Ensuite	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Ensuite	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Ensuite	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Ensuite	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Ensuite	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Ensuite	-	-	0.2	-	-	-	-	-	-	-	N/A	

Zone name	SFP [W/(l/s)]										HR efficiency	
ID of system type	A	B	C	D	E	F	G	H	I			
Standard value	0.3	1.1	0.5	2.3	2	0.5	0.5	0.4	1	Zone	Standard	
08 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Studio 02	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Studio 02	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Studio 02	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Studio 02	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Studio 02	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Studio 02	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Studio 02	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Studio 02	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Shower Pod	-	-	0.2	-	-	-	-	-	-	-	N/A	
07 1 Bed Studio - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
07 1 Bed Studio - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
07 Accessible Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
07 Accessible Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
07 Accessible Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
07 Accessible Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
07 Accessible Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
07 Accessible Studio - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
07 Ensuite	-	-	0.2	-	-	-	-	-	-	-	N/A	

Zone name	SFP [W/(l/s)]									HR efficiency	
ID of system type	A	B	C	D	E	F	G	H	I		
Standard value	0.3	1.1	0.5	2.3	2	0.5	0.5	0.4	1	Zone	Standard
08 Shower Pod	-	-	0.2	-	-	-	-	-	-	-	N/A
08 Shower Pod	-	-	0.2	-	-	-	-	-	-	-	N/A
08 Shower Pod	-	-	0.2	-	-	-	-	-	-	-	N/A
08 Shower Pod	-	-	0.2	-	-	-	-	-	-	-	N/A
08 Shower Pod	-	-	0.2	-	-	-	-	-	-	-	N/A
05 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
05 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
05 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
05 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
05 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
05 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
05 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
05 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
05 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
05 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
05 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
05 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
05 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
05 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
05 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
05 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
05 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
05 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
05 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
05 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
05 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
05 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
05 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
05 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
05 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
05 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
05 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
05 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
05 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
05 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
05 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
05 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
05 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
05 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
05 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
05 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
05 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
05 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
05 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A

[illegible]

[illegible]

[illegible]

[illegible]

Zone name	SFP [W/(l/s)]										HR efficiency	
ID of system type	A	B	C	D	E	F	G	H	I			
Standard value	0.3	1.1	0.5	2.3	2	0.5	0.5	0.4	1	Zone	Standard	
08 Shower Pod	-	-	0.2	-	-	-	-	-	-	-	N/A	
03 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
03 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
03 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
03 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
03 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
03 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
03 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
03 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
03 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
03 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
03 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
03 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
03 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
03 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
03 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
03 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
03 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
03 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
03 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
03 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
03 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
03 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
03 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
03 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
03 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
03 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
03 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	

Zone name	SFP [W/(l/s)]									HR efficiency	
ID of system type	A	B	C	D	E	F	G	H	I		
Standard value	0.3	1.1	0.5	2.3	2	0.5	0.5	0.4	1	Zone	Standard
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
03 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
03 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
03 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
03 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
03 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
03 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
06 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
06 Studio 02	-	-	0.2	-	-	-	-	-	-	-	N/A
06 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
06 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
06 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
06 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
06 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
06 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
06 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
03 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
03 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
03 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
03 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
03 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
03 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
03 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
03 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
03 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
02 1 Bed Studio - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A

Zone name	SFP [W/(l/s)]										HR efficiency	
ID of system type	A	B	C	D	E	F	G	H	I			
Standard value	0.3	1.1	0.5	2.3	2	0.5	0.5	0.4	1	Zone	Standard	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 Studio 02	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 1 Bed Studio - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
01 1 Bed Studio - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
01 Accessible Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	

[illegible]

Zone name	SFP [W/(l/s)]										HR efficiency	
ID of system type	A	B	C	D	E	F	G	H	I			
Standard value	0.3	1.1	0.5	2.3	2	0.5	0.5	0.4	1	Zone	Standard	
01 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
01 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
01 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
01 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
01 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
01 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
01 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
01 Studio 02	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
01 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
01 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
01 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
01 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
01 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
01 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
01 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
01 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m²]
	Standard value	95	80	0.3
00 Core		125	-	-

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m²]
	Standard value	95	80	0.3
00 Core		125	-	-
00 Corridor		125	-	-
00 Corridor		125	-	-
00 Corridor		125	-	-
00 Corridor		125	-	-
00 Corridor		125	-	-
00 Duplex Corridor		125	-	-
00 Duplex Studio Shower Pod		120	-	-
00 Duplex Studio Shower Pod		120	-	-
00 Duplex Studio Shower Pod		120	-	-
00 Duplex Studio Shower Pod		120	-	-
00 Duplex Studio Shower Pod		120	-	-
00 Duplex Studio Shower Pod		120	-	-
00 Duplex Studio Shower Pod		120	-	-
00 Duplex Studio Shower Pod		120	-	-
00 Duplex Studio Shower Pod		120	-	-
00 Duplex Studio Shower Pod		120	-	-
00 Duplex Studio Shower Pod		120	-	-
00 PBSA Plant		125	-	-
00 PBSA Social Space		125	-	-
00 Plant		125	-	-
00 Plant		125	-	-
00 Stair Core		125	-	-
00 Stair Core		125	-	-
00 Stair Core		125	-	-
06 1 Bed Studio - MVHR		120	-	-
06 1 Bed Studio - MVHR		120	-	-
06 Accessible Studio		120	-	-
06 Accessible Studio		120	-	-
06 Accessible Studio		120	-	-
06 Accessible Studio		120	-	-
06 Accessible Studio		120	-	-
06 Accessible Studio		120	-	-
06 Accessible Studio - MVHR		120	-	-
06 Ensuite		120	-	-
06 Shower Pod		120	-	-
06 Cl.Cupboard		125	-	-
06 Cl.Cupboard		125	-	-
06 Corridor		125	-	-
06 Corridor		125	-	-
06 Corridor		125	-	-
06 Corridor		125	-	-
06 E.S. Common Area		125	-	-

[illegible]

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m²]
	Standard value	95	80	0.3
06 Studio 01		120	-	-
06 Studio 01		120	-	-
06 Studio 01		120	-	-
06 Studio 01		120	-	-
06 Studio 01		120	-	-
06 Studio 01		120	-	-
06 Studio 01		120	-	-
06 Studio 01		120	-	-
06 Studio 01		120	-	-
06 Studio 01 - MVHR		120	-	-
06 Studio 01 - MVHR		120	-	-
06 Studio 01 - MVHR		120	-	-
06 Studio 01 - MVHR		120	-	-
06 Studio 01 - MVHR		120	-	-
06 Studio 01 - MVHR		120	-	-
06 Studio 01 - MVHR		120	-	-
06 Studio 01 - MVHR		120	-	-
06 Studio 02		120	-	-
06 Studio 02 - MVHR		120	-	-
06 Studio 02 - MVHR		120	-	-
06 Studio 02 - MVHR		120	-	-
06 Studio 02 - MVHR		120	-	-
06 Studio 02 - MVHR		120	-	-
06 Studio 02 - MVHR		120	-	-
06 Studio 02 - MVHR		120	-	-
08 Accessible Studio		120	-	-
08 1 Bed Studio		120	-	-
08 1 Bed Studio		120	-	-
08 Cl.Cupboard		125	-	-
08 Corridor		125	-	-
08 Cupboard		59	-	-
08 E.S. Common Area		125	-	-
08 Ensuite		120	-	-
08 Ensuite		120	-	-
08 Ensuite		120	-	-
08 Ensuite		120	-	-
08 Ensuite		120	-	-
08 Ensuite		120	-	-
08 Ensuite		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m ²]
	Standard value	95	80	0.3
08 Studio 01		120	-	-
08 Studio 01		120	-	-
08 Studio 01		120	-	-
08 Studio 01		120	-	-
08 Studio 01		120	-	-
08 Studio 01		120	-	-
08 Studio 01		120	-	-
08 Studio 01		120	-	-
08 Studio 01		120	-	-
08 Studio 01		120	-	-
08 Studio 01		120	-	-
08 Studio 01		120	-	-
08 Studio 02		120	-	-
08 Studio 02		120	-	-
08 Studio 02		120	-	-
08 Studio 02		120	-	-
08 Studio 02		120	-	-
06 1 Bed Studio		120	-	-
06 1 Bed Studio		120	-	-
06 1 Bed Studio		120	-	-
06 1 Bed Studio		120	-	-
06 1 Bed Studio		120	-	-
06 1 Bed Studio		120	-	-
06 1 Bed Studio		120	-	-
06 1 Bed Studio		120	-	-
06 1 Bed Studio		120	-	-
08 Studio 01		120	-	-
08 Studio 02		120	-	-
08 Studio 02		120	-	-
08 Shower Pod		120	-	-
0M Duplex Studio Bedroom		120	-	-
0M Duplex Studio Bedroom		120	-	-
0M Duplex Studio Bedroom		120	-	-
0M Duplex Studio Bedroom		120	-	-
0M Duplex Studio Bedroom		120	-	-
0M Duplex Studio Bedroom		120	-	-
0M Duplex Studio Bedroom		120	-	-
0M Duplex Studio Bedroom		120	-	-
0M Duplex Studio Bedroom		120	-	-
0M Duplex Studio Bedroom		120	-	-
00 Duplex Studio Living Room		120	-	-

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m ²]
	Standard value	95	80	0.3
00 Duplex Studio Living Room		120	-	-
00 Duplex Studio Living Room		120	-	-
00 Duplex Studio Living Room		120	-	-
00 Duplex Studio Living Room		120	-	-
00 Duplex Studio Living Room		120	-	-
00 Duplex Studio Living Room		120	-	-
00 Duplex Studio Living Room		120	-	-
00 Duplex Studio Living Room		120	-	-
00 Duplex Studio Living Room		120	-	-
00 Duplex Studio Living Room		120	-	-
07 1 Bed Studio - MVHR		120	-	-
07 1 Bed Studio - MVHR		120	-	-
07 Accessible Studio		120	-	-
07 Accessible Studio		120	-	-
07 Accessible Studio		120	-	-
07 Accessible Studio		120	-	-
07 Accessible Studio		120	-	-
07 Accessible Studio - MVHR		120	-	-
07 Ensuite		120	-	-
07 Shower Pod		120	-	-
07 Cl.Cupboard		125	-	-
07 Cl.Cupboard		125	-	-
07 Corridor		125	-	-
07 Corridor		125	-	-
07 Corridor		125	-	-
07 E.S. Common Area		125	-	-
07 Ensuite		120	-	-
07 Ensuite		120	-	-
07 Ensuite		120	-	-
07 Ensuite		120	-	-
07 Ensuite		120	-	-
07 Ensuite		120	-	-
07 Ensuite		120	-	-
07 S.S. Common Area		125	-	-
07 S.S. Common Area		125	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-

General lighting and display lighting	General luminaire	Display light source	
Zone name	Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m²]
Standard value	95	80	0.3
08 Shower Pod	120	-	-
08 Shower Pod	120	-	-
08 Shower Pod	120	-	-
08 Shower Pod	120	-	-
08 Shower Pod	120	-	-
08 Shower Pod	120	-	-
08 Shower Pod	120	-	-
08 Shower Pod	120	-	-
08 Shower Pod	120	-	-
08 Shower Pod	120	-	-
08 Shower Pod	120	-	-
08 Shower Pod	120	-	-
08 Shower Pod	120	-	-
08 Shower Pod	120	-	-
08 Shower Pod	120	-	-
08 Shower Pod	120	-	-
08 Shower Pod	120	-	-
08 Shower Pod	120	-	-
08 Shower Pod	120	-	-
08 Shower Pod	120	-	-
08 Shower Pod	120	-	-
08 Shower Pod	120	-	-
08 Shower Pod	120	-	-
08 Shower Pod	120	-	-
08 Shower Pod	120	-	-
08 Shower Pod	120	-	-
08 Shower Pod	120	-	-
08 Shower Pod	120	-	-
08 Shower Pod	120	-	-
08 Shower Pod	120	-	-
08 Shower Pod	120	-	-
08 Shower Pod	120	-	-
08 Shower Pod	120	-	-
08 Shower Pod	120	-	-
07 Shower Pod - MVHR	120	-	-

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m ²]
	Standard value	95	80	0.3
07 Shower Pod - MVHR		120	-	-
07 Shower Pod - MVHR		120	-	-
07 Shower Pod - MVHR		120	-	-
07 Shower Pod - MVHR		120	-	-
07 Shower Pod - MVHR		120	-	-
07 Shower Pod - MVHR		120	-	-
07 Shower Pod - MVHR		120	-	-
07 Shower Pod - MVHR		120	-	-
07 Shower Pod - MVHR		120	-	-
07 Shower Pod - MVHR		120	-	-
07 Shower Pod - MVHR		120	-	-
07 Shower Pod - MVHR		120	-	-
07 Shower Pod - MVHR		120	-	-
07 Shower Pod - MVHR		120	-	-
07 Shower Pod - MVHR		120	-	-
07 Shower Pod - MVHR		120	-	-
07 Social Studio		120	-	-
07 Social Studio		120	-	-
07 Social Studio		120	-	-
07 Social Studio		120	-	-
07 Social Studio		120	-	-
07 Social Studio		120	-	-
07 Social Studio		120	-	-
07 Social Studio		120	-	-
07 Social Studio		120	-	-
07 Social Studio		120	-	-
07 Social Studio		120	-	-
07 Stairs		125	-	-
07 Stairs		125	-	-
07 Stairs		125	-	-
07 Studio 01		120	-	-
07 Studio 01		120	-	-
07 Studio 01		120	-	-
07 Studio 01		120	-	-
07 Studio 01		120	-	-
07 Studio 01		120	-	-
07 Studio 01		120	-	-
07 Studio 01		120	-	-
07 Studio 01		120	-	-
07 Studio 01		120	-	-
07 Studio 01		120	-	-
07 Studio 01		120	-	-
07 Studio 01		120	-	-
07 Studio 01		120	-	-

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m ²]
	Standard value	95	80	0.3
07 Studio 01		120	-	-
07 Studio 01		120	-	-
07 Studio 01		120	-	-
07 Studio 01		120	-	-
07 Studio 01		120	-	-
07 Studio 01		120	-	-
07 Studio 01		120	-	-
07 Studio 01 - MVHR		120	-	-
07 Studio 01 - MVHR		120	-	-
07 Studio 01 - MVHR		120	-	-
07 Studio 01 - MVHR		120	-	-
07 Studio 01 - MVHR		120	-	-
07 Studio 01 - MVHR		120	-	-
07 Studio 01 - MVHR		120	-	-
07 Studio 02		120	-	-
07 Studio 02 - MVHR		120	-	-
07 Studio 02 - MVHR		120	-	-
07 Studio 02 - MVHR		120	-	-
07 Studio 02 - MVHR		120	-	-
07 Studio 02 - MVHR		120	-	-
07 Studio 02 - MVHR		120	-	-
07 Studio 02 - MVHR		120	-	-
07 1 Bed Studio		120	-	-
07 1 Bed Studio		120	-	-
07 1 Bed Studio		120	-	-
07 1 Bed Studio		120	-	-
07 1 Bed Studio		120	-	-
07 Studio 01		120	-	-
07 Accessible Studio		120	-	-
07 Studio 01		120	-	-
07 Corridor		125	-	-
07 1 Bed Studio		120	-	-
07 Corridor		125	-	-
08 Corridor		125	-	-
08 Studio 01		120	-	-
05 1 Bed Studio - MVHR		120	-	-
05 1 Bed Studio - MVHR		120	-	-
05 Accessible Studio		120	-	-
05 Accessible Studio		120	-	-
05 Accessible Studio		120	-	-
05 Accessible Studio		120	-	-
05 Accessible Studio		120	-	-

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m²]
	Standard value	95	80	0.3
05 Shower Pod - MVHR		120	-	-
05 Shower Pod - MVHR		120	-	-
05 Shower Pod - MVHR		120	-	-
05 Shower Pod - MVHR		120	-	-
05 Shower Pod - MVHR		120	-	-
05 Shower Pod - MVHR		120	-	-
05 Shower Pod - MVHR		120	-	-
05 Shower Pod - MVHR		120	-	-
05 Shower Pod - MVHR		120	-	-
05 Shower Pod - MVHR		120	-	-
05 Shower Pod - MVHR		120	-	-
05 Shower Pod - MVHR		120	-	-
05 Shower Pod - MVHR		120	-	-
05 Shower Pod - MVHR		120	-	-
05 Shower Pod - MVHR		120	-	-
05 Shower Pod - MVHR		120	-	-
05 Shower Pod - MVHR		120	-	-
05 Social Studio		120	-	-
05 Social Studio		120	-	-
05 Social Studio		120	-	-
05 Social Studio		120	-	-
05 Social Studio		120	-	-
05 Social Studio		120	-	-
05 Social Studio		120	-	-
05 Social Studio		120	-	-
05 Social Studio		120	-	-
05 Social Studio		120	-	-
05 Social Studio		120	-	-
05 Stairs		125	-	-
05 Stairs		125	-	-
05 Stairs		125	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m ²]
	Standard value	95	80	0.3
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01 - MVHR		120	-	-
05 Studio 01 - MVHR		120	-	-
05 Studio 01 - MVHR		120	-	-
05 Studio 01 - MVHR		120	-	-
05 Studio 01 - MVHR		120	-	-
05 Studio 01 - MVHR		120	-	-
05 Studio 01 - MVHR		120	-	-
05 Studio 01 - MVHR		120	-	-
05 Studio 02		120	-	-
05 Studio 02 - MVHR		120	-	-
05 Studio 02 - MVHR		120	-	-
05 Studio 02 - MVHR		120	-	-
05 Studio 02 - MVHR		120	-	-
05 Studio 02 - MVHR		120	-	-
05 Studio 02 - MVHR		120	-	-
05 Studio 02 - MVHR		120	-	-
05 1 Bed Studio		120	-	-
05 1 Bed Studio		120	-	-
05 1 Bed Studio		120	-	-
05 1 Bed Studio		120	-	-
05 1 Bed Studio		120	-	-
05 1 Bed Studio		120	-	-
05 1 Bed Studio		120	-	-
05 1 Bed Studio		120	-	-

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m ²]
	Standard value	95	80	0.3
05 1 Bed Studio		120	-	-
04 1 Bed Studio - MVHR		120	-	-
04 1 Bed Studio - MVHR		120	-	-
04 Accessible Studio		120	-	-
04 Accessible Studio		120	-	-
04 Accessible Studio		120	-	-
04 Accessible Studio		120	-	-
04 Accessible Studio		120	-	-
04 Accessible Studio		120	-	-
04 Accessible Studio - MVHR		120	-	-
04 Ensuite		120	-	-
04 Shower Pod		120	-	-
04 Cl.Cupboard		125	-	-
04 Cl.Cupboard		125	-	-
04 Corridor		125	-	-
04 Corridor		125	-	-
04 Corridor		125	-	-
04 Corridor		125	-	-
04 E.S. Common Area		125	-	-
04 Ensuite		120	-	-
04 Ensuite		120	-	-
04 Ensuite		120	-	-
04 Ensuite		120	-	-
04 Ensuite		120	-	-
04 Ensuite		120	-	-
04 Ensuite		120	-	-
04 S.S. Common Area		125	-	-
04 S.S. Common Area		125	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m²]
	Standard value	95	80	0.3
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
06 Shower Pod - MVHR		120	-	-
06 Shower Pod - MVHR		120	-	-
06 Shower Pod - MVHR		120	-	-
06 Shower Pod - MVHR		120	-	-
06 Shower Pod - MVHR		120	-	-
06 Shower Pod - MVHR		120	-	-
06 Shower Pod - MVHR		120	-	-
06 Shower Pod - MVHR		120	-	-
06 Shower Pod - MVHR		120	-	-
06 Shower Pod - MVHR		120	-	-
06 Shower Pod - MVHR		120	-	-
06 Shower Pod - MVHR		120	-	-
06 Shower Pod - MVHR		120	-	-
06 Shower Pod - MVHR		120	-	-
06 Shower Pod - MVHR		120	-	-
06 Shower Pod - MVHR		120	-	-
06 Shower Pod - MVHR		120	-	-
06 Social Studio		120	-	-
06 Social Studio		120	-	-
06 Social Studio		120	-	-
06 Social Studio		120	-	-
06 Social Studio		120	-	-
06 Social Studio		120	-	-
06 Social Studio		120	-	-
06 Social Studio		120	-	-
06 Social Studio		120	-	-
06 Social Studio		120	-	-
06 Social Studio		120	-	-
06 Stairs		125	-	-
06 Stairs		125	-	-
06 Stairs		125	-	-
06 Studio 01		120	-	-
06 Studio 01		120	-	-
06 Studio 01		120	-	-
06 Studio 01		120	-	-
06 Studio 01		120	-	-

[illegible]

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m²]
	Standard value	95	80	0.3
04 1 Bed Studio		120	-	-
04 1 Bed Studio		120	-	-
04 1 Bed Studio		120	-	-
04 1 Bed Studio		120	-	-
04 1 Bed Studio		120	-	-
04 1 Bed Studio		120	-	-
04 1 Bed Studio		120	-	-
04 1 Bed Studio		120	-	-
04 1 Bed Studio		120	-	-
03 1 Bed Studio - MVHR		120	-	-
03 1 Bed Studio - MVHR		120	-	-
03 Accessible Studio		120	-	-
03 Accessible Studio		120	-	-
03 Accessible Studio		120	-	-
03 Accessible Studio		120	-	-
03 Accessible Studio		120	-	-
03 Accessible Studio		120	-	-
03 Accessible Studio - MVHR		120	-	-
03 Ensuite		120	-	-
03 Shower Pod		120	-	-
03 Cl.Cupboard		125	-	-
03 Cl.Cupboard		125	-	-
03 Corridor		125	-	-
03 Corridor		125	-	-
03 Corridor		125	-	-
03 Corridor		125	-	-
03 E.S. Common Area		125	-	-
03 Ensuite		120	-	-
03 Ensuite		120	-	-
03 Ensuite		120	-	-
03 Ensuite		120	-	-
03 Ensuite		120	-	-
03 Ensuite		120	-	-
03 Ensuite		120	-	-
03 S.S. Common Area		125	-	-
03 S.S. Common Area		125	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-

[illegible]

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m ²]
	Standard value	95	80	0.3
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
03 Shower Pod - MVHR		120	-	-
03 Shower Pod - MVHR		120	-	-
03 Shower Pod - MVHR		120	-	-
03 Shower Pod - MVHR		120	-	-
03 Shower Pod - MVHR		120	-	-
03 Shower Pod - MVHR		120	-	-
03 Shower Pod - MVHR		120	-	-
03 Shower Pod - MVHR		120	-	-
03 Shower Pod - MVHR		120	-	-
03 Shower Pod - MVHR		120	-	-
03 Shower Pod - MVHR		120	-	-
03 Shower Pod - MVHR		120	-	-
03 Shower Pod - MVHR		120	-	-
03 Shower Pod - MVHR		120	-	-
03 Shower Pod - MVHR		120	-	-
03 Shower Pod - MVHR		120	-	-
03 Shower Pod - MVHR		120	-	-
03 Shower Pod - MVHR		120	-	-
03 Shower Pod - MVHR		120	-	-
03 Social Studio		120	-	-
03 Social Studio		120	-	-
03 Social Studio		120	-	-
03 Social Studio		120	-	-
03 Social Studio		120	-	-
03 Social Studio		120	-	-
03 Social Studio		120	-	-
03 Social Studio		120	-	-
03 Social Studio		120	-	-
03 Social Studio		120	-	-

General lighting and display lighting	General luminaire	Display light source	
Zone name	Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m²]
Standard value	95	80	0.3
03 Stairs	125	-	-
03 Stairs	125	-	-
03 Stairs	125	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01 - MVHR	120	-	-
03 Studio 01 - MVHR	120	-	-
03 Studio 01 - MVHR	120	-	-
03 Studio 01 - MVHR	120	-	-
03 Studio 01 - MVHR	120	-	-
03 Studio 01 - MVHR	120	-	-
06 Studio 01 - MVHR	120	-	-

General luminaire

Display light source

Zone name	Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m²]
Standard value	95	80	0.3
03 Stairs	125	-	-
03 Stairs	125	-	-
03 Stairs	125	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01 - MVHR	120	-	-
03 Studio 01 - MVHR	120	-	-
03 Studio 01 - MVHR	120	-	-
03 Studio 01 - MVHR	120	-	-
03 Studio 01 - MVHR	120	-	-
03 Studio 01 - MVHR	120	-	-
06 Studio 01 - MVHR	120	-	-

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m ²]
	Standard value	95	80	0.3
06 Studio 02		120	-	-
06 Studio 02 - MVHR		120	-	-
06 Studio 02 - MVHR		120	-	-
06 Studio 02 - MVHR		120	-	-
06 Studio 02 - MVHR		120	-	-
06 Studio 02 - MVHR		120	-	-
06 Studio 02 - MVHR		120	-	-
06 Studio 02 - MVHR		120	-	-
03 1 Bed Studio		120	-	-
03 1 Bed Studio		120	-	-
03 1 Bed Studio		120	-	-
03 1 Bed Studio		120	-	-
03 1 Bed Studio		120	-	-
03 1 Bed Studio		120	-	-
03 1 Bed Studio		120	-	-
03 1 Bed Studio		120	-	-
03 1 Bed Studio		120	-	-
02 1 Bed Studio - MVHR		120	-	-
02 1 Bed Studio - MVHR		120	-	-
02 Accessible Studio		120	-	-
02 Accessible Studio		120	-	-
02 Accessible Studio		120	-	-
02 Accessible Studio		120	-	-
02 Accessible Studio		120	-	-
02 Accessible Studio		120	-	-
02 Accessible Studio - MVHR		120	-	-
02 Ensuite		120	-	-
02 Shower Pod		120	-	-
02 Cl.Cupboard		125	-	-
02 Cl.Cupboard		125	-	-
02 Corridor		125	-	-
02 Corridor		125	-	-
02 Corridor		125	-	-
02 Corridor		125	-	-
02 E.S. Common Area		125	-	-
02 Ensuite		120	-	-
02 Ensuite		120	-	-
02 Ensuite		120	-	-
02 Ensuite		120	-	-
02 Ensuite		120	-	-
02 Ensuite		120	-	-
02 Ensuite		120	-	-
02 S.S. Common Area		125	-	-

[illegible]

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m²]
	Standard value	95	80	0.3
02 Studio 01		120	-	-
02 Studio 01 - MVHR		120	-	-
02 Studio 01 - MVHR		120	-	-
02 Studio 01 - MVHR		120	-	-
02 Studio 01 - MVHR		120	-	-
02 Studio 01 - MVHR		120	-	-
02 Studio 01 - MVHR		120	-	-
02 Studio 01 - MVHR		120	-	-
02 Studio 02		120	-	-
02 Studio 02 - MVHR		120	-	-
02 Studio 02 - MVHR		120	-	-
02 Studio 02 - MVHR		120	-	-
02 Studio 02 - MVHR		120	-	-
02 Studio 02 - MVHR		120	-	-
02 Studio 02 - MVHR		120	-	-
02 Studio 02 - MVHR		120	-	-
02 Studio 02 - MVHR		120	-	-
02 1 Bed Studio		120	-	-
02 1 Bed Studio		120	-	-
02 1 Bed Studio		120	-	-
02 1 Bed Studio		120	-	-
02 1 Bed Studio		120	-	-
02 1 Bed Studio		120	-	-
02 1 Bed Studio		120	-	-
02 1 Bed Studio		120	-	-
02 1 Bed Studio		120	-	-
01 1 Bed Studio - MVHR		120	-	-
01 1 Bed Studio - MVHR		120	-	-
01 Accessible Studio		120	-	-
01 Accessible Studio		120	-	-
01 Accessible Studio		120	-	-
01 Accessible Studio		120	-	-
01 Accessible Studio		120	-	-
01 Accessible Studio		120	-	-
01 Accessible Studio - MVHR		120	-	-
01 Ensuite		120	-	-
01 Shower Pod		120	-	-
01 Cl.Cupboard		125	-	-
01 Cl.Cupboard		125	-	-
01 Corridor		125	-	-
01 Corridor		125	-	-
01 Corridor		125	-	-
01 Corridor		125	-	-
01 E.S. Common Area		125	-	-

[illegible]

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m ²]
	Standard value	95	80	0.3
01 Studio 01		120	-	-
01 Studio 01		120	-	-
01 Studio 01		120	-	-
01 Studio 01		120	-	-
01 Studio 01		120	-	-
01 Studio 01		120	-	-
01 Studio 01		120	-	-
01 Studio 01		120	-	-
01 Studio 01		120	-	-
01 Studio 01 - MVHR		120	-	-
01 Studio 01 - MVHR		120	-	-
01 Studio 01 - MVHR		120	-	-
01 Studio 01 - MVHR		120	-	-
01 Studio 01 - MVHR		120	-	-
01 Studio 01 - MVHR		120	-	-
01 Studio 01 - MVHR		120	-	-
01 Studio 01 - MVHR		120	-	-
01 Studio 02		120	-	-
01 Studio 02 - MVHR		120	-	-
01 Studio 02 - MVHR		120	-	-
01 Studio 02 - MVHR		120	-	-
01 Studio 02 - MVHR		120	-	-
01 Studio 02 - MVHR		120	-	-
01 Studio 02 - MVHR		120	-	-
01 Studio 02 - MVHR		120	-	-
01 1 Bed Studio		120	-	-
01 1 Bed Studio		120	-	-
01 1 Bed Studio		120	-	-
01 1 Bed Studio		120	-	-
01 1 Bed Studio		120	-	-
01 1 Bed Studio		120	-	-
01 1 Bed Studio		120	-	-
01 1 Bed Studio		120	-	-
01 1 Bed Studio		120	-	-

The spaces in the building should have appropriate passive control measures to limit solar gains in summer

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
00 PBSA Social Space	YES (+18.4%)	NO
06 1 Bed Studio - MVHR	NO (-67.9%)	NO
06 1 Bed Studio - MVHR	NO (-65.8%)	NO
06 Accessible Studio	NO (-94.3%)	NO
06 Accessible Studio	NO (-93.1%)	NO
06 Accessible Studio	NO (-77.6%)	NO
06 Accessible Studio	NO (-73.5%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
06 Accessible Studio	NO (-93.2%)	NO
06 Accessible Studio	NO (-92%)	NO
06 Accessible Studio - MVHR	NO (-69.5%)	NO
06 Ensuite	NO (-88.4%)	NO
06 Shower Pod	N/A	N/A
06 Ensuite	NO (-87%)	NO
06 Ensuite	NO (-88.2%)	NO
06 Ensuite	NO (-87%)	NO
06 Ensuite	NO (-87.6%)	NO
06 Ensuite	NO (-86.9%)	NO
06 Ensuite	NO (-86.6%)	NO
06 Ensuite	NO (-87.3%)	NO
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Social Studio	NO (-91.9%)	NO
06 Social Studio	NO (-84.9%)	NO
06 Social Studio	NO (-92.1%)	NO
06 Social Studio	NO (-91.6%)	NO
06 Social Studio	NO (-92.1%)	NO
06 Social Studio	NO (-92.6%)	NO
06 Social Studio	NO (-91.7%)	NO
06 Social Studio	NO (-93.1%)	NO
06 Social Studio	NO (-92.2%)	NO
06 Social Studio	NO (-85.2%)	NO
06 Studio 01	NO (-89.8%)	NO
06 Studio 01	NO (-88.5%)	NO
06 Studio 01	NO (-87.6%)	NO
06 Studio 01	NO (-91.9%)	NO
06 Studio 01	NO (-87.5%)	NO
06 Studio 01	NO (-87.7%)	NO
06 Studio 01	NO (-79.8%)	NO
06 Studio 01	NO (-88%)	NO
06 Studio 01	NO (-88.8%)	NO
06 Studio 01	NO (-80%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
06 Studio 01	NO (-75.7%)	NO
06 Studio 01	NO (-75.2%)	NO
06 Studio 01	NO (-80.1%)	NO
06 Studio 01	NO (-88.5%)	NO
06 Studio 01	NO (-80.1%)	NO
06 Studio 01	NO (-75.8%)	NO
06 Studio 01	NO (-76.2%)	NO
06 Studio 01	NO (-61.9%)	NO
06 Studio 01	NO (-80%)	NO
06 Studio 01	NO (-78.1%)	NO
06 Studio 01	NO (-80%)	NO
06 Studio 01	NO (-80.1%)	NO
06 Studio 01	NO (-76%)	NO
06 Studio 01	NO (-75.6%)	NO
06 Studio 01	NO (-80.1%)	NO
06 Studio 01	NO (-67.9%)	NO
06 Studio 01	NO (-75.3%)	NO
06 Studio 01	NO (-87.9%)	NO
06 Studio 01	NO (-87.9%)	NO
06 Studio 01	NO (-75.8%)	NO
06 Studio 01	NO (-88%)	NO
06 Studio 01	NO (-90.2%)	NO
06 Studio 01	NO (-75.6%)	NO
06 Studio 01 - MVHR	NO (-72.3%)	NO
06 Studio 01 - MVHR	NO (-68.2%)	NO
06 Studio 01 - MVHR	NO (-51.6%)	NO
06 Studio 01 - MVHR	NO (-68.1%)	NO
06 Studio 01 - MVHR	NO (-77%)	NO
06 Studio 01 - MVHR	NO (-68.3%)	NO
06 Studio 01 - MVHR	NO (-68.4%)	NO
06 Studio 02	NO (-88.8%)	NO
06 Studio 02 - MVHR	NO (-38.1%)	NO
06 Studio 02 - MVHR	NO (-56.3%)	NO
06 Studio 02 - MVHR	NO (-36.8%)	NO
06 Studio 02 - MVHR	NO (-72.3%)	NO
06 Studio 02 - MVHR	NO (-56.4%)	NO
06 Studio 02 - MVHR	NO (-56.5%)	NO
06 Studio 02 - MVHR	NO (-53.9%)	NO
08 Accessible Studio	NO (-91.1%)	NO
08 1 Bed Studio	NO (-75.1%)	NO
08 1 Bed Studio	NO (-97.7%)	NO
08 Ensuite	NO (-86.2%)	NO
08 Ensuite	NO (-86.2%)	NO
08 Ensuite	NO (-86.1%)	NO
08 Ensuite	NO (-86.2%)	NO
08 Ensuite	NO (-86.1%)	NO
08 Ensuite	NO (-86.2%)	NO
08 Ensuite	NO (-86.6%)	NO
08 Ensuite	NO (-86.1%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
08 Studio 01	NO (-39.9%)	NO
08 Studio 01	NO (-86.8%)	NO
08 Studio 01	NO (-39.8%)	NO
08 Studio 01	NO (-86.8%)	NO
08 Studio 01	NO (-60.7%)	NO
08 Studio 01	NO (-40.2%)	NO
08 Studio 01	NO (-39.8%)	NO
08 Studio 01	NO (-60.7%)	NO
08 Studio 01	NO (-39.4%)	NO
08 Studio 01	NO (-86.8%)	NO
08 Studio 01	NO (-60.7%)	NO
08 Studio 01	NO (-87.5%)	NO
08 Studio 01	NO (-86.8%)	NO
08 Studio 01	NO (-69.6%)	NO
08 Studio 01	NO (-59.7%)	NO
08 Studio 01	NO (-74.6%)	NO
08 Studio 01	NO (-66.6%)	NO
08 Studio 01	NO (-77.5%)	NO
08 Studio 01	NO (-75.6%)	NO
08 Studio 02	NO (-76.7%)	NO
08 Studio 02	NO (-87.7%)	NO
08 Studio 02	NO (-62.6%)	NO
08 Studio 02	NO (-65.4%)	NO
08 Studio 02	NO (-62.4%)	NO
08 Studio 02	NO (-65.1%)	NO
06 1 Bed Studio	NO (-75.8%)	NO
06 1 Bed Studio	NO (-75.9%)	NO
06 1 Bed Studio	NO (-70.6%)	NO
06 1 Bed Studio	NO (-87.4%)	NO
06 1 Bed Studio	NO (-87.1%)	NO
06 1 Bed Studio	NO (-70.8%)	NO
06 1 Bed Studio	NO (-70.4%)	NO
06 1 Bed Studio	NO (-76%)	NO
06 1 Bed Studio	NO (-91.7%)	NO
08 Studio 01	NO (-95.9%)	NO
08 Studio 02	N/A	N/A
08 Studio 02	NO (-85.8%)	NO
0M Duplex Studio Bedroom	NO (-94.7%)	NO
0M Duplex Studio Bedroom	NO (-85.9%)	NO
0M Duplex Studio Bedroom	NO (-86.6%)	NO
0M Duplex Studio Bedroom	NO (-85.9%)	NO
0M Duplex Studio Bedroom	NO (-86.1%)	NO
0M Duplex Studio Bedroom	NO (-86.1%)	NO
0M Duplex Studio Bedroom	NO (-85.9%)	NO
0M Duplex Studio Bedroom	NO (-87.8%)	NO
0M Duplex Studio Bedroom	NO (-86.6%)	NO
0M Duplex Studio Bedroom	NO (-87.2%)	NO
0M Duplex Studio Bedroom	NO (-95.3%)	NO
00 Duplex Studio Living Room	NO (-31%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
00 Duplex Studio Living Room	YES (+79.1%)	NO
00 Duplex Studio Living Room	YES (+87.2%)	NO
00 Duplex Studio Living Room	YES (+56.8%)	NO
00 Duplex Studio Living Room	NO (-46.1%)	NO
00 Duplex Studio Living Room	YES (+75.3%)	NO
00 Duplex Studio Living Room	YES (+71.1%)	NO
00 Duplex Studio Living Room	YES (+76.4%)	NO
00 Duplex Studio Living Room	YES (+73.1%)	NO
00 Duplex Studio Living Room	YES (+73.8%)	NO
00 Duplex Studio Living Room	YES (+75.4%)	NO
07 1 Bed Studio - MVHR	NO (-67.9%)	NO
07 1 Bed Studio - MVHR	NO (-65.8%)	NO
07 Accessible Studio	NO (-91.8%)	NO
07 Accessible Studio	NO (-67.4%)	NO
07 Accessible Studio	NO (-69.9%)	NO
07 Accessible Studio	NO (-90.7%)	NO
07 Accessible Studio	NO (-91.3%)	NO
07 Accessible Studio - MVHR	NO (-69.5%)	NO
07 Ensuite	NO (-86.3%)	NO
07 Shower Pod	N/A	N/A
07 Ensuite	NO (-86.2%)	NO
07 Ensuite	NO (-87.4%)	NO
07 Ensuite	NO (-86.2%)	NO
07 Ensuite	NO (-86.5%)	NO
07 Ensuite	NO (-86.2%)	NO
07 Ensuite	NO (-86.1%)	NO
07 Ensuite	NO (-86.4%)	NO
07 Shower Pod - MVHR	N/A	N/A
07 Shower Pod - MVHR	N/A	N/A
07 Shower Pod - MVHR	N/A	N/A
07 Shower Pod - MVHR	N/A	N/A
07 Shower Pod - MVHR	N/A	N/A
07 Shower Pod - MVHR	N/A	N/A
07 Shower Pod - MVHR	N/A	N/A
07 Shower Pod - MVHR	N/A	N/A
07 Shower Pod - MVHR	N/A	N/A
07 Shower Pod - MVHR	N/A	N/A
07 Shower Pod - MVHR	N/A	N/A
07 Shower Pod - MVHR	N/A	N/A
07 Shower Pod - MVHR	N/A	N/A
07 Shower Pod - MVHR	N/A	N/A
07 Shower Pod - MVHR	N/A	N/A
07 Shower Pod - MVHR	N/A	N/A
07 Shower Pod - MVHR	N/A	N/A
07 Shower Pod - MVHR	N/A	N/A
07 Social Studio	NO (-90.1%)	NO
07 Social Studio	NO (-84.8%)	NO
07 Social Studio	NO (-90.6%)	NO
07 Social Studio	NO (-89.8%)	NO
07 Social Studio	NO (-90.6%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
07 Social Studio	NO (-91.3%)	NO
07 Social Studio	NO (-91.7%)	NO
07 Social Studio	NO (-92.3%)	NO
07 Social Studio	NO (-92%)	NO
07 Social Studio	NO (-85.1%)	NO
07 Studio 01	NO (-86.8%)	NO
07 Studio 01	NO (-91.9%)	NO
07 Studio 01	NO (-86.7%)	NO
07 Studio 01	NO (-86.8%)	NO
07 Studio 01	NO (-79.8%)	NO
07 Studio 01	NO (-87%)	NO
07 Studio 01	NO (-87.4%)	NO
07 Studio 01	NO (-80%)	NO
07 Studio 01	NO (-75.7%)	NO
07 Studio 01	NO (-75.2%)	NO
07 Studio 01	NO (-80.1%)	NO
07 Studio 01	NO (-80.1%)	NO
07 Studio 01	NO (-75.8%)	NO
07 Studio 01	NO (-61.9%)	NO
07 Studio 01	NO (-78.1%)	NO
07 Studio 01	NO (-76%)	NO
07 Studio 01	NO (-75.6%)	NO
07 Studio 01	NO (-67.9%)	NO
07 Studio 01	NO (-75.8%)	NO
07 Studio 01	NO (-90.3%)	NO
07 Studio 01	NO (-75.6%)	NO
07 Studio 01 - MVHR	NO (-72.3%)	NO
07 Studio 01 - MVHR	NO (-68.2%)	NO
07 Studio 01 - MVHR	NO (-51.6%)	NO
07 Studio 01 - MVHR	NO (-68.1%)	NO
07 Studio 01 - MVHR	NO (-77%)	NO
07 Studio 01 - MVHR	NO (-68.3%)	NO
07 Studio 01 - MVHR	NO (-68.4%)	NO
07 Studio 02	NO (-88.3%)	NO
07 Studio 02 - MVHR	NO (-38.1%)	NO
07 Studio 02 - MVHR	NO (-56.3%)	NO
07 Studio 02 - MVHR	NO (-36.9%)	NO
07 Studio 02 - MVHR	NO (-72.3%)	NO
07 Studio 02 - MVHR	NO (-56.4%)	NO
07 Studio 02 - MVHR	NO (-56.5%)	NO
07 Studio 02 - MVHR	NO (-53.9%)	NO
07 1 Bed Studio	NO (-70.5%)	NO
07 1 Bed Studio	NO (-86.9%)	NO
07 1 Bed Studio	NO (-86.1%)	NO
07 1 Bed Studio	NO (-70.8%)	NO
07 1 Bed Studio	NO (-70.4%)	NO
07 1 Bed Studio	NO (-76%)	NO
07 Studio 01	N/A	N/A
07 Accessible Studio	N/A	N/A

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
07 Studio 01	N/A	N/A
07 1 Bed Studio	N/A	N/A
08 Studio 01	NO (-49.6%)	NO
05 1 Bed Studio - MVHR	NO (-67.9%)	NO
05 1 Bed Studio - MVHR	NO (-65.8%)	NO
05 Accessible Studio	NO (-95.8%)	NO
05 Accessible Studio	NO (-94.3%)	NO
05 Accessible Studio	NO (-79.2%)	NO
05 Accessible Studio	NO (-74.3%)	NO
05 Accessible Studio	NO (-94.4%)	NO
05 Accessible Studio	NO (-92.4%)	NO
05 Accessible Studio - MVHR	NO (-69.5%)	NO
05 Ensuite	NO (-91.8%)	NO
05 Shower Pod	N/A	N/A
05 Ensuite	NO (-89.5%)	NO
05 Ensuite	NO (-90%)	NO
05 Ensuite	NO (-89.2%)	NO
05 Ensuite	NO (-89.4%)	NO
05 Ensuite	NO (-89.5%)	NO
05 Ensuite	NO (-89.1%)	NO
05 Ensuite	NO (-90.2%)	NO
05 Shower Pod - MVHR	N/A	N/A
05 Shower Pod - MVHR	N/A	N/A
05 Shower Pod - MVHR	N/A	N/A
05 Shower Pod - MVHR	N/A	N/A
05 Shower Pod - MVHR	N/A	N/A
05 Shower Pod - MVHR	N/A	N/A
05 Shower Pod - MVHR	N/A	N/A
05 Shower Pod - MVHR	N/A	N/A
05 Shower Pod - MVHR	N/A	N/A
05 Shower Pod - MVHR	N/A	N/A
05 Shower Pod - MVHR	N/A	N/A
05 Shower Pod - MVHR	N/A	N/A
05 Shower Pod - MVHR	N/A	N/A
05 Shower Pod - MVHR	N/A	N/A
05 Shower Pod - MVHR	N/A	N/A
05 Shower Pod - MVHR	N/A	N/A
05 Social Studio	NO (-92.5%)	NO
05 Social Studio	NO (-85%)	NO
05 Social Studio	NO (-93.2%)	NO
05 Social Studio	NO (-93.2%)	NO
05 Social Studio	NO (-92.8%)	NO
05 Social Studio	NO (-93%)	NO
05 Social Studio	NO (-91.8%)	NO
05 Social Studio	NO (-93.6%)	NO
05 Social Studio	NO (-92.3%)	NO
05 Social Studio	NO (-85.3%)	NO
05 Studio 01	NO (-91%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
05 Studio 01	NO (-90.6%)	NO
05 Studio 01	NO (-89.8%)	NO
05 Studio 01	NO (-91.9%)	NO
05 Studio 01	NO (-89%)	NO
05 Studio 01	NO (-89%)	NO
05 Studio 01	NO (-79.8%)	NO
05 Studio 01	NO (-89.3%)	NO
05 Studio 01	NO (-89.8%)	NO
05 Studio 01	NO (-80%)	NO
05 Studio 01	NO (-75.7%)	NO
05 Studio 01	NO (-75.2%)	NO
05 Studio 01	NO (-80.1%)	NO
05 Studio 01	NO (-90.2%)	NO
05 Studio 01	NO (-80.1%)	NO
05 Studio 01	NO (-75.8%)	NO
05 Studio 01	NO (-76.2%)	NO
05 Studio 01	NO (-61.9%)	NO
05 Studio 01	NO (-80%)	NO
05 Studio 01	NO (-78.1%)	NO
05 Studio 01	NO (-80%)	NO
05 Studio 01	NO (-80.1%)	NO
05 Studio 01	NO (-75.8%)	NO
05 Studio 01	NO (-75.6%)	NO
05 Studio 01	NO (-80.1%)	NO
05 Studio 01	NO (-67.9%)	NO
05 Studio 01	NO (-75.3%)	NO
05 Studio 01	NO (-90.1%)	NO
05 Studio 01	NO (-90.3%)	NO
05 Studio 01	NO (-75.8%)	NO
05 Studio 01	NO (-90.3%)	NO
05 Studio 01	NO (-90.1%)	NO
05 Studio 01	NO (-75.6%)	NO
05 Studio 01 - MVHR	NO (-72.3%)	NO
05 Studio 01 - MVHR	NO (-68.2%)	NO
05 Studio 01 - MVHR	NO (-51.6%)	NO
05 Studio 01 - MVHR	NO (-68.1%)	NO
05 Studio 01 - MVHR	NO (-77%)	NO
05 Studio 01 - MVHR	NO (-68.3%)	NO
05 Studio 01 - MVHR	NO (-68.4%)	NO
05 Studio 02	NO (-91.4%)	NO
05 Studio 02 - MVHR	NO (-38.1%)	NO
05 Studio 02 - MVHR	NO (-56.3%)	NO
05 Studio 02 - MVHR	NO (-36.8%)	NO
05 Studio 02 - MVHR	NO (-72.3%)	NO
05 Studio 02 - MVHR	NO (-56.4%)	NO
05 Studio 02 - MVHR	NO (-56.5%)	NO
05 Studio 02 - MVHR	NO (-53.9%)	NO
05 1 Bed Studio	NO (-75.9%)	NO
05 1 Bed Studio	NO (-75.9%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
05 1 Bed Studio	NO (-70.5%)	NO
05 1 Bed Studio	NO (-87.7%)	NO
05 1 Bed Studio	NO (-88.1%)	NO
05 1 Bed Studio	NO (-70.8%)	NO
05 1 Bed Studio	NO (-70.4%)	NO
05 1 Bed Studio	NO (-76%)	NO
05 1 Bed Studio	NO (-93.8%)	NO
04 1 Bed Studio - MVHR	NO (-67.9%)	NO
04 1 Bed Studio - MVHR	NO (-65.8%)	NO
04 Accessible Studio	NO (-96.1%)	NO
04 Accessible Studio	NO (-94.8%)	NO
04 Accessible Studio	NO (-80.4%)	NO
04 Accessible Studio	NO (-75.9%)	NO
04 Accessible Studio	NO (-95.2%)	NO
04 Accessible Studio	NO (-93%)	NO
04 Accessible Studio - MVHR	NO (-69.5%)	NO
04 Ensuite	NO (-93.6%)	NO
04 Shower Pod	N/A	N/A
04 Ensuite	NO (-91.1%)	NO
04 Ensuite	NO (-91.4%)	NO
04 Ensuite	NO (-91%)	NO
04 Ensuite	NO (-90.9%)	NO
04 Ensuite	NO (-91.4%)	NO
04 Ensuite	NO (-91%)	NO
04 Ensuite	NO (-92.4%)	NO
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Social Studio	NO (-93.6%)	NO
06 Social Studio	NO (-85.5%)	NO
06 Social Studio	NO (-94.2%)	NO
06 Social Studio	NO (-94.1%)	NO
06 Social Studio	NO (-93.7%)	NO
06 Social Studio	NO (-93.8%)	NO
06 Social Studio	NO (-92.2%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
06 Social Studio	NO (-94.2%)	NO
06 Social Studio	NO (-92.6%)	NO
06 Social Studio	NO (-85.8%)	NO
06 Studio 01	NO (-91.8%)	NO
06 Studio 01	NO (-91.7%)	NO
06 Studio 01	NO (-91.7%)	NO
06 Studio 01	NO (-91.9%)	NO
06 Studio 01	NO (-90.4%)	NO
06 Studio 01	NO (-90.3%)	NO
06 Studio 01	NO (-79.8%)	NO
06 Studio 01	NO (-90.4%)	NO
06 Studio 01	NO (-90.7%)	NO
06 Studio 01	NO (-80%)	NO
06 Studio 01	NO (-75.7%)	NO
06 Studio 01	NO (-75.2%)	NO
06 Studio 01	NO (-80.1%)	NO
06 Studio 01	NO (-91.7%)	NO
06 Studio 01	NO (-80.1%)	NO
06 Studio 01	NO (-75.8%)	NO
06 Studio 01	NO (-76.2%)	NO
06 Studio 01	NO (-61.9%)	NO
06 Studio 01	NO (-80%)	NO
06 Studio 01	NO (-78.1%)	NO
06 Studio 01	NO (-80%)	NO
06 Studio 01	NO (-80.1%)	NO
06 Studio 01	NO (-76.3%)	NO
06 Studio 01	NO (-75.6%)	NO
06 Studio 01	NO (-80.1%)	NO
06 Studio 01	NO (-67.9%)	NO
06 Studio 01	NO (-75.3%)	NO
06 Studio 01	NO (-91.6%)	NO
06 Studio 01	NO (-92.3%)	NO
06 Studio 01	NO (-75.8%)	NO
06 Studio 01	NO (-91.9%)	NO
06 Studio 01	NO (-90.2%)	NO
06 Studio 01	NO (-75.6%)	NO
06 Studio 01 - MVHR	NO (-72.3%)	NO
06 Studio 01 - MVHR	NO (-68.2%)	NO
06 Studio 01 - MVHR	NO (-51.6%)	NO
06 Studio 01 - MVHR	NO (-68.1%)	NO
06 Studio 01 - MVHR	NO (-77%)	NO
06 Studio 01 - MVHR	NO (-68.3%)	NO
06 Studio 01 - MVHR	NO (-68.4%)	NO
06 Studio 02	NO (-92.6%)	NO
06 Studio 02 - MVHR	NO (-38.1%)	NO
06 Studio 02 - MVHR	NO (-56.3%)	NO
06 Studio 02 - MVHR	NO (-36.8%)	NO
06 Studio 02 - MVHR	NO (-72.3%)	NO
06 Studio 02 - MVHR	NO (-56.4%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
06 Studio 02 - MVHR	NO (-56.5%)	NO
06 Studio 02 - MVHR	NO (-53.9%)	NO
04 1 Bed Studio	NO (-75.8%)	NO
04 1 Bed Studio	NO (-75.9%)	NO
04 1 Bed Studio	NO (-70.5%)	NO
04 1 Bed Studio	NO (-88.7%)	NO
04 1 Bed Studio	NO (-89.5%)	NO
04 1 Bed Studio	NO (-70.8%)	NO
04 1 Bed Studio	NO (-70.4%)	NO
04 1 Bed Studio	NO (-76%)	NO
04 1 Bed Studio	NO (-95.1%)	NO
03 1 Bed Studio - MVHR	NO (-67.9%)	NO
03 1 Bed Studio - MVHR	NO (-65.8%)	NO
03 Accessible Studio	NO (-96.5%)	NO
03 Accessible Studio	NO (-95.5%)	NO
03 Accessible Studio	NO (-81.6%)	NO
03 Accessible Studio	NO (-77.6%)	NO
03 Accessible Studio	NO (-95.4%)	NO
03 Accessible Studio	NO (-93.4%)	NO
03 Accessible Studio - MVHR	NO (-69.5%)	NO
03 Ensuite	NO (-94.3%)	NO
03 Shower Pod	N/A	N/A
03 Ensuite	NO (-92.3%)	NO
03 Ensuite	NO (-92.7%)	NO
03 Ensuite	NO (-92.5%)	NO
03 Ensuite	NO (-92.4%)	NO
03 Ensuite	NO (-93%)	NO
03 Ensuite	NO (-92.5%)	NO
03 Ensuite	NO (-94.1%)	NO
03 Shower Pod - MVHR	N/A	N/A
03 Shower Pod - MVHR	N/A	N/A
03 Shower Pod - MVHR	N/A	N/A
03 Shower Pod - MVHR	N/A	N/A
03 Shower Pod - MVHR	N/A	N/A
03 Shower Pod - MVHR	N/A	N/A
03 Shower Pod - MVHR	N/A	N/A
03 Shower Pod - MVHR	N/A	N/A
03 Shower Pod - MVHR	N/A	N/A
03 Shower Pod - MVHR	N/A	N/A
03 Shower Pod - MVHR	N/A	N/A
03 Shower Pod - MVHR	N/A	N/A
03 Shower Pod - MVHR	N/A	N/A
03 Shower Pod - MVHR	N/A	N/A
03 Shower Pod - MVHR	N/A	N/A
03 Shower Pod - MVHR	N/A	N/A
03 Social Studio	NO (-94.3%)	NO
03 Social Studio	NO (-86.8%)	NO
03 Social Studio	NO (-94.8%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
03 Social Studio	NO (-94.7%)	NO
03 Social Studio	NO (-94.3%)	NO
03 Social Studio	NO (-94.5%)	NO
03 Social Studio	NO (-92.8%)	NO
03 Social Studio	NO (-94.7%)	NO
03 Social Studio	NO (-93.4%)	NO
03 Social Studio	NO (-87%)	NO
03 Studio 01	NO (-93.5%)	NO
03 Studio 01	NO (-93.2%)	NO
03 Studio 01	NO (-92.5%)	NO
03 Studio 01	NO (-91.9%)	NO
03 Studio 01	NO (-91.9%)	NO
03 Studio 01	NO (-91.5%)	NO
03 Studio 01	NO (-79.8%)	NO
03 Studio 01	NO (-91.7%)	NO
03 Studio 01	NO (-91.6%)	NO
03 Studio 01	NO (-80%)	NO
03 Studio 01	NO (-75.7%)	NO
03 Studio 01	NO (-75.2%)	NO
03 Studio 01	NO (-80.1%)	NO
03 Studio 01	NO (-93.2%)	NO
03 Studio 01	NO (-80.1%)	NO
03 Studio 01	NO (-75.8%)	NO
03 Studio 01	NO (-76.2%)	NO
03 Studio 01	NO (-61.9%)	NO
03 Studio 01	NO (-80%)	NO
03 Studio 01	NO (-78.1%)	NO
03 Studio 01	NO (-80%)	NO
03 Studio 01	NO (-80.1%)	NO
03 Studio 01	NO (-76.6%)	NO
03 Studio 01	NO (-75.6%)	NO
03 Studio 01	NO (-80.1%)	NO
03 Studio 01	NO (-67.9%)	NO
03 Studio 01	NO (-75.3%)	NO
03 Studio 01	NO (-93.2%)	NO
03 Studio 01	NO (-93.6%)	NO
03 Studio 01	NO (-75.8%)	NO
03 Studio 01	NO (-93.4%)	NO
03 Studio 01	NO (-90.6%)	NO
03 Studio 01	NO (-75.6%)	NO
03 Studio 01 - MVHR	NO (-72.3%)	NO
03 Studio 01 - MVHR	NO (-68.2%)	NO
03 Studio 01 - MVHR	NO (-51.6%)	NO
03 Studio 01 - MVHR	NO (-68.1%)	NO
03 Studio 01 - MVHR	NO (-77%)	NO
03 Studio 01 - MVHR	NO (-68.3%)	NO
06 Studio 01 - MVHR	NO (-68.4%)	NO
06 Studio 02	NO (-93.4%)	NO
06 Studio 02 - MVHR	NO (-38.1%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
02 Shower Pod - MVHR	N/A	N/A
02 Social Studio	NO (-94.5%)	NO
02 Social Studio	NO (-87.9%)	NO
02 Social Studio	NO (-95.1%)	NO
02 Social Studio	NO (-94.9%)	NO
02 Social Studio	NO (-94.6%)	NO
02 Social Studio	NO (-94.6%)	NO
02 Social Studio	NO (-93.4%)	NO
02 Social Studio	NO (-94.9%)	NO
02 Social Studio	NO (-93.9%)	NO
02 Social Studio	NO (-88.5%)	NO
02 Studio 01	NO (-94%)	NO
02 Studio 01	NO (-93.9%)	NO
02 Studio 01	NO (-92.9%)	NO
02 Studio 01	NO (-91.9%)	NO
02 Studio 01	NO (-92.6%)	NO
02 Studio 01	NO (-92.2%)	NO
02 Studio 01	NO (-79.8%)	NO
02 Studio 01	NO (-92.3%)	NO
02 Studio 01	NO (-92.6%)	NO
02 Studio 01	NO (-80%)	NO
02 Studio 01	NO (-75.7%)	NO
02 Studio 01	NO (-75.2%)	NO
02 Studio 01	NO (-80.1%)	NO
02 Studio 01	NO (-94.1%)	NO
02 Studio 01	NO (-80.1%)	NO
02 Studio 01	NO (-75.8%)	NO
02 Studio 01	NO (-76.2%)	NO
02 Studio 01	NO (-61.9%)	NO
02 Studio 01	NO (-80%)	NO
02 Studio 01	NO (-78.1%)	NO
02 Studio 01	NO (-80%)	NO
02 Studio 01	NO (-80.1%)	NO
02 Studio 01	NO (-76.7%)	NO
02 Studio 01	NO (-75.6%)	NO
02 Studio 01	NO (-80.1%)	NO
02 Studio 01	NO (-67.9%)	NO
02 Studio 01	NO (-75.3%)	NO
02 Studio 01	NO (-94.1%)	NO
02 Studio 01	NO (-94.8%)	NO
02 Studio 01	NO (-75.8%)	NO
02 Studio 01	NO (-94.5%)	NO
02 Studio 01	NO (-90.6%)	NO
02 Studio 01	NO (-75.6%)	NO
02 Studio 01 - MVHR	NO (-72.3%)	NO
02 Studio 01 - MVHR	NO (-68.2%)	NO
02 Studio 01 - MVHR	NO (-51.6%)	NO
02 Studio 01 - MVHR	NO (-68.1%)	NO
02 Studio 01 - MVHR	NO (-77%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
02 Studio 01 - MVHR	NO (-68.3%)	NO
02 Studio 01 - MVHR	NO (-68.4%)	NO
02 Studio 02	NO (-93.8%)	NO
02 Studio 02 - MVHR	NO (-38.1%)	NO
02 Studio 02 - MVHR	NO (-56.3%)	NO
02 Studio 02 - MVHR	NO (-36.8%)	NO
02 Studio 02 - MVHR	NO (-72.3%)	NO
02 Studio 02 - MVHR	NO (-56.4%)	NO
02 Studio 02 - MVHR	NO (-56.5%)	NO
02 Studio 02 - MVHR	NO (-53.9%)	NO
02 1 Bed Studio	NO (-75.8%)	NO
02 1 Bed Studio	NO (-75.9%)	NO
02 1 Bed Studio	NO (-70.7%)	NO
02 1 Bed Studio	NO (-91.9%)	NO
02 1 Bed Studio	NO (-92.6%)	NO
02 1 Bed Studio	NO (-70.8%)	NO
02 1 Bed Studio	NO (-70.4%)	NO
02 1 Bed Studio	NO (-76%)	NO
02 1 Bed Studio	NO (-96.5%)	NO
01 1 Bed Studio - MVHR	NO (-67.9%)	NO
01 1 Bed Studio - MVHR	NO (-65.8%)	NO
01 Accessible Studio	NO (-96.9%)	NO
01 Accessible Studio	NO (-96.3%)	NO
01 Accessible Studio	NO (-82.9%)	NO
01 Accessible Studio	NO (-81.5%)	NO
01 Accessible Studio	NO (-95.9%)	NO
01 Accessible Studio	NO (-94%)	NO
01 Accessible Studio - MVHR	NO (-69.5%)	NO
01 Ensuite	NO (-95%)	NO
01 Shower Pod	N/A	N/A
01 Ensuite	NO (-94.2%)	NO
01 Ensuite	NO (-94.2%)	NO
01 Ensuite	NO (-94.3%)	NO
01 Ensuite	NO (-94.2%)	NO
01 Ensuite	NO (-94.9%)	NO
01 Ensuite	NO (-94.8%)	NO
01 Ensuite	NO (-94.9%)	NO
01 Shower Pod - MVHR	N/A	N/A
01 Shower Pod - MVHR	N/A	N/A
01 Shower Pod - MVHR	N/A	N/A
01 Shower Pod - MVHR	N/A	N/A
01 Shower Pod - MVHR	N/A	N/A
01 Shower Pod - MVHR	N/A	N/A
01 Shower Pod - MVHR	N/A	N/A
01 Shower Pod - MVHR	N/A	N/A
01 Shower Pod - MVHR	N/A	N/A
01 Shower Pod - MVHR	N/A	N/A
01 Shower Pod - MVHR	N/A	N/A
01 Shower Pod - MVHR	N/A	N/A
01 Shower Pod - MVHR	N/A	N/A

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
01 Shower Pod - MVHR	N/A	N/A
01 Shower Pod - MVHR	N/A	N/A
01 Shower Pod - MVHR	N/A	N/A
01 Shower Pod - MVHR	N/A	N/A
01 Shower Pod - MVHR	N/A	N/A
01 Social Studio	NO (-95%)	NO
01 Social Studio	NO (-89.3%)	NO
01 Social Studio	NO (-95.5%)	NO
01 Social Studio	NO (-95.3%)	NO
01 Social Studio	NO (-95.1%)	NO
01 Social Studio	NO (-95.2%)	NO
01 Social Studio	NO (-94.2%)	NO
01 Social Studio	NO (-95.3%)	NO
01 Social Studio	NO (-94.7%)	NO
01 Social Studio	NO (-89.7%)	NO
01 Studio 01	NO (-94.8%)	NO
01 Studio 01	NO (-94.8%)	NO
01 Studio 01	NO (-93.6%)	NO
01 Studio 01	NO (-91.9%)	NO
01 Studio 01	NO (-93.2%)	NO
01 Studio 01	NO (-93.3%)	NO
01 Studio 01	NO (-79.8%)	NO
01 Studio 01	NO (-93%)	NO
01 Studio 01	NO (-93.4%)	NO
01 Studio 01	NO (-80%)	NO
01 Studio 01	NO (-75.7%)	NO
01 Studio 01	NO (-75.2%)	NO
01 Studio 01	NO (-80.1%)	NO
01 Studio 01	NO (-95%)	NO
01 Studio 01	NO (-80.1%)	NO
01 Studio 01	NO (-75.8%)	NO
01 Studio 01	NO (-76.2%)	NO
01 Studio 01	NO (-61.9%)	NO
01 Studio 01	NO (-80%)	NO
01 Studio 01	NO (-78.1%)	NO
01 Studio 01	NO (-80%)	NO
01 Studio 01	NO (-80.1%)	NO
01 Studio 01	NO (-76.2%)	NO
01 Studio 01	NO (-75.6%)	NO
01 Studio 01	NO (-80.1%)	NO
01 Studio 01	NO (-67.9%)	NO
01 Studio 01	NO (-75.3%)	NO
01 Studio 01	NO (-95%)	NO
01 Studio 01	NO (-95.5%)	NO
01 Studio 01	NO (-75.8%)	NO
01 Studio 01	NO (-95.1%)	NO
01 Studio 01	NO (-90.8%)	NO
01 Studio 01	NO (-75.6%)	NO
01 Studio 01 - MVHR	NO (-72.3%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
01 Studio 01 - MVHR	NO (-68.2%)	NO
01 Studio 01 - MVHR	NO (-51.6%)	NO
01 Studio 01 - MVHR	NO (-68.1%)	NO
01 Studio 01 - MVHR	NO (-76.9%)	NO
01 Studio 01 - MVHR	NO (-68.3%)	NO
01 Studio 01 - MVHR	NO (-68.4%)	NO
01 Studio 02	NO (-94.1%)	NO
01 Studio 02 - MVHR	NO (-38.1%)	NO
01 Studio 02 - MVHR	NO (-56.3%)	NO
01 Studio 02 - MVHR	NO (-36.8%)	NO
01 Studio 02 - MVHR	NO (-72.3%)	NO
01 Studio 02 - MVHR	NO (-56.4%)	NO
01 Studio 02 - MVHR	NO (-56.5%)	NO
01 Studio 02 - MVHR	NO (-53.9%)	NO
01 1 Bed Studio	NO (-75.8%)	NO
01 1 Bed Studio	NO (-75.9%)	NO
01 1 Bed Studio	NO (-70.9%)	NO
01 1 Bed Studio	NO (-93.3%)	NO
01 1 Bed Studio	NO (-93.2%)	NO
01 1 Bed Studio	NO (-70.8%)	NO
01 1 Bed Studio	NO (-70.4%)	NO
01 1 Bed Studio	NO (-76%)	NO
01 1 Bed Studio	NO (-97%)	NO

Regulation 25A: Consideration of high efficiency alternative energy systems

Were alternative energy systems considered and analysed as part of the design process?	NO
Is evidence of such assessment available as a separate submission?	NO
Are any such measures included in the proposed design?	NO

Technical Data Sheet (Actual vs. Notional Building)

Building Global Parameters

	Actual	Notional
Floor area [m ²]	18872.7	18872.7
External area [m ²]	13833	14061.3
Weather	LON	LON
Infiltration [m ³ /hm ² @ 50Pa]	2	3
Average conductance [W/K]	4193.64	6212.73
Average U-value [W/m ² K]	0.3	0.44
Alpha value* [%]	23.91	10

* Percentage of the building's average heat transfer coefficient which is due to thermal bridging

Building Use

% Area Building Type

Retail/Financial and Professional Services
 Restaurants and Cafes/Drinking Establishments/Takeaways
 Offices and Workshop Businesses
 General Industrial and Special Industrial Groups
 Storage or Distribution
 Hotels
 Residential Institutions: Hospitals and Care Homes
 Residential Institutions: Residential Schools

100 Residential Institutions: Universities and Colleges

Secure Residential Institutions
 Residential Spaces
 Non-residential Institutions: Community/Day Centre
 Non-residential Institutions: Libraries, Museums, and Galleries
 Non-residential Institutions: Education
 Non-residential Institutions: Primary Health Care Building
 Non-residential Institutions: Crown and County Courts
 General Assembly and Leisure, Night Clubs, and Theatres
 Others: Passenger Terminals
 Others: Emergency Services
 Others: Miscellaneous 24hr Activities
 Others: Car Parks 24 hrs
 Others: Stand Alone Utility Block

Energy Consumption by End Use [kWh/m²]

	Actual	Notional
Heating	10.39	15.72
Cooling	0.12	0.13
Auxiliary	2.05	3.44
Lighting	5.48	6.6
Hot water	7.82	5.7
Equipment*	19.86	19.86
TOTAL **	25.86	31.58

* Energy used by equipment does not count towards the total for consumption or calculating emissions.

** Total is net of any electrical energy displaced by CHP generators, if applicable.

Energy Production by Technology [kWh/m²]

	Actual	Notional
Photovoltaic systems	0	0
Wind turbines	0	0
CHP generators	0	0
Solar thermal systems	0	0
<i>Displaced electricity</i>	<i>0</i>	<i>0</i>

Energy & CO₂ Emissions Summary

	Actual	Notional
Heating + cooling demand [MJ/m ²]	100.65	158.54
Primary energy [kWh _{PE} /m ²]	38.73	47.42
Total emissions [kg/m ²]	3.65	4.49

HVAC Systems Performance										
System Type	Heat dem MJ/m2	Cool dem MJ/m2	Heat con kWh/m2	Cool con kWh/m2	Aux con kWh/m2	Heat SSEFF	Cool SSEER	Heat gen SEFF	Cool gen SEER	
[ST] Split or multi-split system, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	78.2	9.1	8.2	0.6	1.4	2.64	4.48	2.64	6
	Notional	142.2	6.4	14.2	0.6	1.8	2.78	2.84	----	----
[ST] Central heating using water: floor heating, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	135.4	0	14.2	0	2.6	2.64	0	2.64	0
	Notional	213.3	0	21.3	0	4.8	2.78	0	----	----
[ST] Central heating using water: floor heating, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	147.6	0	15.5	0	3.1	2.64	0	2.64	0
	Notional	130.6	0	13.1	0	3.8	2.78	0	----	----
[ST] No Heating or Cooling										
	Actual	0	0	0	0	0	0	0	0	0
	Notional	0	0	0	0	0	0	0	----	----

Key to terms

Heat dem [MJ/m2]	= Heating energy demand
Cool dem [MJ/m2]	= Cooling energy demand
Heat con [kWh/m2]	= Heating energy consumption
Cool con [kWh/m2]	= Cooling energy consumption
Aux con [kWh/m2]	= Auxiliary energy consumption
Heat SSEFF	= Heating system seasonal efficiency (for notional building, value depends on activity glazing class)
Cool SSEER	= Cooling system seasonal energy efficiency ratio
Heat gen SSEFF	= Heating generator seasonal efficiency
Cool gen SSEER	= Cooling generator seasonal energy efficiency ratio
ST	= System type
HS	= Heat source
HFT	= Heating fuel type
CFT	= Cooling fuel type



Appendix B – Be Green BRUKL Non-Residential – PBSA Only

Project name

2347 Fusion LL - Be Green

As designed

Date: Wed Jan 31 14:27:27 2024

Administrative information

Building Details

Address: Lordship Lane, London,

Certifier details

Name: Name

Telephone number: Phone

Address: Street Address, City, Postcode

Certification tool

Calculation engine: Apache

Calculation engine version: 7.0.24

Interface to calculation engine: IES Virtual Environment

Interface to calculation engine version: 7.0.24

BRUKL compliance module version: v6.1.e.1

Foundation area [m²]: 1626.92The CO₂ emission and primary energy rates of the building must not exceed the targets

Target CO ₂ emission rate (TER), kgCO ₂ /m ² annum	4.32
Building CO ₂ emission rate (BER), kgCO ₂ /m ² annum	2.51
Target primary energy rate (TPER), kWh _{PE} /m ² annum	45.63
Building primary energy rate (BPER), kWh _{PE} /m ² annum	26.02
Do the building's emission and primary energy rates exceed the targets?	BER ≤ TER BPER ≤ TPER

The performance of the building fabric and fixed building services should achieve reasonable overall standards of energy efficiency

Fabric element	U _{a-Limit}	U _{a-Calc}	U _{i-Calc}	First surface with maximum value
Walls*	0.26	0.14	0.15	0000000F:Surf[1]
Floors	0.18	0.13	0.35	06000436:Surf[10]
Pitched roofs	0.16	-	-	No pitched roofs in building
Flat roofs	0.18	0.1	0.1	0000000E:Surf[4]
Windows** and roof windows	1.6	1.21	1.6	00000016:Surf[4]
Rooflights***	2.2	-	-	No roof lights in building
Personnel doors^	1.6	1.04	1.6	00000016:Surf[4]
Vehicle access & similar large doors	1.3	-	-	No vehicle access doors in building
High usage entrance doors	3	1.2	1.2	00000004:Surf[5]

U_{a-Limit} = Limiting area-weighted average U-values [W/(m²K)]U_{i-Calc} = Calculated maximum individual element U-values [W/(m²K)]U_{a-Calc} = Calculated area-weighted average U-values [W/(m²K)]

* Automatic U-value check by the tool does not apply to curtain walls whose limiting standard is similar to that for windows.

** Display windows and similar glazing are excluded from the U-value check.

*** Values for rooflights refer to the horizontal position.

^ For fire doors, limiting U-value is 1.8 W/m²K

NB: Neither roof ventilators (inc. smoke vents) nor swimming pool basins are modelled or checked against the limiting standards by the tool.

Air permeability	Limiting standard	This building
m ³ /(h.m ²) at 50 Pa	8	2

Building services

For details on the standard values listed below, system-specific guidance, and additional regulatory requirements, refer to the Approved Documents.

Whole building lighting automatic monitoring & targeting with alarms for out-of-range values	NO
Whole building electric power factor achieved by power factor correction	>0.95

1- ASHP + MVHR

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	3.3	-	0.06	-	-
Standard value	2.5*	N/A	N/A	N/A	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					

2- VRF + MVHR (social spaces)

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	4	6	0	-	0.8
Standard value	2.5*	5	N/A	N/A	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					

3- VRF + MVHR (PBSA)

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	4	6	0	-	0.8
Standard value	2.5*	5	N/A	N/A	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					

4- ASHP + MEV

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	3.3	-	0.2	-	-
Standard value	2.5*	N/A	N/A	N/A	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					

1- ASHP DHW

	Water heating efficiency	Storage loss factor [kWh/litre per day]
This building	3.3	0.002
Standard value	1	N/A

Zone-level mechanical ventilation, exhaust, and terminal units

ID	System type in the Approved Documents
A	Local supply or extract ventilation units
B	Zonal supply system where the fan is remote from the zone
C	Zonal extract system where the fan is remote from the zone
D	Zonal balanced supply and extract ventilation system
E	Local balanced supply and extract ventilation units
F	Other local ventilation units
G	Fan assisted terminal variable air volume units
H	Fan coil units
I	Kitchen extract with the fan remote from the zone and a grease filter
NB: Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.	

[illegible]

Zone name	SFP [W/(l/s)]										HR efficiency	
ID of system type	A	B	C	D	E	F	G	H	I			
Standard value	0.3	1.1	0.5	2.3	2	0.5	0.5	0.4	1	Zone	Standard	
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
06 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
06 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
06 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
06 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
06 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
06 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
06 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
06 Studio 02	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
06 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
06 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
06 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
06 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
06 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
06 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
06 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
08 Accessible Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 E.S. Common Area	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Ensuite	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Ensuite	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Ensuite	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Ensuite	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Ensuite	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Ensuite	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Ensuite	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Ensuite	-	-	0.2	-	-	-	-	-	-	-	N/A	

Zone name	SFP [W/(l/s)]										HR efficiency	
ID of system type	A	B	C	D	E	F	G	H	I			
Standard value	0.3	1.1	0.5	2.3	2	0.5	0.5	0.4	1	Zone	Standard	
08 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Studio 02	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Studio 02	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Studio 02	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Studio 02	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Studio 02	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Studio 02	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
06 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Studio 02	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Studio 02	-	-	0.2	-	-	-	-	-	-	-	N/A	
08 Shower Pod	-	-	0.2	-	-	-	-	-	-	-	N/A	
07 1 Bed Studio - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
07 1 Bed Studio - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
07 Accessible Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
07 Accessible Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
07 Accessible Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
07 Accessible Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
07 Accessible Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
07 Accessible Studio - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
07 Ensuite	-	-	0.2	-	-	-	-	-	-	-	N/A	

[illegible]

[illegible]

[illegible]

Zone name	SFP [W/(l/s)]									HR efficiency	
ID of system type	A	B	C	D	E	F	G	H	I		
Standard value	0.3	1.1	0.5	2.3	2	0.5	0.5	0.4	1	Zone	Standard
08 Shower Pod	-	-	0.2	-	-	-	-	-	-	-	N/A
08 Shower Pod	-	-	0.2	-	-	-	-	-	-	-	N/A
08 Shower Pod	-	-	0.2	-	-	-	-	-	-	-	N/A
08 Shower Pod	-	-	0.2	-	-	-	-	-	-	-	N/A
08 Shower Pod	-	-	0.2	-	-	-	-	-	-	-	N/A
05 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
05 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
05 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
05 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
05 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
05 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
05 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
05 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
05 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
05 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
05 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
05 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
05 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
05 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
05 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
05 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
05 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
05 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
05 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
05 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
05 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
05 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
05 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
05 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
05 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
05 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
05 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
05 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
05 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
05 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
05 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
05 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
05 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
05 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
05 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
05 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
05 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
05 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A

[illegible]

Zone name	SFP [W/(l/s)]									HR efficiency	
ID of system type	A	B	C	D	E	F	G	H	I		
Standard value	0.3	1.1	0.5	2.3	2	0.5	0.5	0.4	1	Zone	Standard
08 Shower Pod	-	-	0.2	-	-	-	-	-	-	-	N/A
08 Shower Pod	-	-	0.2	-	-	-	-	-	-	-	N/A
08 Shower Pod	-	-	0.2	-	-	-	-	-	-	-	N/A
06 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
06 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
06 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
06 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
06 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
06 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
06 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
06 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
06 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
06 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
06 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
06 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
06 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
06 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
06 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
06 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
06 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
06 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
06 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
06 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
06 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
06 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
06 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
06 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
06 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
06 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
06 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
06 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
06 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
06 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A

[illegible]

[illegible]

Zone name	SFP [W/(l/s)]									HR efficiency	
ID of system type	A	B	C	D	E	F	G	H	I		
Standard value	0.3	1.1	0.5	2.3	2	0.5	0.5	0.4	1	Zone	Standard
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
03 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A
03 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
03 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
03 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
03 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
03 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
03 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
06 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
06 Studio 02	-	-	0.2	-	-	-	-	-	-	-	N/A
06 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
06 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
06 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
06 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
06 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
06 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
06 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A
03 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
03 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
03 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
03 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
03 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
03 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
03 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
03 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
03 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A
02 1 Bed Studio - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A

Zone name	SFP [W/(l/s)]										HR efficiency	
ID of system type	A	B	C	D	E	F	G	H	I			
Standard value	0.3	1.1	0.5	2.3	2	0.5	0.5	0.4	1	Zone	Standard	
02 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 Shower Pod - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Social Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	

Zone name	SFP [W/(l/s)]										HR efficiency	
ID of system type	A	B	C	D	E	F	G	H	I			
Standard value	0.3	1.1	0.5	2.3	2	0.5	0.5	0.4	1	Zone	Standard	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 Studio 02	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
02 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
02 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 1 Bed Studio - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
01 1 Bed Studio - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
01 Accessible Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	

Zone name	SFP [W/(l/s)]										HR efficiency	
ID of system type	A	B	C	D	E	F	G	H	I			
Standard value	0.3	1.1	0.5	2.3	2	0.5	0.5	0.4	1	Zone	Standard	
01 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 Studio 01	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
01 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
01 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
01 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
01 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
01 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
01 Studio 01 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
01 Studio 02	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
01 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
01 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
01 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
01 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
01 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
01 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
01 Studio 02 - MVHR	-	-	-	0.7	-	-	-	-	-	-	N/A	
01 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	
01 1 Bed Studio	-	-	0.2	-	-	-	-	-	-	-	N/A	

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m²]
	Standard value	95	80	0.3
00 Core		125	-	-

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m²]
	Standard value	95	80	0.3
00 Core		125	-	-
00 Corridor		125	-	-
00 Corridor		125	-	-
00 Corridor		125	-	-
00 Corridor		125	-	-
00 Corridor		125	-	-
00 Duplex Corridor		125	-	-
00 Duplex Studio Shower Pod		120	-	-
00 Duplex Studio Shower Pod		120	-	-
00 Duplex Studio Shower Pod		120	-	-
00 Duplex Studio Shower Pod		120	-	-
00 Duplex Studio Shower Pod		120	-	-
00 Duplex Studio Shower Pod		120	-	-
00 Duplex Studio Shower Pod		120	-	-
00 Duplex Studio Shower Pod		120	-	-
00 Duplex Studio Shower Pod		120	-	-
00 Duplex Studio Shower Pod		120	-	-
00 Duplex Studio Shower Pod		120	-	-
00 PBSA Plant		125	-	-
00 PBSA Social Space		125	-	-
00 Plant		125	-	-
00 Plant		125	-	-
00 Stair Core		125	-	-
00 Stair Core		125	-	-
00 Stair Core		125	-	-
06 1 Bed Studio - MVHR		120	-	-
06 1 Bed Studio - MVHR		120	-	-
06 Accessible Studio		120	-	-
06 Accessible Studio		120	-	-
06 Accessible Studio		120	-	-
06 Accessible Studio		120	-	-
06 Accessible Studio		120	-	-
06 Accessible Studio		120	-	-
06 Accessible Studio - MVHR		120	-	-
06 Ensuite		120	-	-
06 Shower Pod		120	-	-
06 Cl.Cupboard		125	-	-
06 Cl.Cupboard		125	-	-
06 Corridor		125	-	-
06 Corridor		125	-	-
06 Corridor		125	-	-
06 Corridor		125	-	-
06 E.S. Common Area		125	-	-

[illegible]

[illegible]

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m²]
	Standard value	95	80	0.3
06 Studio 01		120	-	-
06 Studio 01		120	-	-
06 Studio 01		120	-	-
06 Studio 01		120	-	-
06 Studio 01		120	-	-
06 Studio 01		120	-	-
06 Studio 01		120	-	-
06 Studio 01		120	-	-
06 Studio 01		120	-	-
06 Studio 01 - MVHR		120	-	-
06 Studio 01 - MVHR		120	-	-
06 Studio 01 - MVHR		120	-	-
06 Studio 01 - MVHR		120	-	-
06 Studio 01 - MVHR		120	-	-
06 Studio 01 - MVHR		120	-	-
06 Studio 01 - MVHR		120	-	-
06 Studio 01 - MVHR		120	-	-
06 Studio 02		120	-	-
06 Studio 02 - MVHR		120	-	-
06 Studio 02 - MVHR		120	-	-
06 Studio 02 - MVHR		120	-	-
06 Studio 02 - MVHR		120	-	-
06 Studio 02 - MVHR		120	-	-
06 Studio 02 - MVHR		120	-	-
06 Studio 02 - MVHR		120	-	-
08 Accessible Studio		120	-	-
08 1 Bed Studio		120	-	-
08 1 Bed Studio		120	-	-
08 Cl.Cupboard		125	-	-
08 Corridor		125	-	-
08 Cupboard		59	-	-
08 E.S. Common Area		125	-	-
08 Ensuite		120	-	-
08 Ensuite		120	-	-
08 Ensuite		120	-	-
08 Ensuite		120	-	-
08 Ensuite		120	-	-
08 Ensuite		120	-	-
08 Ensuite		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m ²]
	Standard value	95	80	0.3
08 Studio 01		120	-	-
08 Studio 01		120	-	-
08 Studio 01		120	-	-
08 Studio 01		120	-	-
08 Studio 01		120	-	-
08 Studio 01		120	-	-
08 Studio 01		120	-	-
08 Studio 01		120	-	-
08 Studio 01		120	-	-
08 Studio 01		120	-	-
08 Studio 01		120	-	-
08 Studio 01		120	-	-
08 Studio 02		120	-	-
08 Studio 02		120	-	-
08 Studio 02		120	-	-
08 Studio 02		120	-	-
08 Studio 02		120	-	-
06 1 Bed Studio		120	-	-
06 1 Bed Studio		120	-	-
06 1 Bed Studio		120	-	-
06 1 Bed Studio		120	-	-
06 1 Bed Studio		120	-	-
06 1 Bed Studio		120	-	-
06 1 Bed Studio		120	-	-
06 1 Bed Studio		120	-	-
06 1 Bed Studio		120	-	-
08 Studio 01		120	-	-
08 Studio 02		120	-	-
08 Studio 02		120	-	-
08 Shower Pod		120	-	-
0M Duplex Studio Bedroom		120	-	-
0M Duplex Studio Bedroom		120	-	-
0M Duplex Studio Bedroom		120	-	-
0M Duplex Studio Bedroom		120	-	-
0M Duplex Studio Bedroom		120	-	-
0M Duplex Studio Bedroom		120	-	-
0M Duplex Studio Bedroom		120	-	-
0M Duplex Studio Bedroom		120	-	-
0M Duplex Studio Bedroom		120	-	-
0M Duplex Studio Bedroom		120	-	-
00 Duplex Studio Living Room		120	-	-

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m ²]
	Standard value	95	80	0.3
00 Duplex Studio Living Room		120	-	-
00 Duplex Studio Living Room		120	-	-
00 Duplex Studio Living Room		120	-	-
00 Duplex Studio Living Room		120	-	-
00 Duplex Studio Living Room		120	-	-
00 Duplex Studio Living Room		120	-	-
00 Duplex Studio Living Room		120	-	-
00 Duplex Studio Living Room		120	-	-
00 Duplex Studio Living Room		120	-	-
00 Duplex Studio Living Room		120	-	-
07 1 Bed Studio - MVHR		120	-	-
07 1 Bed Studio - MVHR		120	-	-
07 Accessible Studio		120	-	-
07 Accessible Studio		120	-	-
07 Accessible Studio		120	-	-
07 Accessible Studio		120	-	-
07 Accessible Studio		120	-	-
07 Accessible Studio - MVHR		120	-	-
07 Ensuite		120	-	-
07 Shower Pod		120	-	-
07 Cl.Cupboard		125	-	-
07 Cl.Cupboard		125	-	-
07 Corridor		125	-	-
07 Corridor		125	-	-
07 Corridor		125	-	-
07 E.S. Common Area		125	-	-
07 Ensuite		120	-	-
07 Ensuite		120	-	-
07 Ensuite		120	-	-
07 Ensuite		120	-	-
07 Ensuite		120	-	-
07 Ensuite		120	-	-
07 Ensuite		120	-	-
07 S.S. Common Area		125	-	-
07 S.S. Common Area		125	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m²]
	Standard value	95	80	0.3
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
07 Shower Pod - MVHR		120	-	-

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m ²]
	Standard value	95	80	0.3
07 Shower Pod - MVHR		120	-	-
07 Shower Pod - MVHR		120	-	-
07 Shower Pod - MVHR		120	-	-
07 Shower Pod - MVHR		120	-	-
07 Shower Pod - MVHR		120	-	-
07 Shower Pod - MVHR		120	-	-
07 Shower Pod - MVHR		120	-	-
07 Shower Pod - MVHR		120	-	-
07 Shower Pod - MVHR		120	-	-
07 Shower Pod - MVHR		120	-	-
07 Shower Pod - MVHR		120	-	-
07 Shower Pod - MVHR		120	-	-
07 Shower Pod - MVHR		120	-	-
07 Shower Pod - MVHR		120	-	-
07 Shower Pod - MVHR		120	-	-
07 Shower Pod - MVHR		120	-	-
07 Social Studio		120	-	-
07 Social Studio		120	-	-
07 Social Studio		120	-	-
07 Social Studio		120	-	-
07 Social Studio		120	-	-
07 Social Studio		120	-	-
07 Social Studio		120	-	-
07 Social Studio		120	-	-
07 Social Studio		120	-	-
07 Social Studio		120	-	-
07 Social Studio		120	-	-
07 Stairs		125	-	-
07 Stairs		125	-	-
07 Stairs		125	-	-
07 Studio 01		120	-	-
07 Studio 01		120	-	-
07 Studio 01		120	-	-
07 Studio 01		120	-	-
07 Studio 01		120	-	-
07 Studio 01		120	-	-
07 Studio 01		120	-	-
07 Studio 01		120	-	-
07 Studio 01		120	-	-
07 Studio 01		120	-	-
07 Studio 01		120	-	-
07 Studio 01		120	-	-
07 Studio 01		120	-	-
07 Studio 01		120	-	-

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m ²]
	Standard value	95	80	0.3
07 Studio 01		120	-	-
07 Studio 01		120	-	-
07 Studio 01		120	-	-
07 Studio 01		120	-	-
07 Studio 01		120	-	-
07 Studio 01		120	-	-
07 Studio 01		120	-	-
07 Studio 01 - MVHR		120	-	-
07 Studio 01 - MVHR		120	-	-
07 Studio 01 - MVHR		120	-	-
07 Studio 01 - MVHR		120	-	-
07 Studio 01 - MVHR		120	-	-
07 Studio 01 - MVHR		120	-	-
07 Studio 01 - MVHR		120	-	-
07 Studio 02		120	-	-
07 Studio 02 - MVHR		120	-	-
07 Studio 02 - MVHR		120	-	-
07 Studio 02 - MVHR		120	-	-
07 Studio 02 - MVHR		120	-	-
07 Studio 02 - MVHR		120	-	-
07 Studio 02 - MVHR		120	-	-
07 Studio 02 - MVHR		120	-	-
07 1 Bed Studio		120	-	-
07 1 Bed Studio		120	-	-
07 1 Bed Studio		120	-	-
07 1 Bed Studio		120	-	-
07 1 Bed Studio		120	-	-
07 Studio 01		120	-	-
07 Accessible Studio		120	-	-
07 Studio 01		120	-	-
07 Corridor		125	-	-
07 1 Bed Studio		120	-	-
07 Corridor		125	-	-
08 Corridor		125	-	-
08 Studio 01		120	-	-
05 1 Bed Studio - MVHR		120	-	-
05 1 Bed Studio - MVHR		120	-	-
05 Accessible Studio		120	-	-
05 Accessible Studio		120	-	-
05 Accessible Studio		120	-	-
05 Accessible Studio		120	-	-
05 Accessible Studio		120	-	-

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m²]
	Standard value	95	80	0.3
05 Shower Pod - MVHR		120	-	-
05 Shower Pod - MVHR		120	-	-
05 Shower Pod - MVHR		120	-	-
05 Shower Pod - MVHR		120	-	-
05 Shower Pod - MVHR		120	-	-
05 Shower Pod - MVHR		120	-	-
05 Shower Pod - MVHR		120	-	-
05 Shower Pod - MVHR		120	-	-
05 Shower Pod - MVHR		120	-	-
05 Shower Pod - MVHR		120	-	-
05 Shower Pod - MVHR		120	-	-
05 Shower Pod - MVHR		120	-	-
05 Shower Pod - MVHR		120	-	-
05 Shower Pod - MVHR		120	-	-
05 Shower Pod - MVHR		120	-	-
05 Shower Pod - MVHR		120	-	-
05 Shower Pod - MVHR		120	-	-
05 Social Studio		120	-	-
05 Social Studio		120	-	-
05 Social Studio		120	-	-
05 Social Studio		120	-	-
05 Social Studio		120	-	-
05 Social Studio		120	-	-
05 Social Studio		120	-	-
05 Social Studio		120	-	-
05 Social Studio		120	-	-
05 Social Studio		120	-	-
05 Social Studio		120	-	-
05 Stairs		125	-	-
05 Stairs		125	-	-
05 Stairs		125	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m ²]
	Standard value	95	80	0.3
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01		120	-	-
05 Studio 01 - MVHR		120	-	-
05 Studio 01 - MVHR		120	-	-
05 Studio 01 - MVHR		120	-	-
05 Studio 01 - MVHR		120	-	-
05 Studio 01 - MVHR		120	-	-
05 Studio 01 - MVHR		120	-	-
05 Studio 01 - MVHR		120	-	-
05 Studio 01 - MVHR		120	-	-
05 Studio 02		120	-	-
05 Studio 02 - MVHR		120	-	-
05 Studio 02 - MVHR		120	-	-
05 Studio 02 - MVHR		120	-	-
05 Studio 02 - MVHR		120	-	-
05 Studio 02 - MVHR		120	-	-
05 Studio 02 - MVHR		120	-	-
05 Studio 02 - MVHR		120	-	-
05 1 Bed Studio		120	-	-
05 1 Bed Studio		120	-	-
05 1 Bed Studio		120	-	-
05 1 Bed Studio		120	-	-
05 1 Bed Studio		120	-	-
05 1 Bed Studio		120	-	-
05 1 Bed Studio		120	-	-
05 1 Bed Studio		120	-	-

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m ²]
	Standard value	95	80	0.3
05 1 Bed Studio		120	-	-
04 1 Bed Studio - MVHR		120	-	-
04 1 Bed Studio - MVHR		120	-	-
04 Accessible Studio		120	-	-
04 Accessible Studio		120	-	-
04 Accessible Studio		120	-	-
04 Accessible Studio		120	-	-
04 Accessible Studio		120	-	-
04 Accessible Studio		120	-	-
04 Accessible Studio - MVHR		120	-	-
04 Ensuite		120	-	-
04 Shower Pod		120	-	-
04 Cl.Cupboard		125	-	-
04 Cl.Cupboard		125	-	-
04 Corridor		125	-	-
04 Corridor		125	-	-
04 Corridor		125	-	-
04 Corridor		125	-	-
04 E.S. Common Area		125	-	-
04 Ensuite		120	-	-
04 Ensuite		120	-	-
04 Ensuite		120	-	-
04 Ensuite		120	-	-
04 Ensuite		120	-	-
04 Ensuite		120	-	-
04 Ensuite		120	-	-
04 S.S. Common Area		125	-	-
04 S.S. Common Area		125	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m²]
	Standard value	95	80	0.3
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
06 Shower Pod - MVHR		120	-	-
06 Shower Pod - MVHR		120	-	-
06 Shower Pod - MVHR		120	-	-
06 Shower Pod - MVHR		120	-	-
06 Shower Pod - MVHR		120	-	-
06 Shower Pod - MVHR		120	-	-
06 Shower Pod - MVHR		120	-	-
06 Shower Pod - MVHR		120	-	-
06 Shower Pod - MVHR		120	-	-
06 Shower Pod - MVHR		120	-	-
06 Shower Pod - MVHR		120	-	-
06 Shower Pod - MVHR		120	-	-
06 Shower Pod - MVHR		120	-	-
06 Shower Pod - MVHR		120	-	-
06 Shower Pod - MVHR		120	-	-
06 Shower Pod - MVHR		120	-	-
06 Shower Pod - MVHR		120	-	-
06 Social Studio		120	-	-
06 Social Studio		120	-	-
06 Social Studio		120	-	-
06 Social Studio		120	-	-
06 Social Studio		120	-	-
06 Social Studio		120	-	-
06 Social Studio		120	-	-
06 Social Studio		120	-	-
06 Social Studio		120	-	-
06 Social Studio		120	-	-
06 Social Studio		120	-	-
06 Stairs		125	-	-
06 Stairs		125	-	-
06 Stairs		125	-	-
06 Studio 01		120	-	-
06 Studio 01		120	-	-
06 Studio 01		120	-	-
06 Studio 01		120	-	-
06 Studio 01		120	-	-

[illegible]

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m ²]
	Standard value	95	80	0.3
04 1 Bed Studio		120	-	-
04 1 Bed Studio		120	-	-
04 1 Bed Studio		120	-	-
04 1 Bed Studio		120	-	-
04 1 Bed Studio		120	-	-
04 1 Bed Studio		120	-	-
04 1 Bed Studio		120	-	-
04 1 Bed Studio		120	-	-
04 1 Bed Studio		120	-	-
03 1 Bed Studio - MVHR		120	-	-
03 1 Bed Studio - MVHR		120	-	-
03 Accessible Studio		120	-	-
03 Accessible Studio		120	-	-
03 Accessible Studio		120	-	-
03 Accessible Studio		120	-	-
03 Accessible Studio		120	-	-
03 Accessible Studio		120	-	-
03 Accessible Studio - MVHR		120	-	-
03 Ensuite		120	-	-
03 Shower Pod		120	-	-
03 Cl.Cupboard		125	-	-
03 Cl.Cupboard		125	-	-
03 Corridor		125	-	-
03 Corridor		125	-	-
03 Corridor		125	-	-
03 Corridor		125	-	-
03 E.S. Common Area		125	-	-
03 Ensuite		120	-	-
03 Ensuite		120	-	-
03 Ensuite		120	-	-
03 Ensuite		120	-	-
03 Ensuite		120	-	-
03 Ensuite		120	-	-
03 Ensuite		120	-	-
03 S.S. Common Area		125	-	-
03 S.S. Common Area		125	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m²]
	Standard value	95	80	0.3
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
08 Shower Pod		120	-	-
03 Shower Pod - MVHR		120	-	-
03 Shower Pod - MVHR		120	-	-
03 Shower Pod - MVHR		120	-	-
03 Shower Pod - MVHR		120	-	-
03 Shower Pod - MVHR		120	-	-
03 Shower Pod - MVHR		120	-	-
03 Shower Pod - MVHR		120	-	-
03 Shower Pod - MVHR		120	-	-
03 Shower Pod - MVHR		120	-	-
03 Shower Pod - MVHR		120	-	-
03 Shower Pod - MVHR		120	-	-
03 Shower Pod - MVHR		120	-	-
03 Shower Pod - MVHR		120	-	-
03 Shower Pod - MVHR		120	-	-
03 Shower Pod - MVHR		120	-	-
03 Shower Pod - MVHR		120	-	-
03 Shower Pod - MVHR		120	-	-
03 Shower Pod - MVHR		120	-	-
03 Social Studio		120	-	-
03 Social Studio		120	-	-
03 Social Studio		120	-	-
03 Social Studio		120	-	-
03 Social Studio		120	-	-
03 Social Studio		120	-	-
03 Social Studio		120	-	-
03 Social Studio		120	-	-
03 Social Studio		120	-	-
03 Social Studio		120	-	-

General lighting and display lighting	General luminaire	Display light source	
Zone name	Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m²]
Standard value	95	80	0.3
03 Stairs	125	-	-
03 Stairs	125	-	-
03 Stairs	125	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01	120	-	-
03 Studio 01 - MVHR	120	-	-
03 Studio 01 - MVHR	120	-	-
03 Studio 01 - MVHR	120	-	-
03 Studio 01 - MVHR	120	-	-
03 Studio 01 - MVHR	120	-	-
03 Studio 01 - MVHR	120	-	-
06 Studio 01 - MVHR	120	-	-

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m ²]
	Standard value	95	80	0.3
06 Studio 02		120	-	-
06 Studio 02 - MVHR		120	-	-
06 Studio 02 - MVHR		120	-	-
06 Studio 02 - MVHR		120	-	-
06 Studio 02 - MVHR		120	-	-
06 Studio 02 - MVHR		120	-	-
06 Studio 02 - MVHR		120	-	-
06 Studio 02 - MVHR		120	-	-
03 1 Bed Studio		120	-	-
03 1 Bed Studio		120	-	-
03 1 Bed Studio		120	-	-
03 1 Bed Studio		120	-	-
03 1 Bed Studio		120	-	-
03 1 Bed Studio		120	-	-
03 1 Bed Studio		120	-	-
03 1 Bed Studio		120	-	-
03 1 Bed Studio		120	-	-
02 1 Bed Studio - MVHR		120	-	-
02 1 Bed Studio - MVHR		120	-	-
02 Accessible Studio		120	-	-
02 Accessible Studio		120	-	-
02 Accessible Studio		120	-	-
02 Accessible Studio		120	-	-
02 Accessible Studio		120	-	-
02 Accessible Studio		120	-	-
02 Accessible Studio - MVHR		120	-	-
02 Ensuite		120	-	-
02 Shower Pod		120	-	-
02 Cl.Cupboard		125	-	-
02 Cl.Cupboard		125	-	-
02 Corridor		125	-	-
02 Corridor		125	-	-
02 Corridor		125	-	-
02 Corridor		125	-	-
02 E.S. Common Area		125	-	-
02 Ensuite		120	-	-
02 Ensuite		120	-	-
02 Ensuite		120	-	-
02 Ensuite		120	-	-
02 Ensuite		120	-	-
02 Ensuite		120	-	-
02 Ensuite		120	-	-
02 S.S. Common Area		125	-	-

[illegible]

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m ²]
	Standard value	95	80	0.3
02 Studio 01		120	-	-
02 Studio 01 - MVHR		120	-	-
02 Studio 01 - MVHR		120	-	-
02 Studio 01 - MVHR		120	-	-
02 Studio 01 - MVHR		120	-	-
02 Studio 01 - MVHR		120	-	-
02 Studio 01 - MVHR		120	-	-
02 Studio 01 - MVHR		120	-	-
02 Studio 02		120	-	-
02 Studio 02 - MVHR		120	-	-
02 Studio 02 - MVHR		120	-	-
02 Studio 02 - MVHR		120	-	-
02 Studio 02 - MVHR		120	-	-
02 Studio 02 - MVHR		120	-	-
02 Studio 02 - MVHR		120	-	-
02 Studio 02 - MVHR		120	-	-
02 Studio 02 - MVHR		120	-	-
02 1 Bed Studio		120	-	-
02 1 Bed Studio		120	-	-
02 1 Bed Studio		120	-	-
02 1 Bed Studio		120	-	-
02 1 Bed Studio		120	-	-
02 1 Bed Studio		120	-	-
02 1 Bed Studio		120	-	-
02 1 Bed Studio		120	-	-
02 1 Bed Studio		120	-	-
01 1 Bed Studio - MVHR		120	-	-
01 1 Bed Studio - MVHR		120	-	-
01 Accessible Studio		120	-	-
01 Accessible Studio		120	-	-
01 Accessible Studio		120	-	-
01 Accessible Studio		120	-	-
01 Accessible Studio		120	-	-
01 Accessible Studio		120	-	-
01 Accessible Studio - MVHR		120	-	-
01 Ensuite		120	-	-
01 Shower Pod		120	-	-
01 Cl.Cupboard		125	-	-
01 Cl.Cupboard		125	-	-
01 Corridor		125	-	-
01 Corridor		125	-	-
01 Corridor		125	-	-
01 Corridor		125	-	-
01 E.S. Common Area		125	-	-

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m ²]
	Standard value	95	80	0.3
01 Studio 01		120	-	-
01 Studio 01		120	-	-
01 Studio 01		120	-	-
01 Studio 01		120	-	-
01 Studio 01		120	-	-
01 Studio 01		120	-	-
01 Studio 01		120	-	-
01 Studio 01		120	-	-
01 Studio 01		120	-	-
01 Studio 01 - MVHR		120	-	-
01 Studio 01 - MVHR		120	-	-
01 Studio 01 - MVHR		120	-	-
01 Studio 01 - MVHR		120	-	-
01 Studio 01 - MVHR		120	-	-
01 Studio 01 - MVHR		120	-	-
01 Studio 01 - MVHR		120	-	-
01 Studio 01 - MVHR		120	-	-
01 Studio 02		120	-	-
01 Studio 02 - MVHR		120	-	-
01 Studio 02 - MVHR		120	-	-
01 Studio 02 - MVHR		120	-	-
01 Studio 02 - MVHR		120	-	-
01 Studio 02 - MVHR		120	-	-
01 Studio 02 - MVHR		120	-	-
01 Studio 02 - MVHR		120	-	-
01 1 Bed Studio		120	-	-
01 1 Bed Studio		120	-	-
01 1 Bed Studio		120	-	-
01 1 Bed Studio		120	-	-
01 1 Bed Studio		120	-	-
01 1 Bed Studio		120	-	-
01 1 Bed Studio		120	-	-
01 1 Bed Studio		120	-	-
01 1 Bed Studio		120	-	-

The spaces in the building should have appropriate passive control measures to limit solar gains in summer

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
00 PBSA Social Space	YES (+18.4%)	NO
06 1 Bed Studio - MVHR	NO (-67.9%)	NO
06 1 Bed Studio - MVHR	NO (-65.8%)	NO
06 Accessible Studio	NO (-94.3%)	NO
06 Accessible Studio	NO (-93.1%)	NO
06 Accessible Studio	NO (-77.6%)	NO
06 Accessible Studio	NO (-73.5%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
06 Accessible Studio	NO (-93.2%)	NO
06 Accessible Studio	NO (-92%)	NO
06 Accessible Studio - MVHR	NO (-69.5%)	NO
06 Ensuite	NO (-88.4%)	NO
06 Shower Pod	N/A	N/A
06 Ensuite	NO (-87%)	NO
06 Ensuite	NO (-88.2%)	NO
06 Ensuite	NO (-87%)	NO
06 Ensuite	NO (-87.6%)	NO
06 Ensuite	NO (-86.9%)	NO
06 Ensuite	NO (-86.6%)	NO
06 Ensuite	NO (-87.3%)	NO
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Social Studio	NO (-91.9%)	NO
06 Social Studio	NO (-84.9%)	NO
06 Social Studio	NO (-92.1%)	NO
06 Social Studio	NO (-91.6%)	NO
06 Social Studio	NO (-92.1%)	NO
06 Social Studio	NO (-92.6%)	NO
06 Social Studio	NO (-91.7%)	NO
06 Social Studio	NO (-93.1%)	NO
06 Social Studio	NO (-92.2%)	NO
06 Social Studio	NO (-85.2%)	NO
06 Studio 01	NO (-89.8%)	NO
06 Studio 01	NO (-88.5%)	NO
06 Studio 01	NO (-87.6%)	NO
06 Studio 01	NO (-91.9%)	NO
06 Studio 01	NO (-87.5%)	NO
06 Studio 01	NO (-87.7%)	NO
06 Studio 01	NO (-79.8%)	NO
06 Studio 01	NO (-88%)	NO
06 Studio 01	NO (-88.8%)	NO
06 Studio 01	NO (-80%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
06 Studio 01	NO (-75.7%)	NO
06 Studio 01	NO (-75.2%)	NO
06 Studio 01	NO (-80.1%)	NO
06 Studio 01	NO (-88.5%)	NO
06 Studio 01	NO (-80.1%)	NO
06 Studio 01	NO (-75.8%)	NO
06 Studio 01	NO (-76.2%)	NO
06 Studio 01	NO (-61.9%)	NO
06 Studio 01	NO (-80%)	NO
06 Studio 01	NO (-78.1%)	NO
06 Studio 01	NO (-80%)	NO
06 Studio 01	NO (-80.1%)	NO
06 Studio 01	NO (-76%)	NO
06 Studio 01	NO (-75.6%)	NO
06 Studio 01	NO (-80.1%)	NO
06 Studio 01	NO (-67.9%)	NO
06 Studio 01	NO (-75.3%)	NO
06 Studio 01	NO (-87.9%)	NO
06 Studio 01	NO (-87.9%)	NO
06 Studio 01	NO (-75.8%)	NO
06 Studio 01	NO (-88%)	NO
06 Studio 01	NO (-90.2%)	NO
06 Studio 01	NO (-75.6%)	NO
06 Studio 01 - MVHR	NO (-72.3%)	NO
06 Studio 01 - MVHR	NO (-68.2%)	NO
06 Studio 01 - MVHR	NO (-51.6%)	NO
06 Studio 01 - MVHR	NO (-68.1%)	NO
06 Studio 01 - MVHR	NO (-77%)	NO
06 Studio 01 - MVHR	NO (-68.3%)	NO
06 Studio 01 - MVHR	NO (-68.4%)	NO
06 Studio 02	NO (-88.8%)	NO
06 Studio 02 - MVHR	NO (-38.1%)	NO
06 Studio 02 - MVHR	NO (-56.3%)	NO
06 Studio 02 - MVHR	NO (-36.8%)	NO
06 Studio 02 - MVHR	NO (-72.3%)	NO
06 Studio 02 - MVHR	NO (-56.4%)	NO
06 Studio 02 - MVHR	NO (-56.5%)	NO
06 Studio 02 - MVHR	NO (-53.9%)	NO
08 Accessible Studio	NO (-91.1%)	NO
08 1 Bed Studio	NO (-75.1%)	NO
08 1 Bed Studio	NO (-97.7%)	NO
08 Ensuite	NO (-86.2%)	NO
08 Ensuite	NO (-86.2%)	NO
08 Ensuite	NO (-86.1%)	NO
08 Ensuite	NO (-86.2%)	NO
08 Ensuite	NO (-86.1%)	NO
08 Ensuite	NO (-86.2%)	NO
08 Ensuite	NO (-86.6%)	NO
08 Ensuite	NO (-86.1%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
08 Studio 01	NO (-39.9%)	NO
08 Studio 01	NO (-86.8%)	NO
08 Studio 01	NO (-39.8%)	NO
08 Studio 01	NO (-86.8%)	NO
08 Studio 01	NO (-60.7%)	NO
08 Studio 01	NO (-40.2%)	NO
08 Studio 01	NO (-39.8%)	NO
08 Studio 01	NO (-60.7%)	NO
08 Studio 01	NO (-39.4%)	NO
08 Studio 01	NO (-86.8%)	NO
08 Studio 01	NO (-60.7%)	NO
08 Studio 01	NO (-87.5%)	NO
08 Studio 01	NO (-86.8%)	NO
08 Studio 01	NO (-69.6%)	NO
08 Studio 01	NO (-59.7%)	NO
08 Studio 01	NO (-74.6%)	NO
08 Studio 01	NO (-66.6%)	NO
08 Studio 01	NO (-77.5%)	NO
08 Studio 01	NO (-75.6%)	NO
08 Studio 02	NO (-76.7%)	NO
08 Studio 02	NO (-87.7%)	NO
08 Studio 02	NO (-62.6%)	NO
08 Studio 02	NO (-65.4%)	NO
08 Studio 02	NO (-62.4%)	NO
08 Studio 02	NO (-65.1%)	NO
06 1 Bed Studio	NO (-75.8%)	NO
06 1 Bed Studio	NO (-75.9%)	NO
06 1 Bed Studio	NO (-70.6%)	NO
06 1 Bed Studio	NO (-87.4%)	NO
06 1 Bed Studio	NO (-87.1%)	NO
06 1 Bed Studio	NO (-70.8%)	NO
06 1 Bed Studio	NO (-70.4%)	NO
06 1 Bed Studio	NO (-76%)	NO
06 1 Bed Studio	NO (-91.7%)	NO
08 Studio 01	NO (-95.9%)	NO
08 Studio 02	N/A	N/A
08 Studio 02	NO (-85.8%)	NO
0M Duplex Studio Bedroom	NO (-94.7%)	NO
0M Duplex Studio Bedroom	NO (-85.9%)	NO
0M Duplex Studio Bedroom	NO (-86.6%)	NO
0M Duplex Studio Bedroom	NO (-85.9%)	NO
0M Duplex Studio Bedroom	NO (-86.1%)	NO
0M Duplex Studio Bedroom	NO (-86.1%)	NO
0M Duplex Studio Bedroom	NO (-85.9%)	NO
0M Duplex Studio Bedroom	NO (-87.8%)	NO
0M Duplex Studio Bedroom	NO (-86.6%)	NO
0M Duplex Studio Bedroom	NO (-87.2%)	NO
0M Duplex Studio Bedroom	NO (-95.3%)	NO
00 Duplex Studio Living Room	NO (-31%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
00 Duplex Studio Living Room	YES (+79.1%)	NO
00 Duplex Studio Living Room	YES (+87.2%)	NO
00 Duplex Studio Living Room	YES (+56.8%)	NO
00 Duplex Studio Living Room	NO (-46.1%)	NO
00 Duplex Studio Living Room	YES (+75.3%)	NO
00 Duplex Studio Living Room	YES (+71.1%)	NO
00 Duplex Studio Living Room	YES (+76.4%)	NO
00 Duplex Studio Living Room	YES (+73.1%)	NO
00 Duplex Studio Living Room	YES (+73.8%)	NO
00 Duplex Studio Living Room	YES (+75.4%)	NO
07 1 Bed Studio - MVHR	NO (-67.9%)	NO
07 1 Bed Studio - MVHR	NO (-65.8%)	NO
07 Accessible Studio	NO (-91.8%)	NO
07 Accessible Studio	NO (-67.4%)	NO
07 Accessible Studio	NO (-69.9%)	NO
07 Accessible Studio	NO (-90.7%)	NO
07 Accessible Studio	NO (-91.3%)	NO
07 Accessible Studio - MVHR	NO (-69.5%)	NO
07 Ensuite	NO (-86.3%)	NO
07 Shower Pod	N/A	N/A
07 Ensuite	NO (-86.2%)	NO
07 Ensuite	NO (-87.4%)	NO
07 Ensuite	NO (-86.2%)	NO
07 Ensuite	NO (-86.5%)	NO
07 Ensuite	NO (-86.2%)	NO
07 Ensuite	NO (-86.1%)	NO
07 Ensuite	NO (-86.4%)	NO
07 Shower Pod - MVHR	N/A	N/A
07 Shower Pod - MVHR	N/A	N/A
07 Shower Pod - MVHR	N/A	N/A
07 Shower Pod - MVHR	N/A	N/A
07 Shower Pod - MVHR	N/A	N/A
07 Shower Pod - MVHR	N/A	N/A
07 Shower Pod - MVHR	N/A	N/A
07 Shower Pod - MVHR	N/A	N/A
07 Shower Pod - MVHR	N/A	N/A
07 Shower Pod - MVHR	N/A	N/A
07 Shower Pod - MVHR	N/A	N/A
07 Shower Pod - MVHR	N/A	N/A
07 Shower Pod - MVHR	N/A	N/A
07 Shower Pod - MVHR	N/A	N/A
07 Shower Pod - MVHR	N/A	N/A
07 Shower Pod - MVHR	N/A	N/A
07 Shower Pod - MVHR	N/A	N/A
07 Shower Pod - MVHR	N/A	N/A
07 Social Studio	NO (-90.1%)	NO
07 Social Studio	NO (-84.8%)	NO
07 Social Studio	NO (-90.6%)	NO
07 Social Studio	NO (-89.8%)	NO
07 Social Studio	NO (-90.6%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
07 Social Studio	NO (-91.3%)	NO
07 Social Studio	NO (-91.7%)	NO
07 Social Studio	NO (-92.3%)	NO
07 Social Studio	NO (-92%)	NO
07 Social Studio	NO (-85.1%)	NO
07 Studio 01	NO (-86.8%)	NO
07 Studio 01	NO (-91.9%)	NO
07 Studio 01	NO (-86.7%)	NO
07 Studio 01	NO (-86.8%)	NO
07 Studio 01	NO (-79.8%)	NO
07 Studio 01	NO (-87%)	NO
07 Studio 01	NO (-87.4%)	NO
07 Studio 01	NO (-80%)	NO
07 Studio 01	NO (-75.7%)	NO
07 Studio 01	NO (-75.2%)	NO
07 Studio 01	NO (-80.1%)	NO
07 Studio 01	NO (-80.1%)	NO
07 Studio 01	NO (-75.8%)	NO
07 Studio 01	NO (-61.9%)	NO
07 Studio 01	NO (-78.1%)	NO
07 Studio 01	NO (-76%)	NO
07 Studio 01	NO (-75.6%)	NO
07 Studio 01	NO (-67.9%)	NO
07 Studio 01	NO (-75.8%)	NO
07 Studio 01	NO (-90.3%)	NO
07 Studio 01	NO (-75.6%)	NO
07 Studio 01 - MVHR	NO (-72.3%)	NO
07 Studio 01 - MVHR	NO (-68.2%)	NO
07 Studio 01 - MVHR	NO (-51.6%)	NO
07 Studio 01 - MVHR	NO (-68.1%)	NO
07 Studio 01 - MVHR	NO (-77%)	NO
07 Studio 01 - MVHR	NO (-68.3%)	NO
07 Studio 01 - MVHR	NO (-68.4%)	NO
07 Studio 02	NO (-88.3%)	NO
07 Studio 02 - MVHR	NO (-38.1%)	NO
07 Studio 02 - MVHR	NO (-56.3%)	NO
07 Studio 02 - MVHR	NO (-36.9%)	NO
07 Studio 02 - MVHR	NO (-72.3%)	NO
07 Studio 02 - MVHR	NO (-56.4%)	NO
07 Studio 02 - MVHR	NO (-56.5%)	NO
07 Studio 02 - MVHR	NO (-53.9%)	NO
07 1 Bed Studio	NO (-70.5%)	NO
07 1 Bed Studio	NO (-86.9%)	NO
07 1 Bed Studio	NO (-86.1%)	NO
07 1 Bed Studio	NO (-70.8%)	NO
07 1 Bed Studio	NO (-70.4%)	NO
07 1 Bed Studio	NO (-76%)	NO
07 Studio 01	N/A	N/A
07 Accessible Studio	N/A	N/A

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
07 Studio 01	N/A	N/A
07 1 Bed Studio	N/A	N/A
08 Studio 01	NO (-49.6%)	NO
05 1 Bed Studio - MVHR	NO (-67.9%)	NO
05 1 Bed Studio - MVHR	NO (-65.8%)	NO
05 Accessible Studio	NO (-95.8%)	NO
05 Accessible Studio	NO (-94.3%)	NO
05 Accessible Studio	NO (-79.2%)	NO
05 Accessible Studio	NO (-74.3%)	NO
05 Accessible Studio	NO (-94.4%)	NO
05 Accessible Studio	NO (-92.4%)	NO
05 Accessible Studio - MVHR	NO (-69.5%)	NO
05 Ensuite	NO (-91.8%)	NO
05 Shower Pod	N/A	N/A
05 Ensuite	NO (-89.5%)	NO
05 Ensuite	NO (-90%)	NO
05 Ensuite	NO (-89.2%)	NO
05 Ensuite	NO (-89.4%)	NO
05 Ensuite	NO (-89.5%)	NO
05 Ensuite	NO (-89.1%)	NO
05 Ensuite	NO (-90.2%)	NO
05 Shower Pod - MVHR	N/A	N/A
05 Shower Pod - MVHR	N/A	N/A
05 Shower Pod - MVHR	N/A	N/A
05 Shower Pod - MVHR	N/A	N/A
05 Shower Pod - MVHR	N/A	N/A
05 Shower Pod - MVHR	N/A	N/A
05 Shower Pod - MVHR	N/A	N/A
05 Shower Pod - MVHR	N/A	N/A
05 Shower Pod - MVHR	N/A	N/A
05 Shower Pod - MVHR	N/A	N/A
05 Shower Pod - MVHR	N/A	N/A
05 Shower Pod - MVHR	N/A	N/A
05 Shower Pod - MVHR	N/A	N/A
05 Shower Pod - MVHR	N/A	N/A
05 Shower Pod - MVHR	N/A	N/A
05 Shower Pod - MVHR	N/A	N/A
05 Social Studio	NO (-92.5%)	NO
05 Social Studio	NO (-85%)	NO
05 Social Studio	NO (-93.2%)	NO
05 Social Studio	NO (-93.2%)	NO
05 Social Studio	NO (-92.8%)	NO
05 Social Studio	NO (-93%)	NO
05 Social Studio	NO (-91.8%)	NO
05 Social Studio	NO (-93.6%)	NO
05 Social Studio	NO (-92.3%)	NO
05 Social Studio	NO (-85.3%)	NO
05 Studio 01	NO (-91%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
05 Studio 01	NO (-90.6%)	NO
05 Studio 01	NO (-89.8%)	NO
05 Studio 01	NO (-91.9%)	NO
05 Studio 01	NO (-89%)	NO
05 Studio 01	NO (-89%)	NO
05 Studio 01	NO (-79.8%)	NO
05 Studio 01	NO (-89.3%)	NO
05 Studio 01	NO (-89.8%)	NO
05 Studio 01	NO (-80%)	NO
05 Studio 01	NO (-75.7%)	NO
05 Studio 01	NO (-75.2%)	NO
05 Studio 01	NO (-80.1%)	NO
05 Studio 01	NO (-90.2%)	NO
05 Studio 01	NO (-80.1%)	NO
05 Studio 01	NO (-75.8%)	NO
05 Studio 01	NO (-76.2%)	NO
05 Studio 01	NO (-61.9%)	NO
05 Studio 01	NO (-80%)	NO
05 Studio 01	NO (-78.1%)	NO
05 Studio 01	NO (-80%)	NO
05 Studio 01	NO (-80.1%)	NO
05 Studio 01	NO (-75.8%)	NO
05 Studio 01	NO (-75.6%)	NO
05 Studio 01	NO (-80.1%)	NO
05 Studio 01	NO (-67.9%)	NO
05 Studio 01	NO (-75.3%)	NO
05 Studio 01	NO (-90.1%)	NO
05 Studio 01	NO (-90.3%)	NO
05 Studio 01	NO (-75.8%)	NO
05 Studio 01	NO (-90.3%)	NO
05 Studio 01	NO (-90.1%)	NO
05 Studio 01	NO (-75.6%)	NO
05 Studio 01 - MVHR	NO (-72.3%)	NO
05 Studio 01 - MVHR	NO (-68.2%)	NO
05 Studio 01 - MVHR	NO (-51.6%)	NO
05 Studio 01 - MVHR	NO (-68.1%)	NO
05 Studio 01 - MVHR	NO (-77%)	NO
05 Studio 01 - MVHR	NO (-68.3%)	NO
05 Studio 01 - MVHR	NO (-68.4%)	NO
05 Studio 02	NO (-91.4%)	NO
05 Studio 02 - MVHR	NO (-38.1%)	NO
05 Studio 02 - MVHR	NO (-56.3%)	NO
05 Studio 02 - MVHR	NO (-36.8%)	NO
05 Studio 02 - MVHR	NO (-72.3%)	NO
05 Studio 02 - MVHR	NO (-56.4%)	NO
05 Studio 02 - MVHR	NO (-56.5%)	NO
05 Studio 02 - MVHR	NO (-53.9%)	NO
05 1 Bed Studio	NO (-75.9%)	NO
05 1 Bed Studio	NO (-75.9%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
05 1 Bed Studio	NO (-70.5%)	NO
05 1 Bed Studio	NO (-87.7%)	NO
05 1 Bed Studio	NO (-88.1%)	NO
05 1 Bed Studio	NO (-70.8%)	NO
05 1 Bed Studio	NO (-70.4%)	NO
05 1 Bed Studio	NO (-76%)	NO
05 1 Bed Studio	NO (-93.8%)	NO
04 1 Bed Studio - MVHR	NO (-67.9%)	NO
04 1 Bed Studio - MVHR	NO (-65.8%)	NO
04 Accessible Studio	NO (-96.1%)	NO
04 Accessible Studio	NO (-94.8%)	NO
04 Accessible Studio	NO (-80.4%)	NO
04 Accessible Studio	NO (-75.9%)	NO
04 Accessible Studio	NO (-95.2%)	NO
04 Accessible Studio	NO (-93%)	NO
04 Accessible Studio - MVHR	NO (-69.5%)	NO
04 Ensuite	NO (-93.6%)	NO
04 Shower Pod	N/A	N/A
04 Ensuite	NO (-91.1%)	NO
04 Ensuite	NO (-91.4%)	NO
04 Ensuite	NO (-91%)	NO
04 Ensuite	NO (-90.9%)	NO
04 Ensuite	NO (-91.4%)	NO
04 Ensuite	NO (-91%)	NO
04 Ensuite	NO (-92.4%)	NO
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Shower Pod - MVHR	N/A	N/A
06 Social Studio	NO (-93.6%)	NO
06 Social Studio	NO (-85.5%)	NO
06 Social Studio	NO (-94.2%)	NO
06 Social Studio	NO (-94.1%)	NO
06 Social Studio	NO (-93.7%)	NO
06 Social Studio	NO (-93.8%)	NO
06 Social Studio	NO (-92.2%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
06 Social Studio	NO (-94.2%)	NO
06 Social Studio	NO (-92.6%)	NO
06 Social Studio	NO (-85.8%)	NO
06 Studio 01	NO (-91.8%)	NO
06 Studio 01	NO (-91.7%)	NO
06 Studio 01	NO (-91.7%)	NO
06 Studio 01	NO (-91.9%)	NO
06 Studio 01	NO (-90.4%)	NO
06 Studio 01	NO (-90.3%)	NO
06 Studio 01	NO (-79.8%)	NO
06 Studio 01	NO (-90.4%)	NO
06 Studio 01	NO (-90.7%)	NO
06 Studio 01	NO (-80%)	NO
06 Studio 01	NO (-75.7%)	NO
06 Studio 01	NO (-75.2%)	NO
06 Studio 01	NO (-80.1%)	NO
06 Studio 01	NO (-91.7%)	NO
06 Studio 01	NO (-80.1%)	NO
06 Studio 01	NO (-75.8%)	NO
06 Studio 01	NO (-76.2%)	NO
06 Studio 01	NO (-61.9%)	NO
06 Studio 01	NO (-80%)	NO
06 Studio 01	NO (-78.1%)	NO
06 Studio 01	NO (-80%)	NO
06 Studio 01	NO (-80.1%)	NO
06 Studio 01	NO (-76.3%)	NO
06 Studio 01	NO (-75.6%)	NO
06 Studio 01	NO (-80.1%)	NO
06 Studio 01	NO (-67.9%)	NO
06 Studio 01	NO (-75.3%)	NO
06 Studio 01	NO (-91.6%)	NO
06 Studio 01	NO (-92.3%)	NO
06 Studio 01	NO (-75.8%)	NO
06 Studio 01	NO (-91.9%)	NO
06 Studio 01	NO (-90.2%)	NO
06 Studio 01	NO (-75.6%)	NO
06 Studio 01 - MVHR	NO (-72.3%)	NO
06 Studio 01 - MVHR	NO (-68.2%)	NO
06 Studio 01 - MVHR	NO (-51.6%)	NO
06 Studio 01 - MVHR	NO (-68.1%)	NO
06 Studio 01 - MVHR	NO (-77%)	NO
06 Studio 01 - MVHR	NO (-68.3%)	NO
06 Studio 01 - MVHR	NO (-68.4%)	NO
06 Studio 02	NO (-92.6%)	NO
06 Studio 02 - MVHR	NO (-38.1%)	NO
06 Studio 02 - MVHR	NO (-56.3%)	NO
06 Studio 02 - MVHR	NO (-36.8%)	NO
06 Studio 02 - MVHR	NO (-72.3%)	NO
06 Studio 02 - MVHR	NO (-56.4%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
06 Studio 02 - MVHR	NO (-56.5%)	NO
06 Studio 02 - MVHR	NO (-53.9%)	NO
04 1 Bed Studio	NO (-75.8%)	NO
04 1 Bed Studio	NO (-75.9%)	NO
04 1 Bed Studio	NO (-70.5%)	NO
04 1 Bed Studio	NO (-88.7%)	NO
04 1 Bed Studio	NO (-89.5%)	NO
04 1 Bed Studio	NO (-70.8%)	NO
04 1 Bed Studio	NO (-70.4%)	NO
04 1 Bed Studio	NO (-76%)	NO
04 1 Bed Studio	NO (-95.1%)	NO
03 1 Bed Studio - MVHR	NO (-67.9%)	NO
03 1 Bed Studio - MVHR	NO (-65.8%)	NO
03 Accessible Studio	NO (-96.5%)	NO
03 Accessible Studio	NO (-95.5%)	NO
03 Accessible Studio	NO (-81.6%)	NO
03 Accessible Studio	NO (-77.6%)	NO
03 Accessible Studio	NO (-95.4%)	NO
03 Accessible Studio	NO (-93.4%)	NO
03 Accessible Studio - MVHR	NO (-69.5%)	NO
03 Ensuite	NO (-94.3%)	NO
03 Shower Pod	N/A	N/A
03 Ensuite	NO (-92.3%)	NO
03 Ensuite	NO (-92.7%)	NO
03 Ensuite	NO (-92.5%)	NO
03 Ensuite	NO (-92.4%)	NO
03 Ensuite	NO (-93%)	NO
03 Ensuite	NO (-92.5%)	NO
03 Ensuite	NO (-94.1%)	NO
03 Shower Pod - MVHR	N/A	N/A
03 Shower Pod - MVHR	N/A	N/A
03 Shower Pod - MVHR	N/A	N/A
03 Shower Pod - MVHR	N/A	N/A
03 Shower Pod - MVHR	N/A	N/A
03 Shower Pod - MVHR	N/A	N/A
03 Shower Pod - MVHR	N/A	N/A
03 Shower Pod - MVHR	N/A	N/A
03 Shower Pod - MVHR	N/A	N/A
03 Shower Pod - MVHR	N/A	N/A
03 Shower Pod - MVHR	N/A	N/A
03 Shower Pod - MVHR	N/A	N/A
03 Shower Pod - MVHR	N/A	N/A
03 Shower Pod - MVHR	N/A	N/A
03 Shower Pod - MVHR	N/A	N/A
03 Shower Pod - MVHR	N/A	N/A
03 Social Studio	NO (-94.3%)	NO
03 Social Studio	NO (-86.8%)	NO
03 Social Studio	NO (-94.8%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
03 Social Studio	NO (-94.7%)	NO
03 Social Studio	NO (-94.3%)	NO
03 Social Studio	NO (-94.5%)	NO
03 Social Studio	NO (-92.8%)	NO
03 Social Studio	NO (-94.7%)	NO
03 Social Studio	NO (-93.4%)	NO
03 Social Studio	NO (-87%)	NO
03 Studio 01	NO (-93.5%)	NO
03 Studio 01	NO (-93.2%)	NO
03 Studio 01	NO (-92.5%)	NO
03 Studio 01	NO (-91.9%)	NO
03 Studio 01	NO (-91.9%)	NO
03 Studio 01	NO (-91.5%)	NO
03 Studio 01	NO (-79.8%)	NO
03 Studio 01	NO (-91.7%)	NO
03 Studio 01	NO (-91.6%)	NO
03 Studio 01	NO (-80%)	NO
03 Studio 01	NO (-75.7%)	NO
03 Studio 01	NO (-75.2%)	NO
03 Studio 01	NO (-80.1%)	NO
03 Studio 01	NO (-93.2%)	NO
03 Studio 01	NO (-80.1%)	NO
03 Studio 01	NO (-75.8%)	NO
03 Studio 01	NO (-76.2%)	NO
03 Studio 01	NO (-61.9%)	NO
03 Studio 01	NO (-80%)	NO
03 Studio 01	NO (-78.1%)	NO
03 Studio 01	NO (-80%)	NO
03 Studio 01	NO (-80.1%)	NO
03 Studio 01	NO (-76.6%)	NO
03 Studio 01	NO (-75.6%)	NO
03 Studio 01	NO (-80.1%)	NO
03 Studio 01	NO (-67.9%)	NO
03 Studio 01	NO (-75.3%)	NO
03 Studio 01	NO (-93.2%)	NO
03 Studio 01	NO (-93.6%)	NO
03 Studio 01	NO (-75.8%)	NO
03 Studio 01	NO (-93.4%)	NO
03 Studio 01	NO (-90.6%)	NO
03 Studio 01	NO (-75.6%)	NO
03 Studio 01 - MVHR	NO (-72.3%)	NO
03 Studio 01 - MVHR	NO (-68.2%)	NO
03 Studio 01 - MVHR	NO (-51.6%)	NO
03 Studio 01 - MVHR	NO (-68.1%)	NO
03 Studio 01 - MVHR	NO (-77%)	NO
03 Studio 01 - MVHR	NO (-68.3%)	NO
06 Studio 01 - MVHR	NO (-68.4%)	NO
06 Studio 02	NO (-93.4%)	NO
06 Studio 02 - MVHR	NO (-38.1%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
06 Studio 02 - MVHR	NO (-56.3%)	NO
06 Studio 02 - MVHR	NO (-36.8%)	NO
06 Studio 02 - MVHR	NO (-72.3%)	NO
06 Studio 02 - MVHR	NO (-56.4%)	NO
06 Studio 02 - MVHR	NO (-56.5%)	NO
06 Studio 02 - MVHR	NO (-53.9%)	NO
03 1 Bed Studio	NO (-75.8%)	NO
03 1 Bed Studio	NO (-75.9%)	NO
03 1 Bed Studio	NO (-70.7%)	NO
03 1 Bed Studio	NO (-90.3%)	NO
03 1 Bed Studio	NO (-91.6%)	NO
03 1 Bed Studio	NO (-70.8%)	NO
03 1 Bed Studio	NO (-70.4%)	NO
03 1 Bed Studio	NO (-76%)	NO
03 1 Bed Studio	NO (-95.9%)	NO
02 1 Bed Studio - MVHR	NO (-67.9%)	NO
02 1 Bed Studio - MVHR	NO (-65.8%)	NO
02 Accessible Studio	NO (-96.7%)	NO
02 Accessible Studio	NO (-95.8%)	NO
02 Accessible Studio	NO (-81.8%)	NO
02 Accessible Studio	NO (-78.9%)	NO
02 Accessible Studio	NO (-95.6%)	NO
02 Accessible Studio	NO (-93.6%)	NO
02 Accessible Studio - MVHR	NO (-69.5%)	NO
02 Ensuite	NO (-94.8%)	NO
02 Shower Pod	N/A	N/A
02 Ensuite	NO (-93.4%)	NO
02 Ensuite	NO (-93.5%)	NO
02 Ensuite	NO (-93.6%)	NO
02 Ensuite	NO (-93.5%)	NO
02 Ensuite	NO (-94.2%)	NO
02 Ensuite	NO (-93.8%)	NO
02 Ensuite	NO (-94.6%)	NO
02 Shower Pod - MVHR	N/A	N/A
02 Shower Pod - MVHR	N/A	N/A
02 Shower Pod - MVHR	N/A	N/A
02 Shower Pod - MVHR	N/A	N/A
02 Shower Pod - MVHR	N/A	N/A
02 Shower Pod - MVHR	N/A	N/A
02 Shower Pod - MVHR	N/A	N/A
02 Shower Pod - MVHR	N/A	N/A
02 Shower Pod - MVHR	N/A	N/A
02 Shower Pod - MVHR	N/A	N/A
02 Shower Pod - MVHR	N/A	N/A
02 Shower Pod - MVHR	N/A	N/A
02 Shower Pod - MVHR	N/A	N/A
02 Shower Pod - MVHR	N/A	N/A
02 Shower Pod - MVHR	N/A	N/A
02 Shower Pod - MVHR	N/A	N/A
02 Shower Pod - MVHR	N/A	N/A
02 Shower Pod - MVHR	N/A	N/A

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
02 Shower Pod - MVHR	N/A	N/A
02 Social Studio	NO (-94.5%)	NO
02 Social Studio	NO (-87.9%)	NO
02 Social Studio	NO (-95.1%)	NO
02 Social Studio	NO (-94.9%)	NO
02 Social Studio	NO (-94.6%)	NO
02 Social Studio	NO (-94.6%)	NO
02 Social Studio	NO (-93.4%)	NO
02 Social Studio	NO (-94.9%)	NO
02 Social Studio	NO (-93.9%)	NO
02 Social Studio	NO (-88.5%)	NO
02 Studio 01	NO (-94%)	NO
02 Studio 01	NO (-93.9%)	NO
02 Studio 01	NO (-92.9%)	NO
02 Studio 01	NO (-91.9%)	NO
02 Studio 01	NO (-92.6%)	NO
02 Studio 01	NO (-92.2%)	NO
02 Studio 01	NO (-79.8%)	NO
02 Studio 01	NO (-92.3%)	NO
02 Studio 01	NO (-92.6%)	NO
02 Studio 01	NO (-80%)	NO
02 Studio 01	NO (-75.7%)	NO
02 Studio 01	NO (-75.2%)	NO
02 Studio 01	NO (-80.1%)	NO
02 Studio 01	NO (-94.1%)	NO
02 Studio 01	NO (-80.1%)	NO
02 Studio 01	NO (-75.8%)	NO
02 Studio 01	NO (-76.2%)	NO
02 Studio 01	NO (-61.9%)	NO
02 Studio 01	NO (-80%)	NO
02 Studio 01	NO (-78.1%)	NO
02 Studio 01	NO (-80%)	NO
02 Studio 01	NO (-80.1%)	NO
02 Studio 01	NO (-76.7%)	NO
02 Studio 01	NO (-75.6%)	NO
02 Studio 01	NO (-80.1%)	NO
02 Studio 01	NO (-67.9%)	NO
02 Studio 01	NO (-75.3%)	NO
02 Studio 01	NO (-94.1%)	NO
02 Studio 01	NO (-94.8%)	NO
02 Studio 01	NO (-75.8%)	NO
02 Studio 01	NO (-94.5%)	NO
02 Studio 01	NO (-90.6%)	NO
02 Studio 01	NO (-75.6%)	NO
02 Studio 01 - MVHR	NO (-72.3%)	NO
02 Studio 01 - MVHR	NO (-68.2%)	NO
02 Studio 01 - MVHR	NO (-51.6%)	NO
02 Studio 01 - MVHR	NO (-68.1%)	NO
02 Studio 01 - MVHR	NO (-77%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
02 Studio 01 - MVHR	NO (-68.3%)	NO
02 Studio 01 - MVHR	NO (-68.4%)	NO
02 Studio 02	NO (-93.8%)	NO
02 Studio 02 - MVHR	NO (-38.1%)	NO
02 Studio 02 - MVHR	NO (-56.3%)	NO
02 Studio 02 - MVHR	NO (-36.8%)	NO
02 Studio 02 - MVHR	NO (-72.3%)	NO
02 Studio 02 - MVHR	NO (-56.4%)	NO
02 Studio 02 - MVHR	NO (-56.5%)	NO
02 Studio 02 - MVHR	NO (-53.9%)	NO
02 1 Bed Studio	NO (-75.8%)	NO
02 1 Bed Studio	NO (-75.9%)	NO
02 1 Bed Studio	NO (-70.7%)	NO
02 1 Bed Studio	NO (-91.9%)	NO
02 1 Bed Studio	NO (-92.6%)	NO
02 1 Bed Studio	NO (-70.8%)	NO
02 1 Bed Studio	NO (-70.4%)	NO
02 1 Bed Studio	NO (-76%)	NO
02 1 Bed Studio	NO (-96.5%)	NO
01 1 Bed Studio - MVHR	NO (-67.9%)	NO
01 1 Bed Studio - MVHR	NO (-65.8%)	NO
01 Accessible Studio	NO (-96.9%)	NO
01 Accessible Studio	NO (-96.3%)	NO
01 Accessible Studio	NO (-82.9%)	NO
01 Accessible Studio	NO (-81.5%)	NO
01 Accessible Studio	NO (-95.9%)	NO
01 Accessible Studio	NO (-94%)	NO
01 Accessible Studio - MVHR	NO (-69.5%)	NO
01 Ensuite	NO (-95%)	NO
01 Shower Pod	N/A	N/A
01 Ensuite	NO (-94.2%)	NO
01 Ensuite	NO (-94.2%)	NO
01 Ensuite	NO (-94.3%)	NO
01 Ensuite	NO (-94.2%)	NO
01 Ensuite	NO (-94.9%)	NO
01 Ensuite	NO (-94.8%)	NO
01 Ensuite	NO (-94.9%)	NO
01 Shower Pod - MVHR	N/A	N/A
01 Shower Pod - MVHR	N/A	N/A
01 Shower Pod - MVHR	N/A	N/A
01 Shower Pod - MVHR	N/A	N/A
01 Shower Pod - MVHR	N/A	N/A
01 Shower Pod - MVHR	N/A	N/A
01 Shower Pod - MVHR	N/A	N/A
01 Shower Pod - MVHR	N/A	N/A
01 Shower Pod - MVHR	N/A	N/A
01 Shower Pod - MVHR	N/A	N/A
01 Shower Pod - MVHR	N/A	N/A
01 Shower Pod - MVHR	N/A	N/A

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
01 Shower Pod - MVHR	N/A	N/A
01 Shower Pod - MVHR	N/A	N/A
01 Shower Pod - MVHR	N/A	N/A
01 Shower Pod - MVHR	N/A	N/A
01 Shower Pod - MVHR	N/A	N/A
01 Social Studio	NO (-95%)	NO
01 Social Studio	NO (-89.3%)	NO
01 Social Studio	NO (-95.5%)	NO
01 Social Studio	NO (-95.3%)	NO
01 Social Studio	NO (-95.1%)	NO
01 Social Studio	NO (-95.2%)	NO
01 Social Studio	NO (-94.2%)	NO
01 Social Studio	NO (-95.3%)	NO
01 Social Studio	NO (-94.7%)	NO
01 Social Studio	NO (-89.7%)	NO
01 Studio 01	NO (-94.8%)	NO
01 Studio 01	NO (-94.8%)	NO
01 Studio 01	NO (-93.6%)	NO
01 Studio 01	NO (-91.9%)	NO
01 Studio 01	NO (-93.2%)	NO
01 Studio 01	NO (-93.3%)	NO
01 Studio 01	NO (-79.8%)	NO
01 Studio 01	NO (-93%)	NO
01 Studio 01	NO (-93.4%)	NO
01 Studio 01	NO (-80%)	NO
01 Studio 01	NO (-75.7%)	NO
01 Studio 01	NO (-75.2%)	NO
01 Studio 01	NO (-80.1%)	NO
01 Studio 01	NO (-95%)	NO
01 Studio 01	NO (-80.1%)	NO
01 Studio 01	NO (-75.8%)	NO
01 Studio 01	NO (-76.2%)	NO
01 Studio 01	NO (-61.9%)	NO
01 Studio 01	NO (-80%)	NO
01 Studio 01	NO (-78.1%)	NO
01 Studio 01	NO (-80%)	NO
01 Studio 01	NO (-80.1%)	NO
01 Studio 01	NO (-76.2%)	NO
01 Studio 01	NO (-75.6%)	NO
01 Studio 01	NO (-80.1%)	NO
01 Studio 01	NO (-67.9%)	NO
01 Studio 01	NO (-75.3%)	NO
01 Studio 01	NO (-95%)	NO
01 Studio 01	NO (-95.5%)	NO
01 Studio 01	NO (-75.8%)	NO
01 Studio 01	NO (-95.1%)	NO
01 Studio 01	NO (-90.8%)	NO
01 Studio 01	NO (-75.6%)	NO
01 Studio 01 - MVHR	NO (-72.3%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
01 Studio 01 - MVHR	NO (-68.2%)	NO
01 Studio 01 - MVHR	NO (-51.6%)	NO
01 Studio 01 - MVHR	NO (-68.1%)	NO
01 Studio 01 - MVHR	NO (-76.9%)	NO
01 Studio 01 - MVHR	NO (-68.3%)	NO
01 Studio 01 - MVHR	NO (-68.4%)	NO
01 Studio 02	NO (-94.1%)	NO
01 Studio 02 - MVHR	NO (-38.1%)	NO
01 Studio 02 - MVHR	NO (-56.3%)	NO
01 Studio 02 - MVHR	NO (-36.8%)	NO
01 Studio 02 - MVHR	NO (-72.3%)	NO
01 Studio 02 - MVHR	NO (-56.4%)	NO
01 Studio 02 - MVHR	NO (-56.5%)	NO
01 Studio 02 - MVHR	NO (-53.9%)	NO
01 1 Bed Studio	NO (-75.8%)	NO
01 1 Bed Studio	NO (-75.9%)	NO
01 1 Bed Studio	NO (-70.9%)	NO
01 1 Bed Studio	NO (-93.3%)	NO
01 1 Bed Studio	NO (-93.2%)	NO
01 1 Bed Studio	NO (-70.8%)	NO
01 1 Bed Studio	NO (-70.4%)	NO
01 1 Bed Studio	NO (-76%)	NO
01 1 Bed Studio	NO (-97%)	NO

Regulation 25A: Consideration of high efficiency alternative energy systems

Were alternative energy systems considered and analysed as part of the design process?	NO
Is evidence of such assessment available as a separate submission?	NO
Are any such measures included in the proposed design?	NO

Technical Data Sheet (Actual vs. Notional Building)

Building Global Parameters

	Actual	Notional
Floor area [m ²]	18872.7	18872.7
External area [m ²]	13833	14061.3
Weather	LON	LON
Infiltration [m ³ /hm ² @ 50Pa]	2	3
Average conductance [W/K]	4193.64	6212.73
Average U-value [W/m ² K]	0.3	0.44
Alpha value* [%]	23.91	10

* Percentage of the building's average heat transfer coefficient which is due to thermal bridging

Building Use

% Area Building Type

Retail/Financial and Professional Services
 Restaurants and Cafes/Drinking Establishments/Takeaways
 Offices and Workshop Businesses
 General Industrial and Special Industrial Groups
 Storage or Distribution
 Hotels
 Residential Institutions: Hospitals and Care Homes
 Residential Institutions: Residential Schools

100 Residential Institutions: Universities and Colleges

Secure Residential Institutions
 Residential Spaces
 Non-residential Institutions: Community/Day Centre
 Non-residential Institutions: Libraries, Museums, and Galleries
 Non-residential Institutions: Education
 Non-residential Institutions: Primary Health Care Building
 Non-residential Institutions: Crown and County Courts
 General Assembly and Leisure, Night Clubs, and Theatres
 Others: Passenger Terminals
 Others: Emergency Services
 Others: Miscellaneous 24hr Activities
 Others: Car Parks 24 hrs
 Others: Stand Alone Utility Block

Energy Consumption by End Use [kWh/m²]

	Actual	Notional
Heating	8.55	14.73
Cooling	0.12	0.13
Auxiliary	2.13	3.38
Lighting	5.48	6.6
Hot water	6.61	5.57
Equipment*	19.86	19.86
TOTAL **	22.89	30.41

* Energy used by equipment does not count towards the total for consumption or calculating emissions.

** Total is net of any electrical energy displaced by CHP generators, if applicable.

Energy Production by Technology [kWh/m²]

	Actual	Notional
Photovoltaic systems	5.61	0
Wind turbines	0	0
CHP generators	0	0
Solar thermal systems	0	0
<i>Displaced electricity</i>	<i>5.61</i>	<i>0</i>

Energy & CO₂ Emissions Summary

	Actual	Notional
Heating + cooling demand [MJ/m ²]	100.65	148.71
Primary energy [kWh _{PE} /m ²]	26.02	45.63
Total emissions [kg/m ²]	2.51	4.32

HVAC Systems Performance										
System Type	Heat dem MJ/m2	Cool dem MJ/m2	Heat con kWh/m2	Cool con kWh/m2	Aux con kWh/m2	Heat SSEFF	Cool SSEER	Heat gen SEFF	Cool gen SEER	
[ST] Split or multi-split system, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
Actual	206.4	11.6	14.6	0.7	0	3.92	4.48	4	6	
Notional	184.4	11.1	18.4	1.1	0	2.78	2.84	----	----	
[ST] Central heating using water: floor heating, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
Actual	147.6	0	13.2	0	3.1	3.1	0	3.3	0	
Notional	130.6	0	13.1	0	3.8	2.78	0	----	----	
[ST] Central heating using water: floor heating, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
Actual	135.4	0	12.1	0	2.6	3.1	0	3.3	0	
Notional	213.3	0	21.3	0	4.8	2.78	0	----	----	
[ST] Split or multi-split system, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
Actual	27.3	8.2	1.9	0.5	1.9	3.92	4.48	4	6	
Notional	59.2	4.5	5.9	0.4	2.6	2.78	2.84	----	----	
[ST] No Heating or Cooling										
Actual	0	0	0	0	0	0	0	0	0	
Notional	0	0	0	0	0	0	0	----	----	

Key to terms

Heat dem [MJ/m2]	= Heating energy demand
Cool dem [MJ/m2]	= Cooling energy demand
Heat con [kWh/m2]	= Heating energy consumption
Cool con [kWh/m2]	= Cooling energy consumption
Aux con [kWh/m2]	= Auxiliary energy consumption
Heat SSEFF	= Heating system seasonal efficiency (for notional building, value depends on activity glazing class)
Cool SSEER	= Cooling system seasonal energy efficiency ratio
Heat gen SSEFF	= Heating generator seasonal efficiency
Cool gen SSEER	= Cooling generator seasonal energy efficiency ratio
ST	= System type
HS	= Heat source
HFT	= Heating fuel type
CFT	= Cooling fuel type



Appendix C – Be Lean BRUKL Non-Residential – Commercial Unit Only

Project name

2347 Fusion LL commercial unit - Be Lean

As designed

Date: Fri Jan 26 16:45:28 2024

Administrative information

Building Details

Address: Lordship Lane, London,

Certifier details

Name: Name

Telephone number: Phone

Address: Street Address, City, Postcode

Certification tool

Calculation engine: Apache

Calculation engine version: 7.0.24

Interface to calculation engine: IES Virtual Environment

Interface to calculation engine version: 7.0.24

BRUKL compliance module version: v6.1.e.1

Foundation area [m²]: 708.97The CO₂ emission and primary energy rates of the building must not exceed the targets

Target CO ₂ emission rate (TER), kgCO ₂ /m ² annum	2.7
Building CO ₂ emission rate (BER), kgCO ₂ /m ² annum	2.57
Target primary energy rate (TPER), kWh _{PE} /m ² annum	29.1
Building primary energy rate (BPER), kWh _{PE} /m ² annum	27.65
Do the building's emission and primary energy rates exceed the targets?	BER ≤ TER BPER ≤ TPER

The performance of the building fabric and fixed building services should achieve reasonable overall standards of energy efficiency

Fabric element	U _{a-Limit}	U _{a-Calc}	U _{i-Calc}	First surface with maximum value
Walls*	0.26	0.15	0.15	00000000:Surf[11]
Floors	0.18	0.12	0.12	00000000:Surf[0]
Pitched roofs	0.16	-	-	No pitched roofs in building
Flat roofs	0.18	0.1	0.1	00000000:Surf[1]
Windows** and roof windows	1.6	1.2	1.2	00000000:Surf[2]
Rooflights***	2.2	-	-	No roof lights in building
Personnel doors^	1.6	-	-	No personnel doors in building
Vehicle access & similar large doors	1.3	-	-	No vehicle access doors in building
High usage entrance doors	3	1.2	1.2	00000000:Surf[8]

U_{a-Limit} = Limiting area-weighted average U-values [W/(m²K)]U_{i-Calc} = Calculated maximum individual element U-values [W/(m²K)]U_{a-Calc} = Calculated area-weighted average U-values [W/(m²K)]

* Automatic U-value check by the tool does not apply to curtain walls whose limiting standard is similar to that for windows.

** Display windows and similar glazing are excluded from the U-value check.

*** Values for rooflights refer to the horizontal position.

^ For fire doors, limiting U-value is 1.8 W/m²K

NB: Neither roof ventilators (inc. smoke vents) nor swimming pool basins are modelled or checked against the limiting standards by the tool.

Air permeability	Limiting standard	This building
m ³ /(h.m ²) at 50 Pa	8	2

Building services

For details on the standard values listed below, system-specific guidance, and additional regulatory requirements, refer to the Approved Documents.

Whole building lighting automatic monitoring & targeting with alarms for out-of-range values	NO
Whole building electric power factor achieved by power factor correction	>0.95

1- VRF + MVHR (Be lean)

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	2.64	5.79	0	-	0.8
Standard value	2.5*	5	N/A	N/A	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					

1- Commercial Unit DHW (be lean)

	Water heating efficiency	Storage loss factor [kWh/litre per day]
This building	1	-
Standard value	1	N/A

Zone-level mechanical ventilation, exhaust, and terminal units

ID	System type in the Approved Documents
A	Local supply or extract ventilation units
B	Zonal supply system where the fan is remote from the zone
C	Zonal extract system where the fan is remote from the zone
D	Zonal balanced supply and extract ventilation system
E	Local balanced supply and extract ventilation units
F	Other local ventilation units
G	Fan assisted terminal variable air volume units
H	Fan coil units
I	Kitchen extract with the fan remote from the zone and a grease filter
NB: Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.	

Zone name	SFP [W/(l/s)]										HR efficiency	
ID of system type	A	B	C	D	E	F	G	H	I		Zone	Standard
Standard value	0.3	1.1	0.5	2.3	2	0.5	0.5	0.4	1			
00 Commercial unit	-	-	-	1.1	-	-	-	-	-	-	-	N/A

General lighting and display lighting	General luminaire	Display light source	
Zone name	Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m²]
Standard value	95	80	0.3
00 Commercial unit	110	100	1.5

The spaces in the building should have appropriate passive control measures to limit solar gains in summer

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
00 Commercial unit	YES (+11.3%)	NO

Regulation 25A: Consideration of high efficiency alternative energy systems

Were alternative energy systems considered and analysed as part of the design process?	NO
Is evidence of such assessment available as a separate submission?	NO
Are any such measures included in the proposed design?	NO

Technical Data Sheet (Actual vs. Notional Building)

Building Global Parameters

	Actual	Notional
Floor area [m ²]	681.2	681.2
External area [m ²]	1107.5	1107.5
Weather	LON	LON
Infiltration [m ³ /hm ² @ 50Pa]	2	3
Average conductance [W/K]	327.6	317.48
Average U-value [W/m ² K]	0.3	0.29
Alpha value* [%]	24.2	10

* Percentage of the building's average heat transfer coefficient which is due to thermal bridging

Building Use

% Area	Building Type
100	Retail/Financial and Professional Services
	Restaurants and Cafes/Drinking Establishments/Takeaways
	Offices and Workshop Businesses
	General Industrial and Special Industrial Groups
	Storage or Distribution
	Hotels
	Residential Institutions: Hospitals and Care Homes
	Residential Institutions: Residential Schools
	Residential Institutions: Universities and Colleges
	Secure Residential Institutions
	Residential Spaces
	Non-residential Institutions: Community/Day Centre
	Non-residential Institutions: Libraries, Museums, and Galleries
	Non-residential Institutions: Education
	Non-residential Institutions: Primary Health Care Building
	Non-residential Institutions: Crown and County Courts
	General Assembly and Leisure, Night Clubs, and Theatres
	Others: Passenger Terminals
	Others: Emergency Services
	Others: Miscellaneous 24hr Activities
	Others: Car Parks 24 hrs
	Others: Stand Alone Utility Block

Energy Consumption by End Use [kWh/m²]

	Actual	Notional
Heating	3.03	2.08
Cooling	1.48	1.13
Auxiliary	2.91	2.38
Lighting	9.49	12.41
Hot water	1.7	1.61
Equipment*	20.26	20.26
TOTAL **	18.6	19.61

* Energy used by equipment does not count towards the total for consumption or calculating emissions.

** Total is net of any electrical energy displaced by CHP generators, if applicable.

Energy Production by Technology [kWh/m²]

	Actual	Notional
Photovoltaic systems	0	0
Wind turbines	0	0
CHP generators	0	0
Solar thermal systems	0	0
<i>Displaced electricity</i>	<i>0</i>	<i>0</i>

Energy & CO₂ Emissions Summary

	Actual	Notional
Heating + cooling demand [MJ/m ²]	51.74	32.35
Primary energy [kWh _{PE} /m ²]	27.65	29.1
Total emissions [kg/m ²]	2.57	2.7

HVAC Systems Performance										
System Type	Heat dem MJ/m2	Cool dem MJ/m2	Heat con kWh/m2	Cool con kWh/m2	Aux con kWh/m2	Heat SSEFF	Cool SSEER	Heat gen SEFF	Cool gen SEER	
[ST] Split or multi-split system, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	28.8	23	3	1.5	2.9	2.64	4.33	2.64	5.79
	Notional	20.8	11.5	2.1	1.1	2.4	2.78	2.84	----	----
[ST] No Heating or Cooling										
	Actual	0	0	0	0	0	0	0	0	0
	Notional	0	0	0	0	0	0	0	----	----

Key to terms

Heat dem [MJ/m2]	= Heating energy demand
Cool dem [MJ/m2]	= Cooling energy demand
Heat con [kWh/m2]	= Heating energy consumption
Cool con [kWh/m2]	= Cooling energy consumption
Aux con [kWh/m2]	= Auxiliary energy consumption
Heat SSEFF	= Heating system seasonal efficiency (for notional building, value depends on activity glazing class)
Cool SSEER	= Cooling system seasonal energy efficiency ratio
Heat gen SSEFF	= Heating generator seasonal efficiency
Cool gen SSEER	= Cooling generator seasonal energy efficiency ratio
ST	= System type
HS	= Heat source
HFT	= Heating fuel type
CFT	= Cooling fuel type



Appendix D – Be Green BRUKL Non-Residential – Commercial Unit Only

Project name

2347 Fusion LL commercial unit - Be Green

As designed

Date: Fri Jan 26 16:59:56 2024

Administrative information

Building Details

Address: Lordship Lane, London,

Certifier details

Name: Name

Telephone number: Phone

Address: Street Address, City, Postcode

Certification tool

Calculation engine: Apache

Calculation engine version: 7.0.24

Interface to calculation engine: IES Virtual Environment

Interface to calculation engine version: 7.0.24

BRUKL compliance module version: v6.1.e.1

Foundation area [m²]: 708.97The CO₂ emission and primary energy rates of the building must not exceed the targets

Target CO ₂ emission rate (TER), kgCO ₂ /m ² annum	2.7
Building CO ₂ emission rate (BER), kgCO ₂ /m ² annum	2.42
Target primary energy rate (TPER), kWh _{PE} /m ² annum	29.1
Building primary energy rate (BPER), kWh _{PE} /m ² annum	26.05
Do the building's emission and primary energy rates exceed the targets?	BER ≤ TER BPER ≤ TPER

The performance of the building fabric and fixed building services should achieve reasonable overall standards of energy efficiency

Fabric element	U _a -Limit	U _a -Calc	U _i -Calc	First surface with maximum value
Walls*	0.26	0.15	0.15	00000000:Surf[11]
Floors	0.18	0.12	0.12	00000000:Surf[0]
Pitched roofs	0.16	-	-	No pitched roofs in building
Flat roofs	0.18	0.1	0.1	00000000:Surf[1]
Windows** and roof windows	1.6	1.2	1.2	00000000:Surf[2]
Rooflights***	2.2	-	-	No roof lights in building
Personnel doors^	1.6	-	-	No personnel doors in building
Vehicle access & similar large doors	1.3	-	-	No vehicle access doors in building
High usage entrance doors	3	1.2	1.2	00000000:Surf[8]

U_a-Limit = Limiting area-weighted average U-values [W/(m²K)]U_i-Calc = Calculated maximum individual element U-values [W/(m²K)]U_a-Calc = Calculated area-weighted average U-values [W/(m²K)]

* Automatic U-value check by the tool does not apply to curtain walls whose limiting standard is similar to that for windows.

** Display windows and similar glazing are excluded from the U-value check.

*** Values for rooflights refer to the horizontal position.

^ For fire doors, limiting U-value is 1.8 W/m²K

NB: Neither roof ventilators (inc. smoke vents) nor swimming pool basins are modelled or checked against the limiting standards by the tool.

Air permeability	Limiting standard	This building
m ³ /(h.m ²) at 50 Pa	8	2

Building services

For details on the standard values listed below, system-specific guidance, and additional regulatory requirements, refer to the Approved Documents.

Whole building lighting automatic monitoring & targeting with alarms for out-of-range values	NO
Whole building electric power factor achieved by power factor correction	>0.95

1- VRF + MVHR (social spaces)

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	4	6	0	-	0.8
Standard value	2.5*	5	N/A	N/A	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					

1- Commercial Unit DHW (be lean)

	Water heating efficiency	Storage loss factor [kWh/litre per day]
This building	1	-
Standard value	1	N/A

Zone-level mechanical ventilation, exhaust, and terminal units

ID	System type in the Approved Documents
A	Local supply or extract ventilation units
B	Zonal supply system where the fan is remote from the zone
C	Zonal extract system where the fan is remote from the zone
D	Zonal balanced supply and extract ventilation system
E	Local balanced supply and extract ventilation units
F	Other local ventilation units
G	Fan assisted terminal variable air volume units
H	Fan coil units
I	Kitchen extract with the fan remote from the zone and a grease filter
NB: Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.	

Zone name	SFP [W/(l/s)]										HR efficiency	
ID of system type	A	B	C	D	E	F	G	H	I		Zone	Standard
Standard value	0.3	1.1	0.5	2.3	2	0.5	0.5	0.4	1			
00 Commercial unit	-	-	-	1.1	-	-	-	-	-	-	-	N/A

General lighting and display lighting	General luminaire	Display light source	
Zone name	Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m²]
Standard value	95	80	0.3
00 Commercial unit	110	100	1.5

The spaces in the building should have appropriate passive control measures to limit solar gains in summer

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
00 Commercial unit	YES (+11.3%)	NO

Regulation 25A: Consideration of high efficiency alternative energy systems

Were alternative energy systems considered and analysed as part of the design process?	NO
Is evidence of such assessment available as a separate submission?	NO
Are any such measures included in the proposed design?	NO

Technical Data Sheet (Actual vs. Notional Building)

Building Global Parameters

	Actual	Notional
Floor area [m ²]	681.2	681.2
External area [m ²]	1107.5	1107.5
Weather	LON	LON
Infiltration [m ³ /hm ² @ 50Pa]	2	3
Average conductance [W/K]	327.6	317.48
Average U-value [W/m ² K]	0.3	0.29
Alpha value* [%]	24.2	10

* Percentage of the building's average heat transfer coefficient which is due to thermal bridging

Building Use

% Area	Building Type
100	Retail/Financial and Professional Services
	Restaurants and Cafes/Drinking Establishments/Takeaways
	Offices and Workshop Businesses
	General Industrial and Special Industrial Groups
	Storage or Distribution
	Hotels
	Residential Institutions: Hospitals and Care Homes
	Residential Institutions: Residential Schools
	Residential Institutions: Universities and Colleges
	Secure Residential Institutions
	Residential Spaces
	Non-residential Institutions: Community/Day Centre
	Non-residential Institutions: Libraries, Museums, and Galleries
	Non-residential Institutions: Education
	Non-residential Institutions: Primary Health Care Building
	Non-residential Institutions: Crown and County Courts
	General Assembly and Leisure, Night Clubs, and Theatres
	Others: Passenger Terminals
	Others: Emergency Services
	Others: Miscellaneous 24hr Activities
	Others: Car Parks 24 hrs
	Others: Stand Alone Utility Block

Energy Consumption by End Use [kWh/m²]

	Actual	Notional
Heating	2.04	2.08
Cooling	1.42	1.13
Auxiliary	2.91	2.38
Lighting	9.49	12.41
Hot water	1.7	1.61
Equipment*	20.26	20.26
TOTAL **	17.56	19.61

* Energy used by equipment does not count towards the total for consumption or calculating emissions.

** Total is net of any electrical energy displaced by CHP generators, if applicable.

Energy Production by Technology [kWh/m²]

	Actual	Notional
Photovoltaic systems	0	0
Wind turbines	0	0
CHP generators	0	0
Solar thermal systems	0	0
<i>Displaced electricity</i>	<i>0</i>	<i>0</i>

Energy & CO₂ Emissions Summary

	Actual	Notional
Heating + cooling demand [MJ/m ²]	51.74	32.35
Primary energy [kWh _{PE} /m ²]	26.06	29.1
Total emissions [kg/m ²]	2.42	2.7

HVAC Systems Performance										
System Type	Heat dem MJ/m2	Cool dem MJ/m2	Heat con kWh/m2	Cool con kWh/m2	Aux con kWh/m2	Heat SSEFF	Cool SSEER	Heat gen SEFF	Cool gen SEER	
[ST] Split or multi-split system, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	28.8	23	2	1.4	2.9	3.92	4.48	4	6
	Notional	20.8	11.5	2.1	1.1	2.4	2.78	2.84	----	----
[ST] No Heating or Cooling										
	Actual	0	0	0	0	0	0	0	0	0
	Notional	0	0	0	0	0	0	0	----	----

Key to terms

Heat dem [MJ/m2]	= Heating energy demand
Cool dem [MJ/m2]	= Cooling energy demand
Heat con [kWh/m2]	= Heating energy consumption
Cool con [kWh/m2]	= Cooling energy consumption
Aux con [kWh/m2]	= Auxiliary energy consumption
Heat SSEFF	= Heating system seasonal efficiency (for notional building, value depends on activity glazing class)
Cool SSEER	= Cooling system seasonal energy efficiency ratio
Heat gen SSEFF	= Heating generator seasonal efficiency
Cool gen SSEER	= Cooling generator seasonal energy efficiency ratio
ST	= System type
HS	= Heat source
HFT	= Heating fuel type
CFT	= Cooling fuel type



Appendix E – Part L1A Residential Emission Analysis

The applicant should complete all the light blue cells including information on the modelled units, the area per unit, the number of units, the TER/DER/BER and the TFEe/DFEE.																					
RESIDENTIAL CO ₂ ANALYSIS (PART L1)																					
Unit identifier (e.g. plot number, dwelling type etc.)	Model total floor area	Number of units	Total area represented by model	Baseline		'No Lean'	'No Clean'	'No Green'	Fabric Energy Efficiency (FEE)		Baseline		'No Lean'		'No Clean'		'No Green'				
				TER	Energy saving/generation technologies (%)	DER	DER	DER	Target Fabric Energy Efficiency	Dwelling Fabric Energy Efficiency	Part L 2021 CO ₂ emissions	Energy saving/generation technologies	Part L 2021 CO ₂ emissions	Part L 2021 CO ₂ emissions with National PV savings included	'No Lean' savings emissions	Part L 2021 CO ₂ emissions	Part L 2021 CO ₂ emissions with National PV savings included	'No Clean' savings emissions	Part L 2021 CO ₂ emissions	'No Green' savings emissions	
(a)(i)	(a)(ii)	(a)(iii)	(a)(iv)	(a)(v) (Row 27)	(a)(vi) (Row 28)	(a)(vii) (Row 27 or 28)	(a)(viii) (Row 27 or 28)	(a)(ix) (Row 27 or 28)	BWHP/m ²	BWHP/m ²	RuCO ₂ a-1	RuCO ₂ a-1	RuCO ₂ a-1	RuCO ₂ a-1	RuCO ₂ a-1	RuCO ₂ a-1	RuCO ₂ a-1	RuCO ₂ a-1	RuCO ₂ a-1	RuCO ₂ a-1	
GF and terrace d	548.3	2	548.3	15.25	-586.41	14.54	14.54	14.54	50.57	48.29	8.362	-588	7.972	7.988	976	7.972	7.988	0	2.133	5.253	
GF mid terrace d	587.2	1	587.2	13.25	-628.61	13.32	13.32	13.32	39.64	42.44	7.751	-628	7.822	7.833	956	7.822	7.833	0	2.137	5.056	
MF end terrace a	1271.7	2	1271.7	14.08	-1393.97	14.69	14.69	14.69	3.72	35.82	17.096	-1391	16.681	17.320	945	16.681	17.320	0	4.751	12.589	
MF mid terrace a	1450.5	1	1450.5	11.18	-3551.82	11.38	11.38	11.38	3.07	22.80	18.217	-1452	18.507	18.505	14,955	18.507	18,505	0	4.463	16,502	
TF end terrace a	546.6	2	546.6	16.59	-584.82	13.32	13.32	13.32	3.51	47.69	9.048	-585	7.281	6.696	2,272	7.281	6.696	0	1.919	4.777	
TF mid terrace a	412.9	1	412.9	14.86	-445.77	12.61	12.61	12.61	3.49	39.71	35.16	-447	5.289	4.687	1,288	5.289	4.687	0	1.454	3.444	
End terrace town	546.4	2	546.4	11.52	-1283.11	12.35	12.35	12.35	3.44	44.76	44.84	6,295	6,748	5,465	830	6,748	5,465	0	1,889	3,385	
Mid terrace town	402.9	1	402.9	10.17	-346.13	11.21	11.21	11.21	3.18	38.85	38.86	4,097	4,517	3,579	527	4,517	3,579	0	1,281	2,288	
Sum	8	5,767	13.2	-1,985.8	13.0	13.0	13.0	13.0	35.7	34.0	75.814	-7,383	74,814	67,423	6,397	74,814	67,423	0	19,937	67,496	
NON-RESIDENTIAL CO ₂ ANALYSIS (PART L2)																					
Building Use	Model Area	Number of units	Total area represented by model	Baseline		'No Lean'	'No Clean'	'No Green'	Baseline		'No Lean'		'No Clean'		'No Green'						
				BRUKL TER	BRUKL Disposed electricity (%)	BRUKL BER	BRUKL BER	BRUKL BER	Part L 2021 CO ₂ emissions	Energy saving/generation technologies	Part L 2021 CO ₂ emissions	Part L 2021 CO ₂ emissions with National PV savings included	'No Lean' savings emissions	Part L 2021 CO ₂ emissions	Part L 2021 CO ₂ emissions with National PV savings included	'No Clean' savings emissions	Part L 2021 CO ₂ emissions	'No Green' savings emissions			
(a)(i)	(a)(ii)	(a)(iii)	(a)(iv)	(a)(v) HMM (a)(vi) HMM (a)(vi)	(a)(vii) HMM (a)(vi) HMM (a)(vi)	(a)(viii) HMM (a)(vi) HMM (a)(vi)	(a)(ix) HMM (a)(vi) HMM (a)(vi)	(a)(x) HMM (a)(vi) HMM (a)(vi)	RuCO ₂ a-1	RuCO ₂ a-1	RuCO ₂ a-1	RuCO ₂ a-1	RuCO ₂ a-1	RuCO ₂ a-1	RuCO ₂ a-1	RuCO ₂ a-1	RuCO ₂ a-1	RuCO ₂ a-1	RuCO ₂ a-1		
PSRA	28872.7	1	28872.7	4.32	0.00	3.65	3.65	2.51	61,530	0.00	60,885.36	60,885	60,885	12,545	60,885	60,885	0	47,370	21,515		
Commercial unit	692.2	1	692.2	2.70	0.00	2.57	2.57	2.42	1,839	0.00	1,795.68	1,751	89	1,751	1,751	1,751	0	1,649	102		
Sum	2	19,564	4.3	0.0	3.6	3.6	3.6	2.5	63,369	0	70,636	70,636	70,636	12,722	70,636	70,636	0	49,019	21,617		
SITE-WIDE ENERGY CONSUMPTION AND CO ₂ ANALYSIS																					
Total Sum	25,320	-	-	-	-	-	-	-	169,200	-7,383	165,452	158,699	21,121	165,452	158,699	0	66,394	69,123			



Appendix F – GLA Carbon Reporting Tool Summary

Part L 2021 Performance

Residential

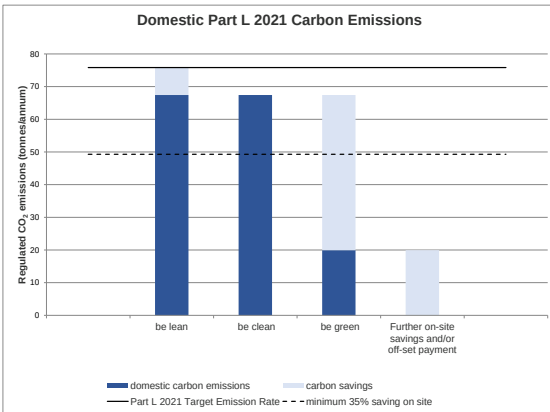
Table 1: Carbon Dioxide Emissions after each stage of the Energy Hierarchy for residential buildings

	Carbon Dioxide Emissions for residential buildings (Tonnes CO ₂ per annum)	
	Regulated	Unregulated
Baseline: Part L 2021 of the Building Regulations Compliant Development	75.8	32.0
After energy demand reduction (be lean)	67.4	32.0
After heat network connection (be clean)	67.4	32.0
After renewable energy (be green)	19.9	32.0

Table 2: Regulated Carbon Dioxide savings from each stage of the Energy Hierarchy for residential buildings

	Regulated residential carbon dioxide savings	
	(Tonnes CO ₂ per annum)	(%)
Be lean: savings from energy demand reduction	8.4	11%
Be clean: savings from heat network	0.0	0%
Be green: savings from renewable energy	47.5	63%
Cumulative on site savings	55.9	74%
Annual savings from off-set payment	19.9	-
(Tonnes CO ₂)		
Cumulative savings for off-set payment	598	-
Cash in-lieu contribution (£)	56,821	

*carbon price is based on GLA recommended price of £95 per tonne of carbon dioxide unless Local Planning Authority price is inputted in the 'Development Information' tab



Non-residential

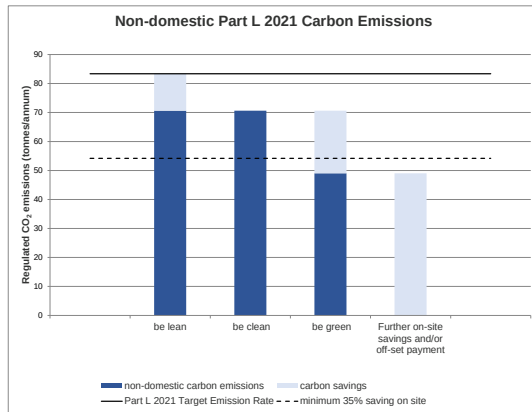
Table 3: Carbon Dioxide Emissions after each stage of the Energy Hierarchy for non-residential buildings

	Carbon Dioxide Emissions for non-residential buildings (Tonnes CO ₂ per annum)	
	Regulated	Unregulated
Baseline: Part L 2021 of the Building Regulations Compliant Development	83.4	55.3
After energy demand reduction (be lean)	70.6	55.3
After heat network connection (be clean)	70.6	55.3
After renewable energy (be green)	49.0	55.3

Table 4: Regulated Carbon Dioxide savings from each stage of the Energy Hierarchy for non-residential buildings

	Regulated non-residential carbon dioxide savings	
	(Tonnes CO ₂ per annum)	(%)
Be lean: savings from energy demand reduction	12.7	15%
Be clean: savings from heat network	0.0	0%
Be green: savings from renewable energy	21.6	26%
Total Cumulative Savings	34.4	41%
Annual savings from off-set payment	49.0	-
(Tonnes CO ₂)		
Cumulative savings for off-set payment	1,471	-
Cash in-lieu contribution (£)	139,704	

*carbon price is based on GLA recommended price of £95 per tonne of carbon dioxide unless Local Planning Authority price is inputted in the 'Development Information' tab



SITE-WIDE

	Total regulated emissions (Tonnes CO ₂ / year)	CO ₂ savings (Tonnes CO ₂ / year)	Percentage savings (%)
Part L 2021 baseline	159.2		
Be lean	138.1	21.1	13%
Be clean	138.1	0.0	0%
Be green	69.0	69.1	43%
Total Savings	-	90.2	57%
	-	CO ₂ savings off-set (Tonnes CO ₂)	-
Off-set	-	2,068.7	-

	Target Fabric Energy Efficiency (kWh/m ²)	Dwelling Fabric Energy Efficiency (kWh/m ²)	Improvement (%)
Development total	35.74	34.00	5%

	Area weighted non-residential cooling demand (MJ/m ²)	Total non-residential cooling demand (MJ/year)
Actual		
Notional		

EUI & space heating demand (predicted energy use)

Residential

Building type	EUI (kWh/m ² /year) (excluding renewable energy)	Space heating demand (kWh/m ² /year) (excluding renewable energy)	EUI value from Table 4 of the guidance (kWh/m ² /year) (excluding renewable energy)	Space heating demand from Table 4 of the guidance(kWh/m ² /year) (excluding renewable energy)	Methodology used (e.g. 'be seen' methodology or an alternative predictive energy modelling methodology)	Explanatory notes (if expected performance differs from the Table 4 values in the guidance)

Non-residential

Building type	EUI (kWh/m ² /year) (excluding renewable energy)	Space heating demand (kWh/m ² /year) (excluding renewable energy)	EUI value from Table 4 of the guidance (kWh/m ² /year) (excluding renewable energy)	Space heating demand from Table 4 of the guidance(kWh/m ² /year) (excluding renewable energy)	Methodology used (e.g. 'be seen' methodology or an alternative predictive energy modelling methodology)	Explanatory notes (if expected performance differs from the Table 4 values in the guidance)