BREEAM 2016 International Wat 01 Water consumption calculator - Office buildings

Building details

Building name	Photon House, Station Road, Linton CB21 4NW
BRE Assessment Reference No.	
Precipitation zone:	Precipitation zone 1

Building type	Description of building type	Default occupancy	Default annual days/operation	Default daily hours of operation
Office	Offices and workshop business (including those with a basic (category 1) laboratory area)	79.583	253	10

Main building activity areas	Description of activity area	Activity area present in building?	Net Floor Area (m^2)
Office - Office areas	Cellular or open plan office space, including staff kitchen where present/adjacent and reception areas. Exlcude meeting rooms, visitor waiting or circulation areas.	Yes	709
Office - Small workshop / laboratory space	Small scale workshop or category 1 laboratory area	Yes	13
Office - Staff canteen dining area	Seated dining areas that accompany a permanently staffed kitchen preparing food for consumption on the premises (excludes small un-staffed kitchen's used by office staff to re-heat food, make tea etc.)	No	
Office - Fitness suite/gym (with changing facility and showers)	A fitness suite or gym that is part of the office building/development and used by the building's employees only. The gym will have its own changing facility with showers.	No	

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Water Consumption - Building Microcomponent

WC component - all activity areas	units	Specification	Usage/person/day	Usage factor	Consumption (L/person/day)
WC - male (urinals installed)	Effective flush volume (Litres)	4.00	1.00	1.00	2.00
WC - female	Effective flush volume (Litres)	4.00	4.00	1.00	8.00

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Urinal component - all activity areas	units	Specification	No. of cisterns	Flushing frequency (flushes/hour)	Consumption (L/person/day)
Automatically operated flushing cistern	Cistern capacity (Litres)				0.00
	No. of urinal bowls				

	units	Specification	Usage/person/day	Usage factor	Consumption (L/person/day)
Manual/automatic operated pressure flushing valve (all activity areas)	Flush volume (litres)	4.00	3.00	1.00	6.00
	No. of urinal bowls	9.00			
	units	Specification	Usage/person/day	Usage factor	Consumption (L/person/day)
Waterless urinals (all activity areas)	Flush volume (litres)	Waterless urinals - not specified	3.00	1.00	0.00
	No. of urinal bowls				

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	units	Specification	Usage/person/day	Usage factor	Consumption (L/person/day)
Taps components (personal hygiene) - all activity areas					
Wash hand basin taps	Flow rate (litres/min)	6.00	4.00	0.25	4.06
Shower use	Flow rate (litres/min)	8.00	0.030	5.60	1.34
Fixed use - vessel filling	Litres/person/day	-	-	-	1.58
Tap components (cleaning) - staff kitchenette					
Kitchen taps - kitchenette	Flow rate (litres/min)	7.00	1.00	0.67	3.18
Dishwasher	Litres/cycle		0.04	1.00	0.00
Tap components (cleaning and food preparation) - staff canteen food preparation area					

	Microcomponent Consumption (L/person/day)
Total	26.16

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Non Potable Water Yield - Greywater System

Has, or will, the greywater system be specified and installed?	No

Greywater source (building components)		Greywater Collected	Proportion of components collected from (%)	Greywater yield (L/person/day)
Greywater source (other components)	Typical greywater yield (litres)	Frequency of yield (days)	Greywater yield (litres/day)	Greywater yield (L/person/day)

	Greywater yield (L/person/day)
Total	0.00

Non Potable Water Yield - Rainwater System

Has, or will, the rainwater system be specified and installed?	No
How has the storage capacity for the proposed system been calculated?	

Rainwater yield if intermediate:

Collection area (m2)	Rainfall (average mm/yr)	Hydraulic filter efficiency (%)	Yield co-efficient (%)	Annual rainwater yield (Litres)	Rainwater yield (L/person/day)

Rainwater yield if detailed:

Daily rainfall collection (litres)	Rainwater yield (L/person/day)

Non Potable Water Demand - Building Components

	Greywater and/or rainwater yield (L/person/day)
Total	

Component	Greywater and/or rainwater utilised for component	Proportion of components using greywater and/or rainwater yield (%)	Maximum permissible demand (L/person/day)
			Demand met by yield (L/person/day)
		Total	

Other permissible components

	Maximum permissible demand (L/day)
	Demand met by yield (L/person/day)
Total	

	Greywater and/or rainwater demand met by yield (L/person/day)
Total	

Water Consumption Calculation Results

	Litres/person/day	m^3/person/yr
Water consumption - modelled baseline performance benchmark (excludes fixed uses)	**33.17**	**8.39**
Microcomponent Water consumption - modelled performance (excludes fixed uses)	**24.58**	**6.22**
Modelled water demand met via greywater and rainwater sources	**0.00**	**0.00**
If greywater/rainwater systems specified has the minimum % efficiency improvement for component specifications been met	**System not specified**	
Net modelled water consumption (excludes fixed uses)	**24.58**	**6.22**
Percentage improvement	**25.89%**	
Total Wat 01 BREEAM credits achieved	**2 credits**	
Total Wat 01 BREEAM Innovation credits achieved	**Exemplary level not achieved**	
Key Performance Indicator - use of freshwater resource (includes fixed uses)	**26.16**	**6.62**

Key

	Cells that are white with a black border require user input (data entry/option selection)
	Cells that are light grey contain fixed data or a formula and do not require any user input
	Cells that are dark grey are user input cells which are not applicable due to either building type or user input/option selection or default setting. Note these cells can change to ones requiring user input depending on the users option selection in oth
>	A red arrow indicates that option selection or mandatory data entry is required in one of the cells on the row where this arrow appears. Without appropriate selection/data the calculator will not be able to determine the number of BREEAM credits. Where the term "Requires building information" appears check to make sure there are no red arrows indicating an absence of option selection or data entry.

ne activity areas defined opposite are used to estimate the assessed building's default occupancy and therefore water consumption benchmark. These areas are chosen as they are deemed, by in
o represent the permanently occupied spaces in the building and therefore reflect the number of building occupants/users. As a result it is not necessary to include all areas of the building that may be
:, as the areas not defined are assumed to be used by the occupants of the building already accounted for by those areas that are listed.

nly select this activity if there is a permanently staffed kitchen that will prepare hot and cold meals for the building's staff (and visitors). Enter the area of the seated dining area only (not
/servery areas), this is used to estimate the number of covers per day for the restaurant and subsequently the number of kitchen staff and water consumption from food preparation activity area.

Where the WC facilities are non-gender specific, please still enter the WC specification against both WC male and WC female categories i.e. if there are two WCs with a 6 litre effective flush, then enter
against both male and female categories. The calculation will not double count water consumption in this instance as the consumption figure calculated for each WC component is adjusted by the
male to female users for this building type.

his consumption total accounts for the ratio of male users for this building type i.e. the ratio of building users who will operate the flush. Where more than one type of urinal flushing control is
d in the building, this consumption figure is adjusted by a ratio of use. the ratio is determined according to the proportion of urinals bowls in the building operated using this type of control.

his total includes the contributions from fixed uses, including where applicable vessel filling, kitchen cleaning and food preparation. Default fixed use totals are included with the calculations to provide
accurate reflection of the buildings total water consumption. The fixed use totals are not however included in the water consumption total used to determine the assessed buildings percentage
ement and the number of BREEAM credits achieved. The percentage improvement is based only on the consumption of water from uses that can be heavily influenced by the microcomponent
ation e.g. WC flushing.

er cells.