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Client

MDL Marinas

Lighting Report

Calculations and Visual Impact Assessment at The Point, Hamble Point Marina

Rev A

Date 15 October 2025

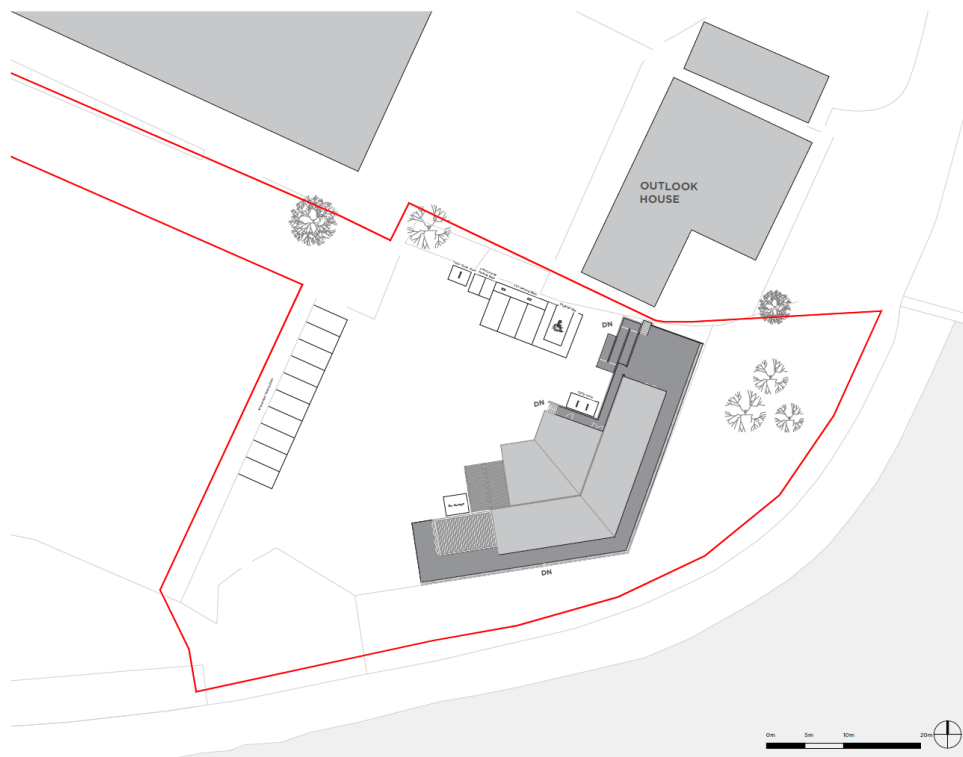
Background

MDL Marinas are proposing to build a new Food and Beverage unit at their Hamble Point Marina, Southampton, SO31 4NB. The glazed restaurant and bar areas will have a panoramic view over the Hamble estuary.

Due to its sensitive ecological and marine location, MDL's planning consultant, Savills, suggest that a lighting assessment is included with their application to Eastleigh Council.

Alan Tulla Lighting is an independent lighting consultancy specialising in the outdoor environment and has been asked to provide light spill calculations and a visual impact assessment.

Rev A is similar to our original report of 8 September 2025 but based on a revised building and site layout.



Excerpt from Your Retreats drawing A106 and included in Savills drawing 726881 of 10 October 2025.

Alan Tulla, FSSL, FILP, is a Fellow and Past President of the Society of Light and Lighting and has been awarded the CIBSE/SLL Lighting Diploma. He is also a Fellow of the Institution of Lighting Professionals, ILP and lectures for them on the topic of exterior and amenity lighting. He is author of the Society of Light and Lighting "Guide to the Exterior Environment", LG06.

Methodology and assumptions used in the 3D model

Our model is based on drawings from Your Retreats dated 8 April 2025 Rev 8. The 3D model is used to calculate illumination on the ground immediately surrounding the property.

We have calculated the light spill on land which faces the Hamble and its approach. The calculation planes are horizontal and at GF level.

It is standard practice for these calculated illumination plots to be “worst case”. I.e. based on all the lighting inside the rooms with windows being switched on at the same time.

We have assumed that the interior decoration of the restaurant and cafeteria is pale in colour, typically with reflection values of 50%, 70% and 20% for the walls, ceiling and floor respectively. A pale wall and ceiling will reflect more light through the windows than darker finishes.

We have used generic, recessed, ceiling mounted downlight fittings to provide the illumination. In this way, the illumination transmitted outside is received by reflection from the walls, floor and ceiling rather than individual fittings.

Although the interior lighting has yet to be designed, we advise against using any spotlights or coloured lights (such as red or green) which could be confused with, or conflict with any navigation lighting/signalling on the Hamble and its approaches.

Clearly, the amount of light transmitted to the outside is dependent on the illumination inside. In practice, the illumination levels found in restaurants and cafes varies a great deal. Due to the sensitive location of this proposal, we have assumed that the Fine Dining area will be illuminated to an average of 100 lux and the Café/Bar to 150 lux.

There is also a glazed and framed outdoor area with a retractable roof to the west of the Fine Dining. We have assumed a nominal illumination of 50 lux. This would likely be produced by table lamps.

Windows used in the model

The amount of light transmitted to the exterior environment through the windows obviously depends on how “clear” or “dark” the glass is (including double/triple glazing, colour tinting and any thermal coatings).

We have assumed “worst case” which is clear, double-glazed windows with a Visible Light Transmission of 76%. Tinted glass is likely to transmit less light to the outside.

Other areas

Note that there is little, or no, glazing on the north facing elevations and so we have not calculated spill in this area. We also understand that the car parking in front of Outlook House will remain unlit.

The approach road from the NW is already illuminated with 8/10m high columns.

As a comparison, 0.5 lux is also generally taken to be the illumination level received from a full moon on a cloudless night. Streetlighting in residential areas is generally 3 – 5 lux.

Calculated results

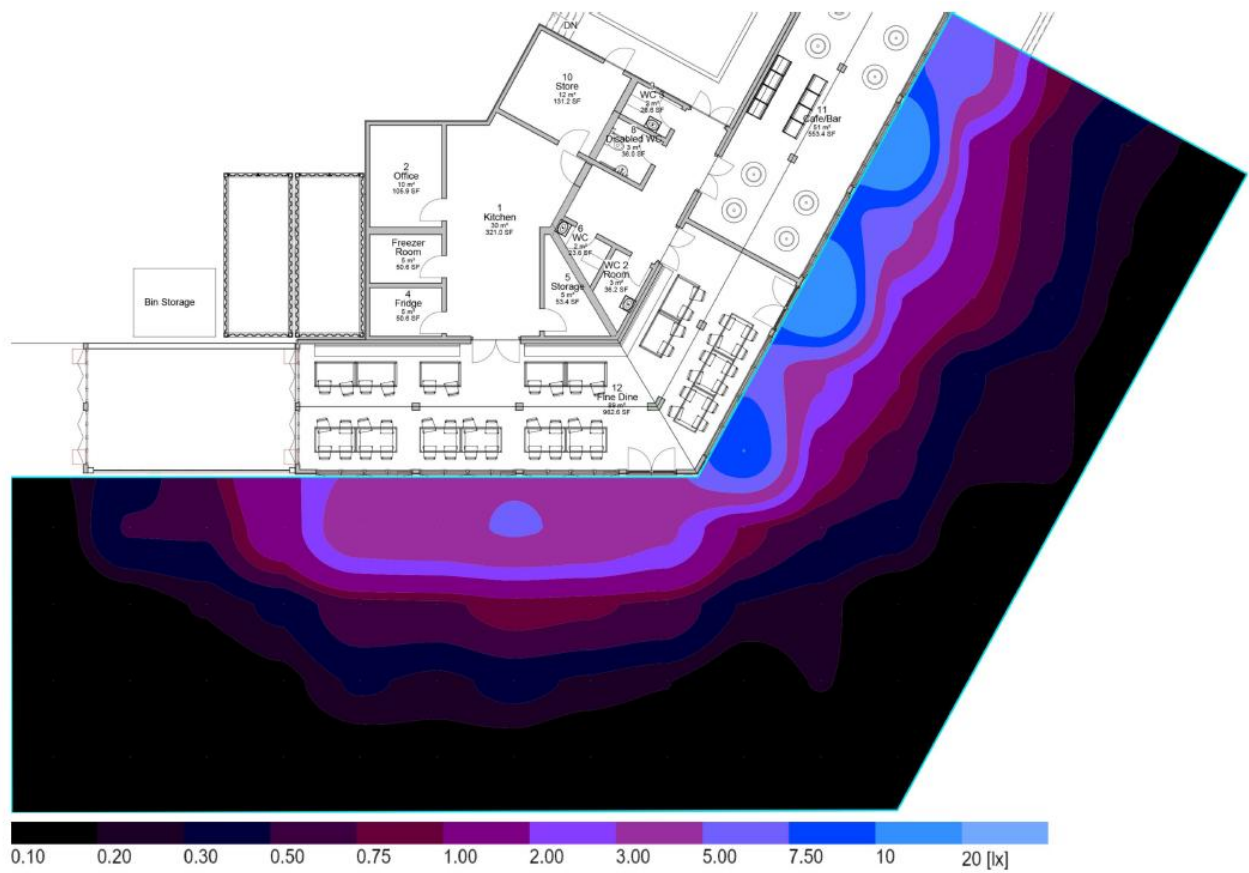
Overall view of calculation areas

These are described in greater detail below.



Calculation areas are numbered arbitrarily.

Main areas facing The Hamble (1)

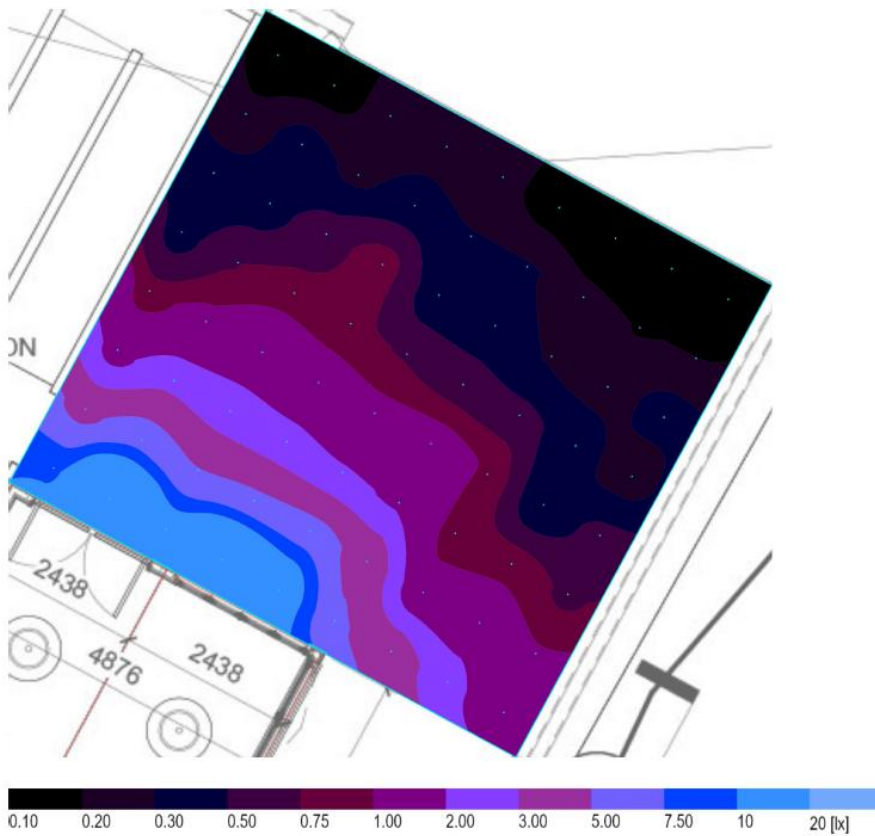


Our calculations show less spill from the Fine Dining area than Café due to the lower illumination inside.



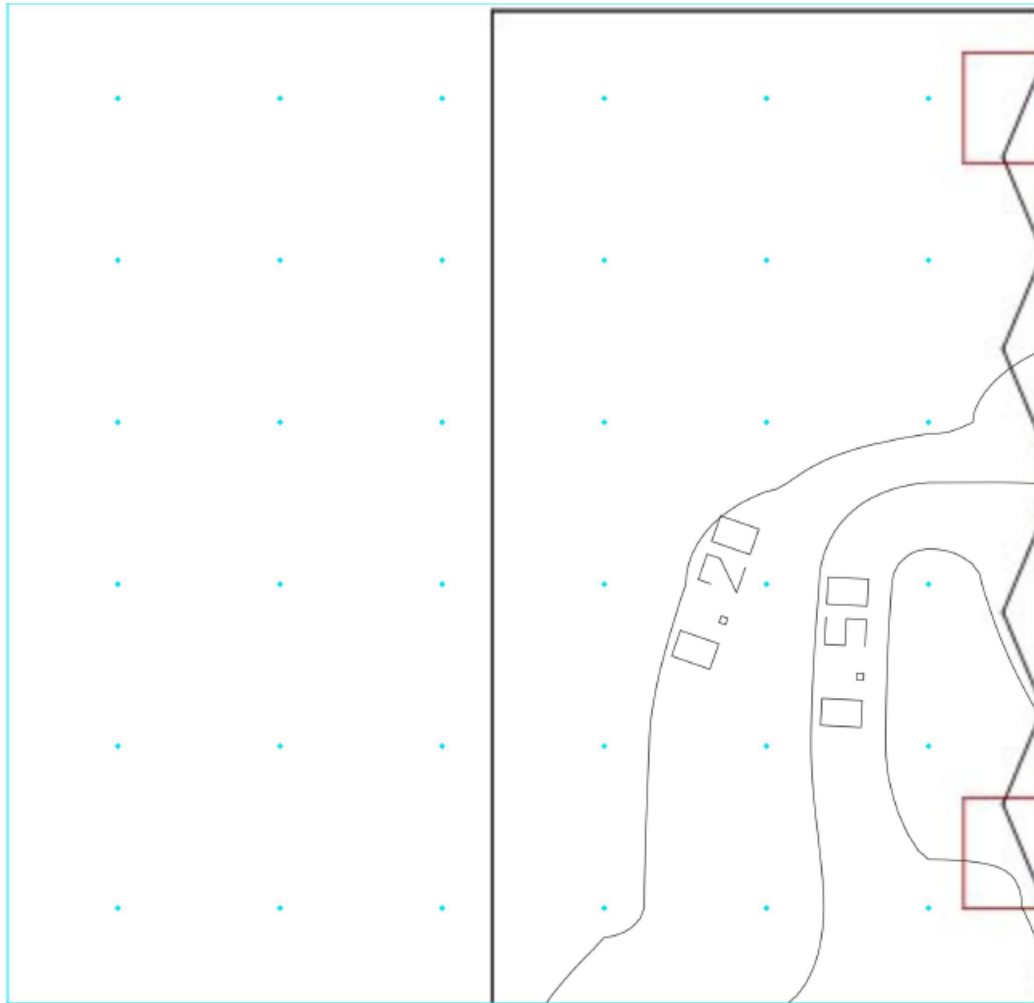
This shows horizontal spill light at ground level down to 0.2 lux. Note that the river is at a lower level and will therefore receive less illumination than shown.

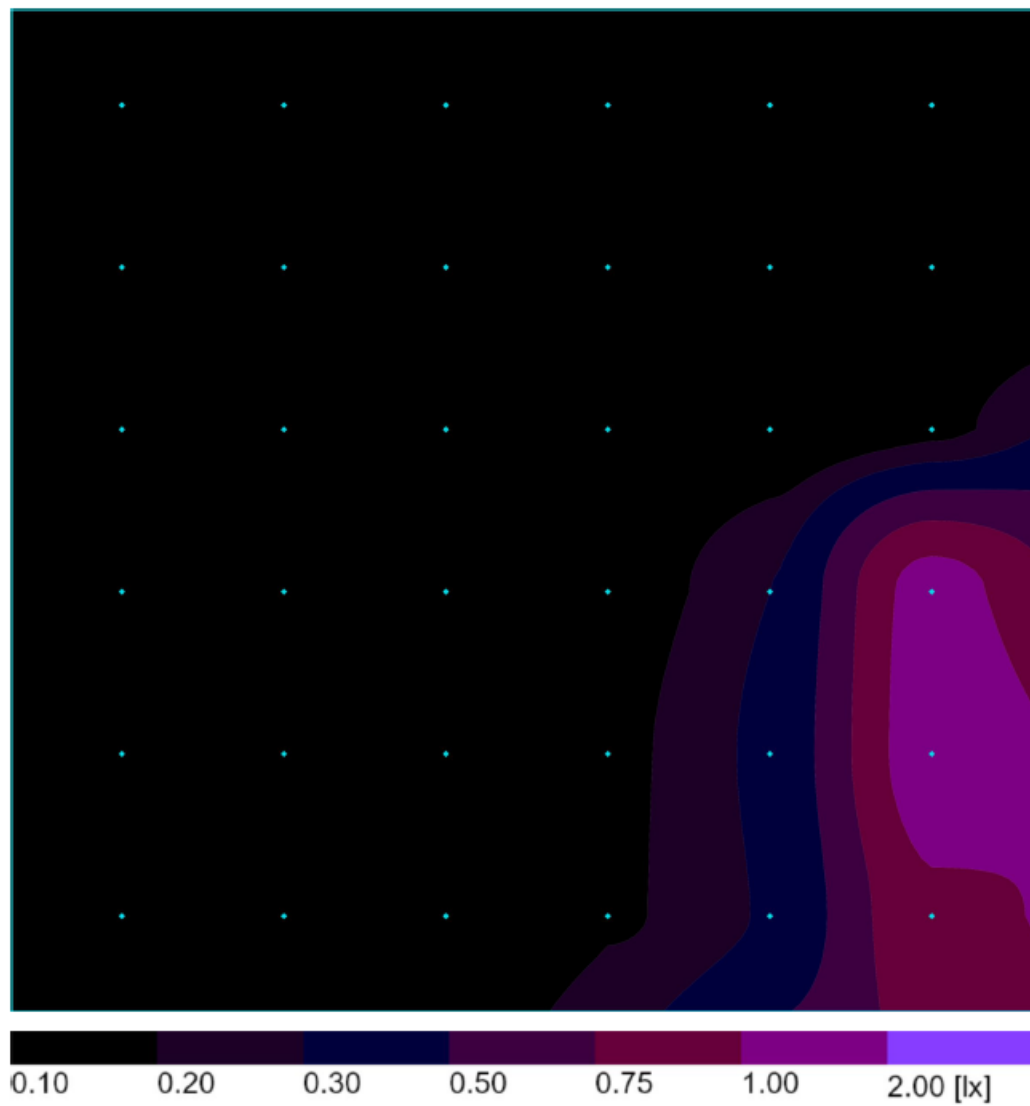
North East deck area (2)



West deck area (3)

This shows the spill from the framed extension with retractable roof.





Glossary of Lighting Terms

Illuminance: this is the SI term for what is normally referred to as Illumination level. It is measured in lux. It refers to the light falling on a surface. Normally this is a horizontal plane such as the ground or desktop. It can also refer to vertical surfaces such as windows and building facades. Illuminance is measured in lux.

Lumen: is the SI term for luminous flux or quantity of light. A typical 60w tungsten filament lamp emitted 700 lumens; a 1.5m fluorescent lamp emitted around 5,500 lm.

Lux: is defined as an illuminance of 1 lumen/m². A typical tennis court would measure 300 - 500 lux, a major traffic route 20 – 30 lux, a residential road 3 – 10 lux. Note that lux is normally taken to be the horizontal value but the vertical value is often relevant. E.g. vertical illuminance is important in recognising faces or light intrusion on windows.

Luminance: It is a measure of objective brightness and is a function of how much light is reflected off a surface. There are many factors involved but the major one is the reflectance of the surface. For a given level of illuminance, dark surfaces have lower luminance than light coloured surfaces. Its importance is that it is the metric used for classifying traffic routes, signs and advertising hoardings.

Luminaire: is the term for what is usually referred to as a light fitting. A fixture or lantern are other commonly used terms. These terms are used to distinguish them from the light source or lamp.