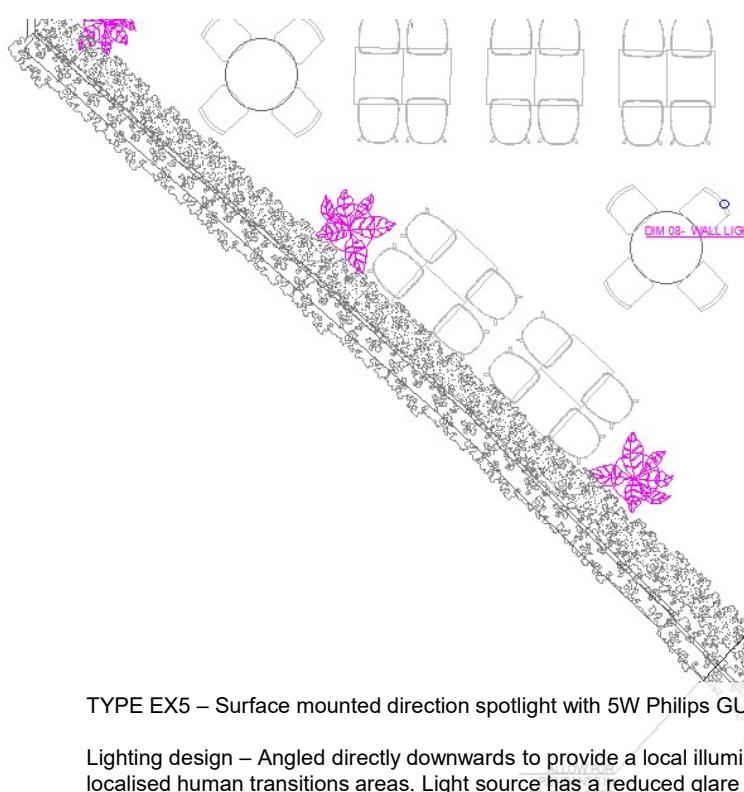


ZAZA Ruislip HA4 7AR – New External lighting – Ecological impact design.

Adverse impact on the ecological interests of the site



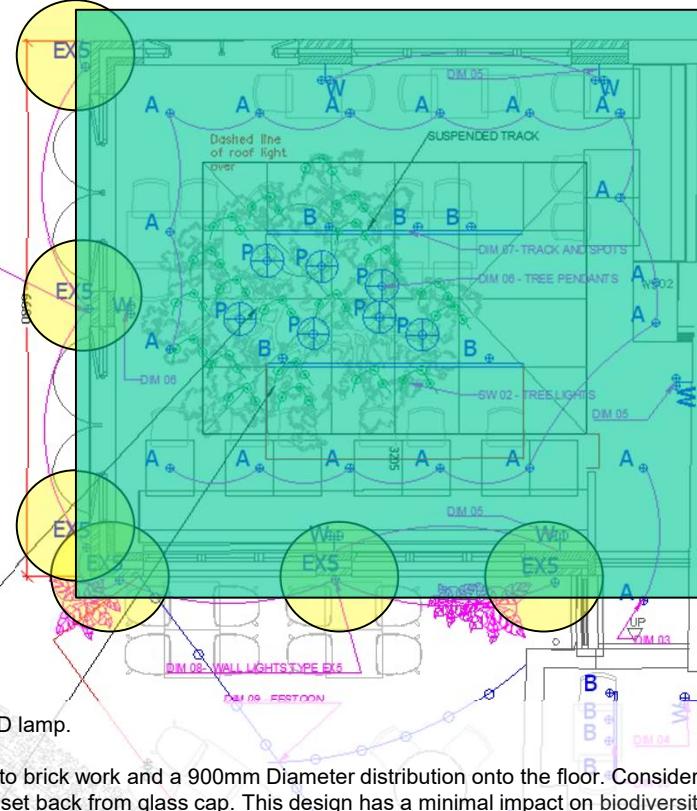
TYPE EX5 – Surface mounted direction spotlight with 5W Philips GU10 LED lamp.

Lighting design – Angled directly downwards to provide a local illumination to brick work and a 900mm Diameter distribution onto the floor. Considerations to only illuminate on localised human transitions areas. Light source has a reduced glare that is set back from glass cap. This design has a minimal impact on biodiversity and light pollution.

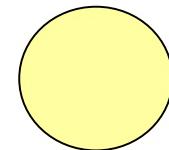
Control - Wall lighting circuit power is provided by a dimmable circuit that adds an added benefit to a reduction brightness and soften light distribution and only to be used when required.

All external lighting to the building will be controlled by a daylight sensor and timer to turn off lighting after hours.

This design is a significant improvement on existing lighting, see page 3. Previously there were flood lights used to illuminate the garden with zero optical control or glare control situated above rear door exit.



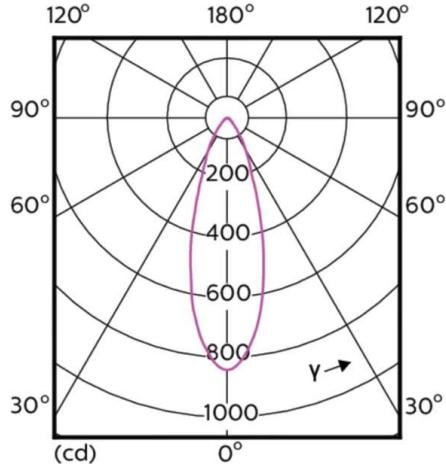
Yellow circle represents light distribution onto the ground



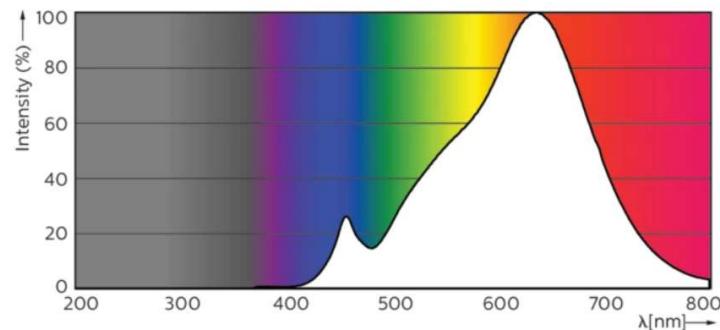
Ruislip – New External lighting – Ecological impact design

| | |
|-------------------------------|---|
| SPD | – 5W Low wattage LED lamps providing 355lumens of output at 100%.2700K Warm white. |
| Light distribution | – 25 Degree Lense to control the light output. Localised lighting illuminating the building walls below the light fitting and the floor directly below. The wall light is installed under the roof soffit and not visible from space. |
| LED Flicker | – Philips GU10 lamps operate with a flicker free efficient flow of power Flickering value (PstLM) of 1 50 to 60 Hz. As technology evolve more efficient lamps can be updated int existing light fittings using a GU10 lamp base. |
| Light colour | - 2700K is a warm temperature with less blue light. |
| Control | - Rear external lighting is dimmable, and controlled via an internal dimming control system. |
| Ecological light pollution | – Localised lighting to illuminate side of one-story building and floor no more than 1200mm in diameter. |
| Glare | - Glare is reduced within the light fitting as it is set back from the glass. |
| Maintenance | - Staff follow lighting schedule of lamps supplied by Moth Lighting Ltd when replacements are required. |
| Implications for biodiversity | - Localised lighting will be used when humans are present. Lighting to be used during open hours. |

Lamp details - https://www.lighting.philips.co.uk/api/assets/v1/file/Signify/content/fp929001347099-pss-en_gb/Localized_Commercial_Leaflet.pdf



Light Distribution Diagram - MASLED ExpertColor5.5-50W GU10 927 36DUK



Spectral Power Distribution Colour - MASLED ExpertColor5.5-50W GU10 927 36DUK



Ruislip – New External lighting – Improvements to lighting



Photo to show type of Existing Flood lighting.

240V 2 x 70W Sodium lamps.

6000 Lumens.

320 Degree beam angle.

Potential flicker.



2 Flood lights, one facing the pond the other facing into the garden.

At the front was another floor light.

