

Project Name: Plaza Logistica Ciudad WH1
Subproject Name: Plaza Logistica Ciudad WH1

Project Details

Project Name Plaza Logistica Ciudad WH1	Address Line1 Pergamino y Av. Cnel. Roca
Number of Distinct Buildings 1	Address Line2
Number of EDGE Subproject(s) associated 1	City Ciudad Autonoma de Buenos Aires
Total Project Floor Area (m²) 41,495	State/ Province Ciudad Autonoma de Buenos Aires
Project Owner Name Plaza Logistica SRL	Postal Code C1437CCH
Project Owner Email ebh@plazalogistica.com.ar	Country Argentina
Project Owner Phone Office 54 - 1152361010	Project Number 1000584124
Share with Investor(s) or Bank(s)? No	

Associated Subproject(s)
Plaza Logistica Ciudad WH1

Subproject Details

Subproject Name Plaza Logistica Ciudad WH1	Address Line1 Pergamino y Av. Cnel. Roca
Retail Store Name Plaza Logistica Ciudad WH1	Address Line2
Subproject Multiplier for the Project 1	City Ciudad Autonoma de Buenos Aires
Certification Stage Preliminary	State/ Province Ciudad Autonoma de Buenos Aires
Status Pending certifier acceptance	Postal Code C1437CCH
Auditor	Country Argentina
Certifier	Subproject Type New Building

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Location Data



Basic Parameters

Type of Retail	Landscaped Area (m ²)
Warehouse	✓ 1,572.13
Site Area (m ²)	
58,587.2	
Car Parking	Kitchenette
None	
Use	
1 Shift (8hrs, 6d/wk)	

Building Data

Floors Above Ground (no.)	Floor to Floor Height (m)
1	11.95
Floors Below Ground (no.)	Gross Internal Area (m ²)
0	41,495

<i>Default</i>	<i>User Entry</i>	<i>Set Point Temperature</i>			
		<i>Space Conditioning</i>	<i>Cooling & Heating</i>	<i>Cooling</i>	<i>Heating</i>
Gross Internal Area (m ²)					
41,495					
Office Spaces (m ²)		Office Spaces			
2,231	555.47	None			
Data Center (m ²)		Data Center			
1,785	0.0000001	None			
Inventory Control (m ²)		Inventory Control			
1,339	3,905.2	None			
Storage (m ²)		Storage			
17,847	31,939.81	None			
Frozen Storage (m ²)		Frozen Storage			
1,339	0.0000001	None			
Cold Storage (m ²)		Cold Storage			
4,462	0.0000001	None			
Fruits & Vegetables Storage (m ²)		Fruits & Vegetables Storage			
4,462	0.0000001	None			
Packaging (m ²)		Packaging			
2,231	3,905.2	None			
Receiving & Shipping (m ²)					
2,231	1,150.29				
Restroom (m ²)					
1,747	38.84				
Mechanical & Electrical Room (m ²)					
0	0.0000001				

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Building Orientation

		<i>Building Lengths</i>	
<i>Default</i>	<i>User Entry</i>	<i>Default</i>	<i>User Entry</i>
Floor Plan Depth*** (m)		North	
-	140.19	-	
Main Orientation***		South	
Northeast		-	
		East	
		-	
		West	
		-	
		Northeast	
		296.0	359
		Northwest	
		140.2	140.19
		Southeast	
		140.2	121.2
		Southwest	
		296.0	295.61

*** These parameters will be used to estimate building dimensions. If the exact details of the dimensions and orientation are available, then complete the User Entry fields in the Building Lengths section. The orientation of the building will have a direct effect on energy consumption.

Building Systems

Does the building design include an AC system?

No

Does the building design include a space heating system?

No

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Key Assumptions for the Base Case

<i>Default</i>	<i>User Entry</i>	<i>Monthly Average Outdoor Temperature (deg.C)</i>	
Fuel Used for Electric Generator Diesel	Diesel	<i>Default</i>	<i>User Entry</i>
Fuel Used for Hot Water Generation Electricity	Electricity	Jan	24.5
Fuel Used for Cooking Electricity	Electricity	Feb	23.4
Fuel Used for Space Heating Electricity	Electricity	Mar	21.3
% of Electricity Generation Using Diesel (% Ave. Yrly)	5.00%	Apr	17.6
Cost of Electricity (\$/kWh)	0.058	May	14.4
Cost of Diesel Fuel (\$/L)	3.05	Jun	11.2
Cost of Natural Gas (\$/L)	0.53	Jul	11.0
Cost of Water (\$/kL)	0.10	Aug	12.3
CO ₂ Emissions from Electricity Generation (g/kWh)	493.01	Sep	14.4
Window to Wall Ratio (%)	10.00%	Oct	17.2
Solar Reflectivity for Paint - Wall (%)	30.00%	Nov	20.3
Solar Reflectivity for Paint - Roof (%)	30.00%	Dec	23.0
Roof U-value (W/m ² .K)	1.99	Latitude (Deg)	34.60
Wall U-value (W/m ² .K)	1.86	Average Annual Rainfall (mm)	950.00
Glass U-value (W/m ² .K)	5.75		
Glass SHGC (Factor)	0.50		
Cooling System ASHRAE 90.1.2007	ASHRAE 90.1.2007		
AC System Efficiency (COP)	4.50		
Heating System ASHRAE 90.1.2007	ASHRAE 90.1.2007		
Heating System Efficiency (Eff.)	1.00		

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Results

Final Energy Use (kWh/Month)
103,022.63

Final Water Use (m³/Month)
5,887.98

Base Case Utility Cost (\$/Month)
16,421.98

Utility Cost Reduction (\$/Month)
6,446.00

Energy Savings (MWh/Year)
784.58

Embodied Energy in Materials Savings (GJ)
76790.27

Carbon Emissions (tCO₂/Year)
618.57

Operational CO₂ Savings (tCO₂/Year)
392.57

Embodied Energy Savings (MJ/m²)
1,850.60

Incremental Cost (\$)
1,585,799.17

Payback in Years (Yrs.)
20.50

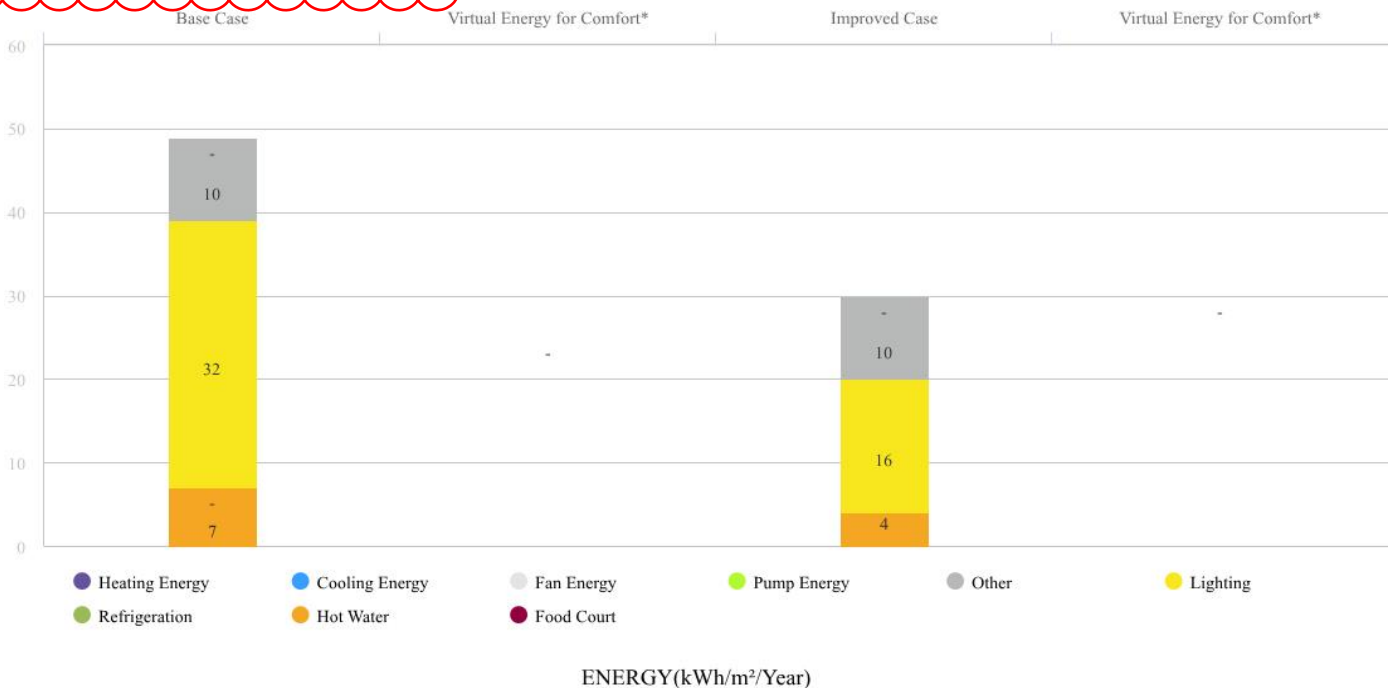
Water Savings (m³/Year)
59538.38

Total Subproject Floor Area (m²)
41495.00

ENERGY SAVINGS

Energy Efficiency Measures 38.82%

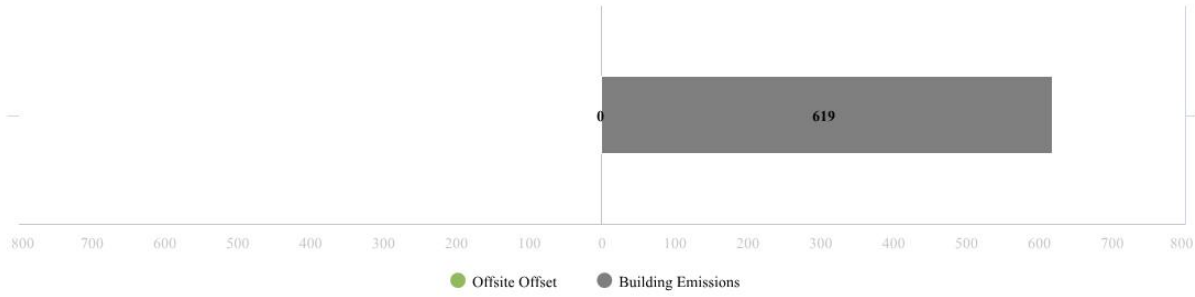
Meets EDGE energy standard



* Virtual energy is the amount of energy that will be required based on the assumption that the retail will eventually install air conditioning or heating.

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Carbon Emissions: 618.57 tCO₂/Year



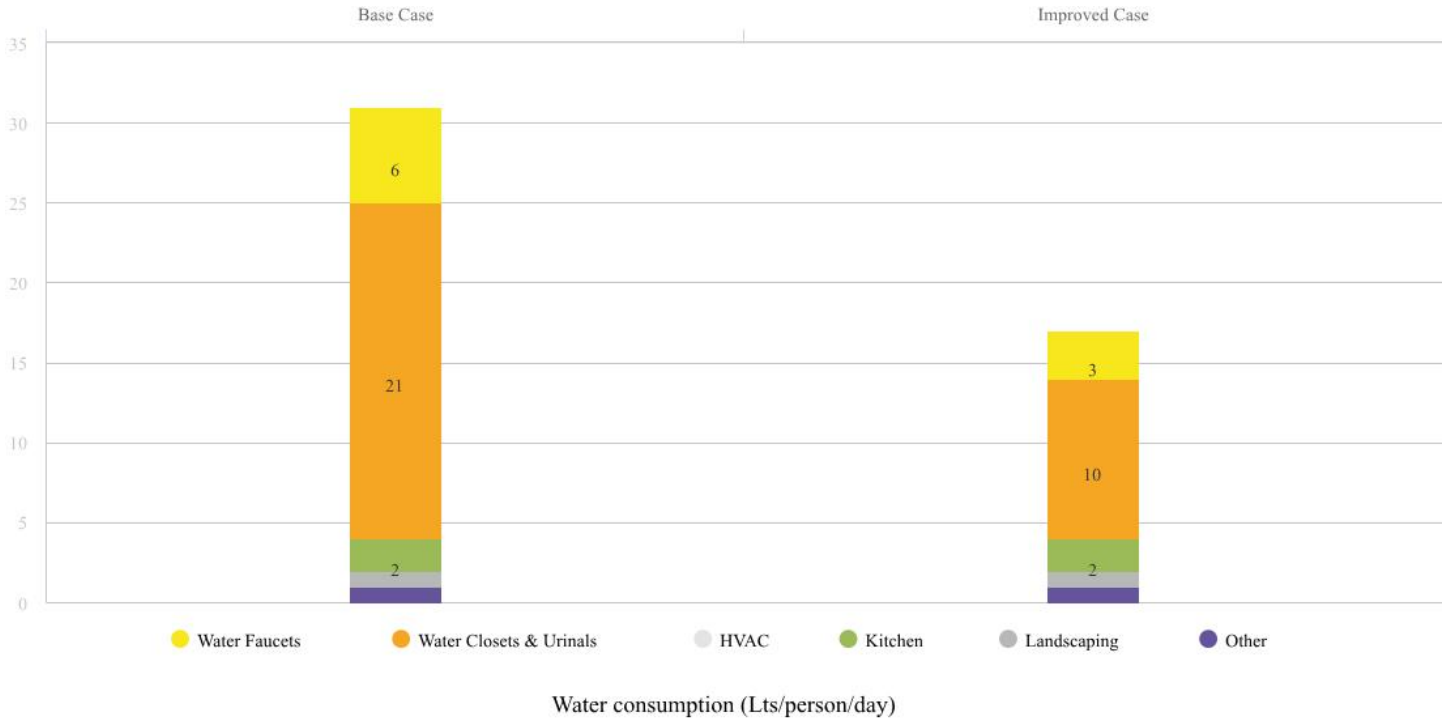
Energy Efficiency Measures 38.82%

- | | |
|--|--|
| <ul style="list-style-type: none"> ✓ RTE01 Reduced Window to Wall Ratio - WWR of 2.79%
Northeast 2.84
Northwest 3.44
Southeast 3.53
Southwest 2.14 ✓ RTE02 Reflective Paint/Tiles for Roof - Solar Reflectivity (albedo) of 0.75
SR 0.75 ✓ RTE03 Reflective Paint for External Walls - Solar Reflectivity (albedo) of 0.61
SR 0.61 RTE04 External Shading Devices - Annual Average Shading Factor (AASF) of 1 ✓ RTE05 Insulation of Roof : U-value of 0.48
W/m².K 0.48 ✓ RTE06 Insulation of External Walls : U-value of 4.67
W/m².K 4.67 RTE07 Low-E Coated Glass : U-value of 3 W/m².K and SHGC of 0.45 RTE08 Natural Ventilation with Operable Windows for Corridors, Atrium, and Common Areas RTE09 Air Economizers During Favorable Outdoor Conditions RTE10 Variable Refrigerant Flow (VRF) Cooling System - COP of 3.5 RTE11 Air Conditioning with Air Cooled Screw Chiller - COP of 3.63 RTE12 Air Conditioning with Water Cooled Chiller - COP of 4.95 RTE13 Ground Source Heat Pump - COP of 5.2 RTE14 Absorption Chiller Powered by Waste Heat - COP of 0.7 RTE15 Recovery of Waste Heat from the Generator for Space Heating RTE16 Variable Speed Drives on the Fans of Cooling Towers RTE17 Variable Frequency Drives in AHUs | <ul style="list-style-type: none"> RTE18 Variable Speed Drives Pumps RTE19 Sensible Heat Recovery from Exhaust Air - Efficiency of 60% RTE20 CO2 Sensor/Demand-Controlled Ventilation for Fresh Air Intake RTE21 High-Efficiency Condensing Boiler for Space Heating - Efficiency of 90% RTE22 High-Efficiency Boiler for Water Heating - Efficiency of 90% ✓ RTE23 Energy-Saving Light Bulbs - Sales Area ✓ RTE24 Energy-Saving Light Bulbs - Corridors and Common Areas ✓ RTE25 Energy-Saving Light Bulbs - External Spaces RTE26 Occupancy Sensors in Bathrooms RTE27 Higher Efficiency Refrigerated Cases RTE28 Solar Hot Water Collectors - 50% of Hot Water Demand RTE29 Solar Photovoltaics - 25% of Total Energy Use RTE30 Skylight(s) to Provide Daylight to 50% of Top Floor Area RTE31 Other Renewable Energy for Electricity Generation RTE32 Offsite Renewable Energy Procurement - Equal to 100% of total Operational CO2 RTE33 Carbon Offset - 100% of Total CO₂ RTE34 Insulation for Cold Storage Envelope : U-value for Exterior & Internal wall, Floor & Roof slab and Window Glass RTE35 Improved System for Cold storage with Air Cooled Screw Chiller - Avg COP of 4 |
|--|--|

WATER SAVINGS

Water Efficiency Measures 45.39%

Meets EDGE Water Standard



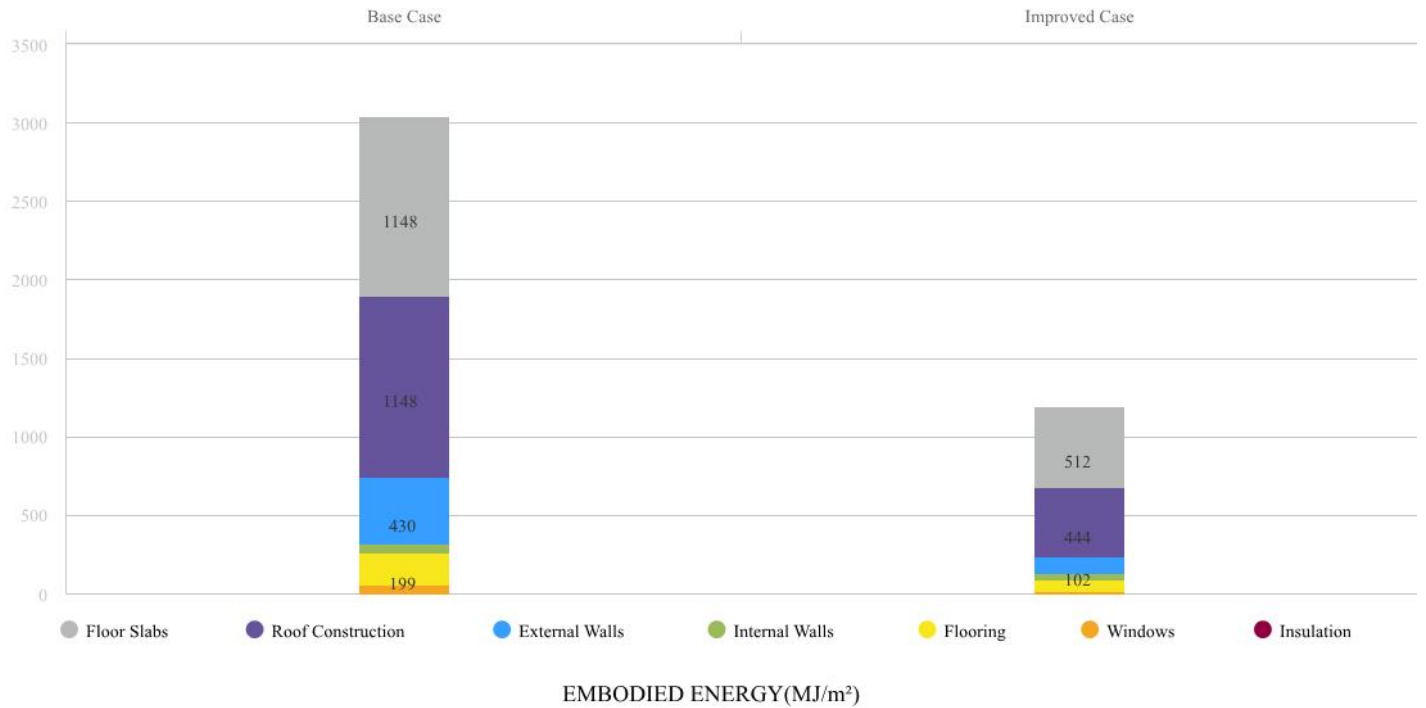
- ✓ RTW01 Dual Flush for Water Closets in All Bathrooms - 6 L/first flush and 3 L/second flush
1st - L/flush 6 2nd - L/flush 3
- ✓ RTW02 Water-Efficient Urinals in All Bathrooms - 0.6 L/flush
L/flush 0.6
- ✓ RTW03 Aerators and Auto Shut-off Faucets in All Bathrooms - 3 L/min
L/min 3
- ✓ RTW04 Water-Efficient Kitchen Faucets - 7 L/min
L/min 7
- RTW05 Water-Efficient Dishwashers - 2 L/Rack
- RTW06 Pre-Rinse Valve for Rinsing Operation - 6 L/min
- RTW07 Water-Efficient Landscaping - 3 L/m²/day
- RTW08 Condensate Water Recovery
- RTW09 Rainwater Harvesting System - 50% of Roof Area Used for Rainwater Collection
- RTW10 Grey Water Treatment and Recycling System
- RTW11 Black Water Treatment and Recycling System

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Embodied Energy Savings

Materials Efficiency Measures 60.82%

Meets EDGE Material Standard



			Proportion %	Thickness (mm)	Steel Rebar (kg/m ²)
RTM01	Floor Slabs In-Situ Reinforced Concrete Slab 350 mm Steel : 35 kg/m ²	In-Situ Reinforced Concrete Slab		120	20
RTM02	Roof Construction In-Situ Reinforced Concrete Slab 350 mm Steel : 35 kg/m ²	Type 1 Steel (Zinc or Galvanised Iron) Sheets on Steel Rafters	100 %		
RTM03	External Walls Common Brick Wall with Internal & External Plaster 200 mm	Type 1 Steel Profile Cladding Type 2 Medium Weight Hollow Concrete Blocks	65 % 35 %	200	
RTM04	Internal Walls Common Brick Wall with Plaster on Both Sides 100 mm	Type 1 Cored (with Holes) Bricks with Plaster on Both Sides	100 %	150	
RTM05	Flooring Ceramic Tile	Type 1 Finished Concrete Floor	100 %		
RTM06	Window Frames Aluminium Single Glazing	Type 1 Aluminium	100 %		Single Glazing
RTM07	Wall Insulation Polystyrene U : ~ 1.86 W/m ² k	No Insulation			
RTM08	Roof Insulation Polystyrene U : ~ 1.99 W/m ² k	Glass Wool		50	

EDGE Certification Checklist

Building Type	Certification Stage	Subproject Name
Retail	Preliminary	Plaza Logistica Ciudad WH1
Energy Measures		Preliminary Audit Requirements
RTE01	Reduced Window to Wall Ratio	<ul style="list-style-type: none"> ✓ Calculation of "Glazing Area" and "Gross Exterior Wall Area" for each façade of the building and the average building area weighted WWR using the WWR calculator ✓ All façade elevation drawings showing glazing dimensions and general building dimensions.
RTE02	Reflective Paint/Tiles for Roof	<ul style="list-style-type: none"> ✓ Building design drawings showing the roof material and roof finish. ✓ Roof specification with solar reflectivity of the roof surface indicated. ✓ Bill of quantities with the roof finish clearly marked.
RTE03	Reflective Paint for External Walls	<ul style="list-style-type: none"> ✓ Building design drawings showing the wall finish. ✓ Wall specification with solar reflectivity of the wall's surface indicated. ✓ Bill of quantities with the wall finish clearly marked.
RTE05	Insulation of Roof	<ul style="list-style-type: none"> ✓ A roof construction detail drawing showing the type and thickness of insulation material. Ideally the roof detail drawing should be annotated with the U Value of the roof. ✓ Calculations of U value either using the formula or U value calculators. ✓ Manufacturer's data sheet of specified insulation material for the roof.
RTE06	Insulation of External Walls	<ul style="list-style-type: none"> ✓ External walls construction detail drawing showing the type and thickness of the insulation material. Ideally the external walls detail drawing should be annotated with the U Value of the external walls. ✓ Calculations of U value either using the formula or U value calculators. ✓ Manufacturer's data sheet of specified insulation material for the external walls.
RTE23	Energy Saving Light Bulbs- Sales Area	<ul style="list-style-type: none"> ✓ Lighting schedule listing type and number of bulbs specified. ✓ Electrical layout drawings showing the location and type of all installed bulbs.
RTE24	Energy Saving Light Bulbs- Corridors and Common Areas	<ul style="list-style-type: none"> ✓ Lighting schedule listing type and number of bulbs specified. ✓ Electrical layout drawings showing the location and type of all installed bulbs.
RTE25	Energy Saving Light Bulbs- External Areas	<ul style="list-style-type: none"> ✓ Lighting schedule listing type and number of bulbs specified. ✓ Electrical layout drawings showing the location and type of all installed bulbs.

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Water Measures		Preliminary Audit Requirements
RTW01	Dual Flush for Water Closets in Bathrooms	<ul style="list-style-type: none"> ✓ Plumbing drawings/specifications including make, model, and flush volumes of water closet(s). ✓ Manufacturer's data sheet for water closet(s) with information on the flush volume of the main and reduced flushes.
RTW02	Water-Efficient Urinals in all Bathrooms	<ul style="list-style-type: none"> ✓ Plumbing drawings/specifications including make, model, and flush volume of the urinal (s). ✓ Manufacturer's data sheet for urinal(s) with information on the flush volume.
RTW03	Aerators for Faucets/ Auto Shut-Off Faucet	<ul style="list-style-type: none"> ✓ Plumbing drawings/specifications including make, model, auto shut-off mechanism and flow rate of the washbasin faucet(s) ✓ Manufacturer's data sheet for faucet(s)/flow aerator(s) confirming the flow rate at 3 bar.
RTW04	Water-Efficient Faucets for Kitchen Sinks	<ul style="list-style-type: none"> ✓ Plumbing drawings/specifications including make, model, and flow rate of kitchen(s) faucet(s) or flow restrictor(s). ✓ Manufacturer's data sheet for faucet(s)/flow restrictor(s) confirming the flow rate at 3 bar.
Material Measures		Preliminary Audit Requirements
RTM01	Floor Slabs	<ul style="list-style-type: none"> ✓ Floor sections showing build-up of the floor; or ✓ Manufacturer's data sheet for specified building material if applicable; or ✓ Bill of quantities with the floor slab specification clearly highlighted.
RTM02	Roof Construction	<ul style="list-style-type: none"> ✓ A section drawing of roof showing the materials and thicknesses; or ✓ Manufacturer's data sheet for specified building material; or ✓ Bill of quantities with the materials used for roof construction clearly highlighted.
RTM03	External Walls	<ul style="list-style-type: none"> ✓ Façade drawings clearly marking the external wall specification selected; and ✓ Drawings of the external wall sections; or ✓ Manufacturer's data sheet for specified building material; or ✓ Bill of quantities with the materials used for the external wall clearly highlighted.
RTM04	Internal Walls	<ul style="list-style-type: none"> ✓ Drawings of the internal wall sections; or ✓ Manufacturer's data sheet for building materials used for internal wall specifications if available; or ✓ Bill of quantities with the materials used for the internal wall clearly highlighted.
RTM05	Flooring	<ul style="list-style-type: none"> ✓ Drawings clearly marking the flooring specification selected; or ✓ Manufacturer's data sheet for building materials used for floor specifications; or ✓ Bill of quantities with the materials used for the flooring clearly highlighted.

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RTM06	Window Frames	<ul style="list-style-type: none">✓ Façade drawings clearly marking the window frame(s) specification; or✓ Manufacturer's data sheet for glazing specified; or✓ Bill of quantities with the windows/window frames clearly highlighted.
<hr/>		
RTM08	Roof Insulation	<ul style="list-style-type: none">✓ Drawings clearly marking the insulation specification selected; or✓ Manufacturer's data sheet for insulation specified; or✓ Bill of quantities with the insulation materials clearly highlighted.
