

# Green Impact Lighting Survey

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## Outline

This report has been written to ascertain the amount of light fittings in the Union Building that currently are energy efficient lighting.

By doing so the Union will be able to see where improvements can be made in order to lower its environmental impact but also for the Union to achieve the Bronze award in the National Union of Students Green Impact Scheme.

The Criteria for the NUS Green Impact Scheme in regards to light is below:

*Less than 5% of all of the light bulbs / tubes throughout the union (excluding specialist rig lighting in entertainments venues) are [tungsten filament bulbs], or the union has a demonstrable strategy for achieving the target within the next 24-months, or within the last 6-months the union has actively lobbied the institution to replace [tungsten filament bulbs] within the union with more efficient versions.*

## Audit

As all lighting in the Metric night club is connected to the DMX entertainments lighting control system, we have omitted this space from this audit.

Any entrainment or show related lighting in the Concert Hall, Metric and FiveSixEight has also been omitted, however the ambient light in this space has been included, as this is separated from the entertainment lighting system.

This Audit also excludes any spaces in which the Union does not have direct control, such as the Beit Quad, Public Space in the h Bar and The Reynolds Bar. However it does include spaces which the Union has direct control, such as the Beit Building (North Wing), the h and Reynolds bar areas and cellars.

			Halogens	LED's	Compact fluorescent	Incandescent	Fluorescent Tubes	2D Fluorescent	Megaman Energy Efficient 7W or 8W
FiveSixEight (inc Bar Office)			71	9	1		31		52
Union Bar (Inc Glass Wash area & lobby)					24	16	16		
Cellar (inc Mezzanine)							13		
West stair case								34	
Meeting Room 5								6	
West Stair toilets				20				7	
Ground Floor Kitchen and Store Room							30		
Metric (inc Fire exit)			54		12			1	14
Metric Toilets					14				
Main Floor toilets					22			1	
Central Staircase (inc lobby's toilets, rear entrance and			6	4	74		5	29	
Lifts				8			12		
Activity spaces 1&2							72		
Meeting Rooms 1&2				16					
Dining Hall					14		44		
Dining Hall Kitchen & Stores							58		
Concert Hall (inc Stage and fly tower)				72		3	10		
Level 2 Offices					4		64		
Student Activity Centre & Level 2M offices					4		39		
Meeting Rooms 3&4				84					
Snooker Room							10	2	
Gym & Stores					25		16		
Gym lobby & Toilets					40				
Meeting Room 6							4		
East Stair Case & Store					3			10	
Reynolds Bar (behind the bar, office and cellar only)				6			10		
H Bar (behind the bar and cellar only)				15			3		
Basement (inc Stores and toilets)				96			44	5	
Totals			131	330	237	19	481	95	66

Energy Efficient	N	Y	Y	N	Y	Y	Y
Total Number of Energy Efficient Lights	1209						
Total Number of non- Energy Efficient Lights	150						
Total Number of Light fittings	1359						
Percentage of Bulbs which are non-Energy Efficient	11.04%						
Percentage of Bulbs which are Energy Efficient	88.96%						

Currently (as of March 19<sup>th</sup> 2015) the percentage of energy efficient bulbs in use is at 88.96%. This sits below the Unions and the Green Impact Schemes target of 95%.

## Recommendations

In order to reach 95% compliance figure stated above the following recommendations are suggested:

1. That the 16 incandescent light fittings in the Union bar are replaced with Girard Sudron E27 Globe LED 12W Opaque or other energy efficient bulbs.
2. That the 23 halogen bulbs behind the FiveSixEight bar are replaced with GU5.3 LED's.
3. That the 48 35W Halogen Spot Reflector bulbs in the ceiling of both FiveSixEight and metric to be replaced with Philips Master LED 10W AR111 24° 2700K or similar energy efficient bulbs.

## Impact of the Recommendations

The effect of the above recommendations will enable the union to exceed the 95% target by 4.33%.

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Total Number of Energy Efficient Lights 1209  
 Total Number of non- Energy Efficient Lights 150  
 Total Number of Light fittings 1359  
 Percentage of Bulbs which are non-Energy Efficient 11.04%  
 Percentage of Bulbs which are Energy Efficient 88.96%  
 Total number of non energy efficient light marked for upgrading 141  
**After Upgrading**  
 Percentage of Bulbs which are non-Energy Efficient 0.66%  
 Percentage of Bulbs which are Energy Efficient 99.34%

	Recommended for replacment	
	Halogens	Incandescent
FiveSixEight	71	
Union Bar		16
Metric & FiveSixEight	54	
	Total	141