

SBEMmt Data Reflection Report — Actual Building

Date: Wed Aug 19 20:55:11 2015

Project name: Green Skid Aministration Building	Building type: Offices and Workshop businesses	Building area [m2]: 115.9
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General		Energy assessor / Certifier		Owner	
Building address	Ta' I-Imriekeb	Name	Cassar Lorraine	Name	Ms Doris Sammut
	Ramla Road	Telephone number	79067197	Telephone number	2142 2009
	Maghtab	Address	Angeli, Triq Caravaggio Gharghur GHR1602	Address	Ta' I-Imriekeb, Ramla Road, Maghtab Naxxar NXR 6540
	Naxxxar NXR 6540				
Building area [m2]	-6666	Assessor number	N0009		
Weather	MAL	Qualification	-	Analysis	
Building rotation [degrees]	0	Accreditation scheme	-	Compliance checked with	None
Project complexity	-	Employer name	-	Asset rating	EPC Malta
		Employer address	-	Stage	As built
				Shell & core building	NO

Software	
SBEMmt version	v4.2.c.0
Interface to SBEMmt	iSBEMmt
Interface version	v4.2.c

Envelope/Door constructions				
Name	U-value [W/m2K]	Adjusted U-value	Km [kJ/m2K]	Metal clad
Basic construction for doors	0.4	NO	30	NO
roof	2.01	NO	172.2	YES
floor	1.63	NO	176.85	NO
external	1.97	NO	170	NO
internal	1.95	NO	73.62	NO
internal 23cm	1.73	NO	170	NO

Window/Rooflight constructions			
Name	U-value [W/m2K]	Solar transmittance	Light transmittance
Basic glazing	5.279	0.858	0.898
glazing aluminium	4.37	0.76	0.8

Summary of objects		
Object type	Total number	Total related area [m2]
Envelope/Door constructions	6	-
Window/Rooflight constructions	2	-
HW systems	1	-
SE systems	1	2
PV systems	1	0
Wind generators	0	-
CHP generators	0	-
HVAC systems	2	-
Zones	7	115.9
Envelopes	45	569.76
Doors	2	5.62
Windows/Rooflights	9	17.62

Project building sevices	
Electric power factor	<0.9

Notes

Hot water systems	
Name	Basic HWS
Generator Type	Stand-alone water heater
Fuel type	Electricity
Seasonal efficiency	0.7
Uses CHP	NO
Storage system	NO
Storage volume [litres]	-
Insulation thickness [mm]	-
Secondary circulation	-
Circulation losses [W/m]	-
Pump power [kW]	-
Loop length [m]	-

Photovoltaic systems	
(Multiplier) Name	(1) PVS green skips
Peak power [kWp]	15
Orientation	North
Inclination [deg]	30
Overshading	None or very little (<20%)
Ventilation	Unventilated modules

Solar energy systems	
(Multiplier) Name	(1) solar water heater
In HWS	Basic HWS
Area [m2]	2
Orientation	South
Inclination [deg]	45
Storage volume [litres]	122
Pre-heating type	Separate solar cylinder
Circulation system	thermosiphon system

Notes

Heating, ventilation, and air conditioning systems		
Name	Zones without HVAC system	HVAC system green skips
Type	No Heating or Cooling	Split or multi-split system
Heat source	-	Heat pump (electric): air source
Heating fuel type	-	Electricity
Heating seasonal efficiency	-	2
Uses CHP	-	NO
Variable speed pumping type	-	-
Generator radiant efficiency	-	-
Cooling generator type	-	Not applicable
Cooling fuel type	-	Electricity
Cooling seasonal energy efficiency ratio	-	2
Cooling nominal energy efficiency ratio	-	2.5
Heat recovery system	-	-
Heat recovery seasonal efficiency	-	-
Variable heat recovery efficiency	-	-
Specific fan power [W/(l/s)]	-	-
Heating - Central time control	-	NO
Heating - Optimum stop/start control	-	NO
Heating - Local time control	-	NO
Heating - Local temperature control	-	NO
Heating - Weather compensation control	-	NO
Cooling - Central time control	-	NO
Cooling - Optimum stop/start control	-	NO
Cooling - Local time control	-	NO
Cooling - Local temperature control	-	NO

Notes

Zone name: z1/01		Activity: Circulation area (corridors and stairways)		Multiplier: 1	
Area [m2]: 7.7		Height [m]: 3		Alpha value [%]: 10	
				Air permeability @ 50pa [m3/hm2]: 10	

HVAC system, ventilation, and exhaust	
Name	Zones without HVAC system
Destratification fans	NO
Ventilation type	Natural
SFP for local mechanical supply & extract [W/(l/s)]	-
Heat Recovery system	-
Heat recovery seasonal efficiency	-
Variable heat recovery efficiency	-
Local mechanical exhaust	NO
Exhaust air flow rate [l/s.m2]	-
SFP for mechanical exhaust [W/(l/s)]	-
Exhaust fans location	-
SFP for system terminal units [W/(l/s)]	-
Demand-controlled ventilation	None
Flow regulation type for ventilation control	-
Night cooling maximum hours [hours/month]	-
Night cooling maximum air flow rate [l/s.m2]	-
SFP for night cooling [W/(l/s)]	-

General Lighting and controls	
Total wattage [W]	-
Design illuminance [Lux]	-
Lamp and ballast efficacy [Lumens/W]	-
Light output ratio	-
Lamp type	Tungsten or Halogen
Air-extracting luminaires	NO
Controls	MANUAL
Type of photoelectric control	-
Different sensor for back of zone	-
Photoelectric control parasitic power [W/m2]	-
Automatic zoning for daylight	YES
Occupancy sensing	NONE
Occupancy sensing parasitic power [W/m2]	-

Hot water system	
Name	Basic HWS
Dead leg length in this zone [m]	0

Display lighting	
Efficient lamps	NO
Lumens per circuit wattage	-
Time switching	NO

Shell & core	
Shell area for fit-out	-

Envelopes						
(Multiplier) Name	(1) z1/01/s	(1) z1/01/e	(1) z1/01/ni	(1) z1/01/w	(1) z1/01/c	(1) z1/01/fi
Type	Wall	Wall	Wall	Wall	Flat roof	Floor or Ceiling
Area [m2]	6.39	3.62	2.13	3.62	7.7	7.7
Orientation	South	East	North	West	Horizontal	Horizontal
Adjacent space	Exterior	Exterior	Unheated	Exterior	Exterior	Unheated
Construction name	external	external	internal 23cm	external	roof	floor

Windows & rooflights	
(Multiplier) Name	(1) z1/01/s/g
In envelope	z1/01/s
Area [m2]	2.3
Glazing name	glazing aluminium
Shading position	None (no shading)
Shading colour	-
Shading translucency	-
Transmission factor	1
Frame / Aspect ratios	0.1 / 0.7

Notes

Zone name: z1/06		Activity: Eating/drinking area		Multiplier: 1	
Area [m2]: 10		Height [m]: 3		Alpha value [%]: 10	
				Air permeability @ 50pa [m3/hm2]: 10	

HVAC system, ventilation, and exhaust	
Name	Zones without HVAC system
Destratification fans	NO
Ventilation type	Mechanical
SFP for local mechanical supply & extract [W/(l/s)]	1.5
Heat Recovery system	No heat recovery
Heat recovery seasonal efficiency	0
Variable heat recovery efficiency	NO
Local mechanical exhaust	NO
Exhaust air flow rate [l/s.m2]	-
SFP for mechanical exhaust [W/(l/s)]	-
Exhaust fans location	-
SFP for system terminal units [W/(l/s)]	-
Demand-controlled ventilation	None
Flow regulation type for ventilation control	-
Night cooling maximum hours [hours/month]	-
Night cooling maximum air flow rate [l/s.m2]	-
SFP for night cooling [W/(l/s)]	-

General Lighting and controls	
Total wattage [W]	-
Design illuminance [Lux]	-
Lamp and ballast efficacy [Lumens/W]	-
Light output ratio	-
Lamp type	Fluorescent - compact
Air-extracting luminaires	NO
Controls	MANUAL
Type of photoelectric control	-
Different sensor for back of zone	-
Photoelectric control parasitic power [W/m2]	-
Automatic zoning for daylight	YES
Occupancy sensing	NONE
Occupancy sensing parasitic power [W/m2]	-

Hot water system	
Name	Basic HWS
Dead leg length in this zone [m]	0

Display lighting	
Efficient lamps	NO
Lumens per circuit wattage	-
Time switching	NO

Shell & core	
Shell area for fit-out	-

Envelopes						
(Multiplier) Name	(1) z1/06/si	(1) z1/06/ei	(1) z1/06/n	(1) z1/06/wi	(1) z1/06/c	(1) z1/06/fi
Type	Wall	Wall	Wall	Wall	Flat roof	Floor or Ceiling
Area [m2]	9.3	9.6	9.3	9.6	10	10
Orientation	South	East	North	West	Horizontal	Horizontal
Adjacent space	Conditioned	Conditioned	Exterior	Conditioned	Exterior	Unheated
Construction name	internal	internal	external	internal	roof	floor

Notes

Zone name: z1/07		Activity: Toilet		Multiplier: 1	
Area [m2]: 5.8		Height [m]: 3		Alpha value [%]: 10	
				Air permeability @ 50pa [m3/hm2]: 10	

HVAC system, ventilation, and exhaust	
Name	Zones without HVAC system
Destratification fans	NO
Ventilation type	Natural
SFP for local mechanical supply & extract [W/(l/s)]	-
Heat Recovery system	-
Heat recovery seasonal efficiency	-
Variable heat recovery efficiency	-
Local mechanical exhaust	NO
Exhaust air flow rate [l/s.m2]	-
SFP for mechanical exhaust [W/(l/s)]	-
Exhaust fans location	-
SFP for system terminal units [W/(l/s)]	-
Demand-controlled ventilation	None
Flow regulation type for ventilation control	-
Night cooling maximum hours [hours/month]	-
Night cooling maximum air flow rate [l/s.m2]	-
SFP for night cooling [W/(l/s)]	-

General Lighting and controls	
Total wattage [W]	-
Design illuminance [Lux]	-
Lamp and ballast efficacy [Lumens/W]	-
Light output ratio	-
Lamp type	Fluorescent - compact
Air-extracting luminaires	NO
Controls	MANUAL
Type of photoelectric control	-
Different sensor for back of zone	-
Photoelectric control parasitic power [W/m2]	-
Automatic zoning for daylight	YES
Occupancy sensing	NONE
Occupancy sensing parasitic power [W/m2]	-

Hot water system	
Name	Basic HWS
Dead leg length in this zone [m]	0

Envelopes						
(Multiplier) Name	(1) z1/07/si	(1) z1/07/e	(1) z1/07/n	(1) z1/07/wi	(1) z1/07/c	(1) z1/07/fi
Type	Wall	Wall	Wall	Wall	Flat roof	Floor or Ceiling
Area [m2]	5.4	9.6	5.4	9.6	5.8	5.8
Orientation	South	East	North	West	Horizontal	Horizontal
Adjacent space	Conditioned	Exterior	Exterior	Conditioned	Exterior	Unheated
Construction name	internal	external	external	internal	roof	floor

Windows & rooflights	
(Multiplier) Name	(2) z1/07/ n g
In envelope	z1/07/n
Area [m2]	0.62
Glazing name	Basic glazing
Shading position	None (no shading)
Shading colour	-
Shading translucency	-
Transmission factor	1
Frame / Aspect ratios	0.1 / 0.7

Display lighting	
Efficient lamps	NO
Lumens per circuit wattage	-
Time switching	NO

Shell & core	
Shell area for fit-out	-

Notes

Zone name: z1/02		Activity: Generic Office Area		Multiplier: 1	
Area [m2]: 25.1		Height [m]: 3		Alpha value [%]: 10	
				Air permeability @ 50pa [m3/hm2]: 10	

HVAC system, ventilation, and exhaust	
Name	HVAC system green skips
Destratification fans	NO
Ventilation type	Natural
SFP for local mechanical supply & extract [W/(l/s)]	-
Heat Recovery system	-
Heat recovery seasonal efficiency	-
Variable heat recovery efficiency	-
Local mechanical exhaust	NO
Exhaust air flow rate [l/s.m2]	-
SFP for mechanical exhaust [W/(l/s)]	-
Exhaust fans location	-
SFP for system terminal units [W/(l/s)]	-
Demand-controlled ventilation	None
Flow regulation type for ventilation control	-
Night cooling maximum hours [hours/month]	-
Night cooling maximum air flow rate [l/s.m2]	-
SFP for night cooling [W/(l/s)]	-

General Lighting and controls	
Total wattage [W]	-
Design illuminance [Lux]	-
Lamp and ballast efficacy [Lumens/W]	-
Light output ratio	-
Lamp type	Fluorescent - compact
Air-extracting luminaires	NO
Controls	MANUAL
Type of photoelectric control	-
Different sensor for back of zone	-
Photoelectric control parasitic power [W/m2]	-
Automatic zoning for daylight	YES
Occupancy sensing	NONE
Occupancy sensing parasitic power [W/m2]	-

Hot water system	
Name	Basic HWS
Dead leg length in this zone [m]	0

Display lighting	
Efficient lamps	NO
Lumens per circuit wattage	-
Time switching	NO

Shell & core	
Shell area for fit-out	-

Envelopes						
(Multiplier) Name	(1) z1/02/s	(1) z1/02/ei	(1) z1/02/ni	(1) z1/02/w	(1) z1/02/c	(1) z1/02/fi
Type	Wall	Wall	Wall	Wall	Flat roof	Floor or Ceiling
Area [m2]	13.92	16.2	13.92	16.2	25.1	25.1
Orientation	South	East	North	West	Horizontal	Horizontal
Adjacent space	Exterior	Conditioned	Conditioned	Exterior	Exterior	Unheated
Construction name	external	internal	internal	external	roof	floor

Windows & rooflights			
(Multiplier) Name	(1) z1/02/s/g	(1) Z1/02/ w g	(1) Z1/02/ w g2
In envelope	z1/02/s	z1/02/w	z1/02/w
Area [m2]	0.94	2.28	2.95
Glazing name	glazing aluminium	glazing aluminium	Basic glazing
Shading position	None (no shading)	None (no shading)	None (no shading)
Shading colour	-	-	-
Shading translucency	-	-	-
Transmission factor	1	1	1
Frame / Aspect ratios	0.1 / 0.7	0.1 / 0.7	0.1 / 0.7

Notes

Zone name: z1/03		Activity: Generic Office Area		Multiplier: 1	
Area [m2]: 26.2		Height [m]: 3		Alpha value [%]: 10	
				Air permeability @ 50pa [m3/hm2]: 10	

HVAC system, ventilation, and exhaust	
Name	HVAC system green skips
Destratification fans	NO
Ventilation type	Natural
SFP for local mechanical supply & extract [W/(l/s)]	-
Heat Recovery system	-
Heat recovery seasonal efficiency	-
Variable heat recovery efficiency	-
Local mechanical exhaust	NO
Exhaust air flow rate [l/s.m2]	-
SFP for mechanical exhaust [W/(l/s)]	-
Exhaust fans location	-
SFP for system terminal units [W/(l/s)]	-
Demand-controlled ventilation	None
Flow regulation type for ventilation control	-
Night cooling maximum hours [hours/month]	-
Night cooling maximum air flow rate [l/s.m2]	-
SFP for night cooling [W/(l/s)]	-

General Lighting and controls	
Total wattage [W]	-
Design illuminance [Lux]	-
Lamp and ballast efficacy [Lumens/W]	-
Light output ratio	-
Lamp type	Fluorescent - compact
Air-extracting luminaires	NO
Controls	MANUAL
Type of photoelectric control	-
Different sensor for back of zone	-
Photoelectric control parasitic power [W/m2]	-
Automatic zoning for daylight	YES
Occupancy sensing	NONE
Occupancy sensing parasitic power [W/m2]	-

Hot water system	
Name	Basic HWS
Dead leg length in this zone [m]	0

Display lighting	
Efficient lamps	NO
Lumens per circuit wattage	-
Time switching	NO

Shell & core	
Shell area for fit-out	-

Envelopes						
(Multiplier) Name	(1) z1/03/si	(1) z1/03/ei	(1) z1/03/n	(1) z1/03/w	(1) z1/03/c	(1) z1/03/fi
Type	Wall	Wall	Wall	Wall	Flat roof	Floor or Ceiling
Area [m2]	16.86	12.6	18.12	13.5	26.2	26.2
Orientation	South	East	North	West	Horizontal	Horizontal
Adjacent space	Conditioned	Conditioned	Exterior	Exterior	Exterior	Unheated
Construction name	internal	internal	external	external	roof	floor

Windows & rooflights			
(Multiplier) Name	(1) z1/03/n/g	(1) z1/03/ n g	(1) z1/03/w/g
In envelope	z1/03/n	z1/03/n	z1/03/w
Area [m2]	1.73	1.73	2.7
Glazing name	glazing aluminium	Basic glazing	glazing aluminium
Shading position	None (no shading)	None (no shading)	None (no shading)
Shading colour	-	-	-
Shading translucency	-	-	-
Transmission factor	1	1	1
Frame / Aspect ratios	0.1 / 0.7	0.1 / 0.7	0.1 / 0.7

Notes

Zone name: z1/04			Activity: Circulation area (corridors and stairways)			Multiplier: 1		
Area [m2]: 20.9			Height [m]: 3			Alpha value [%]: 10		
						Air permeability @ 50pa [m3/hm2]: 10		

HVAC system, ventilation, and exhaust	
Name	HVAC system green skips
Destratification fans	NO
Ventilation type	Natural
SFP for local mechanical supply & extract [W/(l/s)]	-
Heat Recovery system	-
Heat recovery seasonal efficiency	-
Variable heat recovery efficiency	-
Local mechanical exhaust	NO
Exhaust air flow rate [l/s.m2]	-
SFP for mechanical exhaust [W/(l/s)]	-
Exhaust fans location	-
SFP for system terminal units [W/(l/s)]	-
Demand-controlled ventilation	None
Flow regulation type for ventilation control	-
Night cooling maximum hours [hours/month]	-
Night cooling maximum air flow rate [l/s.m2]	-
SFP for night cooling [W/(l/s)]	-

General Lighting and controls	
Total wattage [W]	-
Design illuminance [Lux]	-
Lamp and ballast efficacy [Lumens/W]	-
Light output ratio	-
Lamp type	Fluorescent - compact
Air-extracting luminaires	NO
Controls	MANUAL
Type of photoelectric control	-
Different sensor for back of zone	-
Photoelectric control parasitic power [W/m2]	-
Automatic zoning for daylight	YES
Occupancy sensing	NONE
Occupancy sensing parasitic power [W/m2]	-

Hot water system	
Name	Basic HWS
Dead leg length in this zone [m]	0

Display lighting	
Efficient lamps	NO
Lumens per circuit wattage	-
Time switching	NO

Shell & core	
Shell area for fit-out	-

Envelopes								
(Multiplier) Name	(1) z1/04/s	(1) z1/04/e	(1) z1/04/ni	(1) z1/04/wi	(1) z1/04/c	(1) z1/04/fi	(1) z1/04/si	(1) z1/04/ei
Type	Wall	Wall	Wall	Wall	Flat roof	Floor or Ceiling	Wall	Wall
Area [m2]	4.2	3.9	17.7	18.9	20.9	20.9	19.08	14.7
Orientation	South	East	North	West	Horizontal	Horizontal	South	East
Adjacent space	Exterior	Exterior	Conditioned	Conditioned	Exterior	Unheated	Unheated	Conditioned
Construction name	external	external	internal	internal	roof	floor	internal 23cm	internal

Windows & rooflights	
(Multiplier) Name	(1) z1/04/s/g
In envelope	z1/04/s
Area [m2]	1.75
Glazing name	glazing aluminium
Shading position	None (no shading)
Shading colour	-
Shading translucency	-
Transmission factor	1
Frame / Aspect ratios	0.1 / 0.7

Doors	
(Multiplier) Name	(1) z1/04/ e d
In envelope	z1/04/e
Area [m2]	3.76
Type	Personnel
Construction name	Basic construction for do

Notes

Zone name: z1/05		Activity: Generic Office Area			Multiplier: 1		
Area [m2]: 20.2		Height [m]: 3		Alpha value [%]: 10		Air permeability @ 50pa [m3/hm2]: 10	

HVAC system, ventilation, and exhaust	
Name	HVAC system green skips
Destratification fans	NO
Ventilation type	Natural
SFP for local mechanical supply & extract [W/(l/s)]	-
Heat Recovery system	-
Heat recovery seasonal efficiency	-
Variable heat recovery efficiency	-
Local mechanical exhaust	NO
Exhaust air flow rate [l/s.m2]	-
SFP for mechanical exhaust [W/(l/s)]	-
Exhaust fans location	-
SFP for system terminal units [W/(l/s)]	-
Demand-controlled ventilation	None
Flow regulation type for ventilation control	-
Night cooling maximum hours [hours/month]	-
Night cooling maximum air flow rate [l/s.m2]	-
SFP for night cooling [W/(l/s)]	-

General Lighting and controls	
Total wattage [W]	-
Design illuminance [Lux]	-
Lamp and ballast efficacy [Lumens/W]	-
Light output ratio	-
Lamp type	Fluorescent - compact
Air-extracting luminaires	NO
Controls	MANUAL
Type of photoelectric control	-
Different sensor for back of zone	-
Photoelectric control parasitic power [W/m2]	-
Automatic zoning for daylight	YES
Occupancy sensing	NONE
Occupancy sensing parasitic power [W/m2]	-

Hot water system	
Name	Basic HWS
Dead leg length in this zone [m]	0

Display lighting	
Efficient lamps	NO
Lumens per circuit wattage	-
Time switching	NO

Shell & core	
Shell area for fit-out	-

Envelopes							
(Multiplier) Name	(1) z1/05/s	(1) z1/05/e	(1) z1/05/ni	(1) z1/05/wi	(1) z1/05/c	(1) z1/05/fi	(1) z1/05/si
Type	Wall	Wall	Wall	Wall	Flat roof	Floor or Ceiling	Wall
Area [m2]	7.2	16.2	11.85	14.7	20.2	20.2	4.65
Orientation	South	East	North	West	Horizontal	Horizontal	South
Adjacent space	Exterior	Exterior	Conditioned	Conditioned	Exterior	Unheated	Conditioned
Construction name	external	external	internal	internal	roof	floor	internal

Doors	
(Multiplier) Name	(1) z1/05 s d
In envelope	z1/05/s
Area [m2]	1.86
Type	Personnel
Construction name	Basic construction for do

Notes