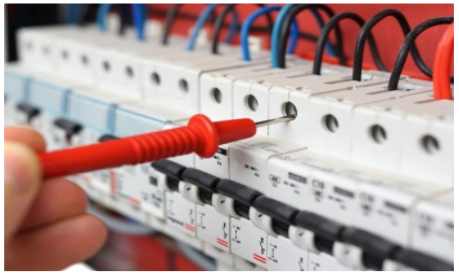
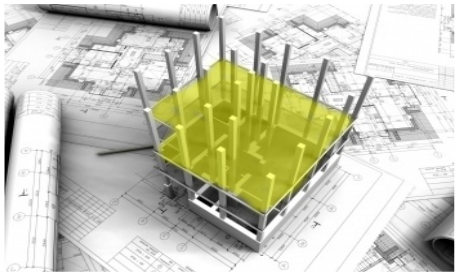
The Castings – External Lighting Assessment









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The Castings – External Lighting Assessment

1 SUMMARY

The aim of this lighting environmental impact report at The Castings was to identify the physical effects that the feature external lighting may have on the surrounding areas. The design goal was to provide horizontal feature illumination which will also act as functional for the external landscaped area and entrance to the rear of the building.

Any adverse nuisance spill light and/or glare impact to the surrounding residences has been minimised and controlled while fulfilling the functional needs of the project. The lighting design proposed by Reform provides an optimal combination of luminaire choice, height, location, and controls to achieve the required illumination on the escape route whilst avoiding light pollution and associated light spill.

The calculations demonstrate no adverse impact to residents above existing ambient values of illumination already in place.

In conclusion, the proposal to provide external lighting at The Castings appears to be achievable without an adverse impact on residents living within the immediate area.

The Castings – External Lighting Assessment

2 INTRODUCTION

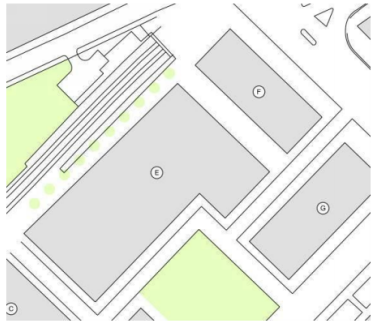
The design goal was to provide horizontal feature illumination which will also act as functional for the external landscaped area and entrance to the rear of the building during non-daylight hours which provides a safe method of passage without any potential nuisance lighting to the surrounding residents.

The basis of this report is to acknowledge, consider and apply the specific requirements of the Institute of Lighting Professionals (ILP) Guidance Note on the Reduction of Obtrusive Light to said lighting design.

2.1 SITE LOCATION

The project, The Castings, Plot E, will comprise of a new 25 Storey build residential scheme with 352 apartments ranging from studios to three-bedroom units. Its total residential area will take up 219,600 sq. ft. The building includes 20 car parking spaces and storage for 350 bicycles.

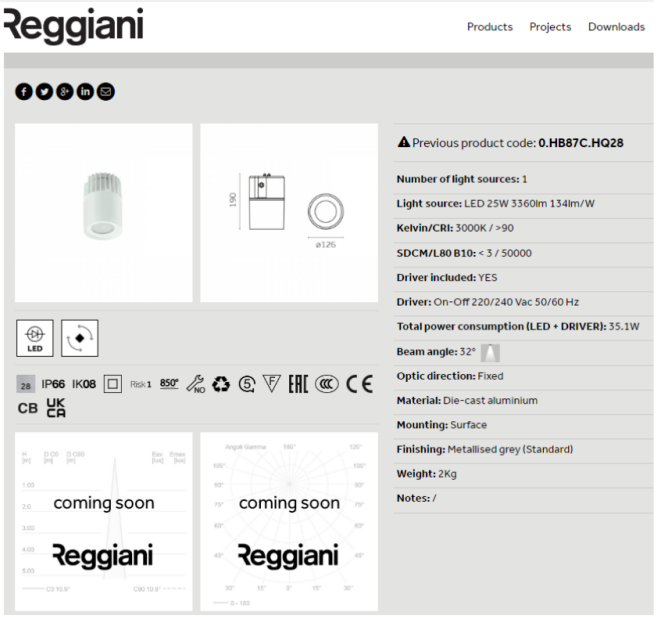
The basement level will be a plant area, with car parking. The ground floor will comprise commercial units, concierge/management facilities, refuse store and residents entrance area.

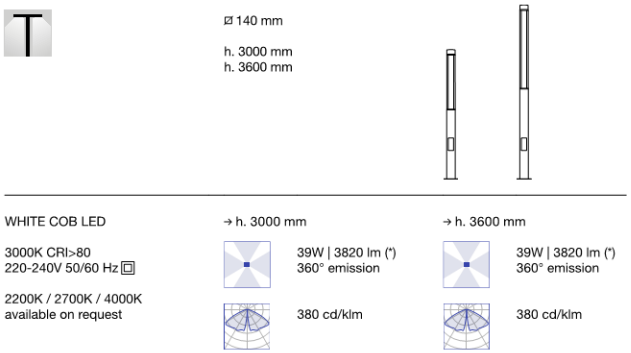




The Castings – External Lighting Assessment

The proposed lighting is to provide horizontal feature illumination which will also act as functional for the external landscaped area and entrance to the rear of the building during non-daylight hours which provides a safe method of passage without any potential nuisance lighting to the surrounding residents.
This is to be via luminaires suspended on a catenary wire, building mounted lighting, 2No 6m columns and LED Lighting Stacks.





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Product Description: Klay™ 18W Multi-Directional IP65 Wall Light

Klay™ is a decorative wall light that offers multiple beam angles and options for light distribution for indoor or outdoor application. On the top or bottom of the product, there is adjustable covers which can be adjusted which then adjusts the beam angle between15° to 60° per light source providing multiple options for illumination.



Optics

- Light output options:
  - 2200-15246 lumens (16-102W)
- Efficacy up to 150 LL/CW
- Road, Pathway and Area lighting distribution options
- Zero light pollution when mounted horizontally
- Adjustable tilt between 0° and +20° at 5 degree intervals for post top mounting
- Adjustable tilt between -20° and +10° at 5 degree intervals for side entry mounting
- 4mm thick, thermal shock resistant, tempered clear flat glass
- 4000K and 3000K colour temperature options

The Castings – External Lighting Assessment

3 LEGISLATION & DESIGN GUIDANCE PERFORMANCE CRITERIA

3.1 INSTITUTE OF LIGHTING PROFESSIONALS GUIDANCE GN1/20 NOTE ON THE REDUCTION OF OBTRUSIVE LIGHT 2020

The Institution of Lighting Professionals (ILP) is the UK and Ireland's largest and most influential professional lighting association.
The ILP have produced considerable design guidance with regard to obtrusive light, which is considered an industry standard in the avoidance of obtrusive light being present in external lighting installations. In addition to wasted energy due to poorly controlled and misdirected light, the potential to cause a nuisance to surrounding areas through glare and sky glow have a potential adverse impact on local wildlife.
It is recommended that Local Planning Authorities specify the following environmental zones for exterior lighting control within their Development Plans.

Zone	Surrounding	Lighting Environment	Examples
E0	Protected	Dark	UNESCO Starlight Reserves, IDA Dark Sky Parks
E1	Natural	Intrinsically dark	National Parks, Areas of Outstanding Natural Beauty etc
E2	Rural	Low district brightness	Village or relatively dark outer suburban locations
E3	Suburban	Medium district brightness	Small town centres or suburban locations
E4	Urban	High district brightness	Town/city centres with high levels of night- time activity

The proposed site location is in a natural Zone E4 environmental zone as the area is considered to be high district brightness.

The Castings – External Lighting Assessment

3.2 LUMINAIRE SELECTION

The catenary luminaires from Reform are the Reggiana Envios IP66. The 28W LED can downlight is manufactured from high pressure die-cast aluminium, a colour temperature of 3000K and a colour rendering index exceeding 90 Ra.

3.3 LIGHTING CONTROLS

The lighting is to be controlled via a photocell and time clock to reduce wasted energy within day light hours. The lighting will be required to be on constantly throughout the night to provide a safe illuminated pedestrian access/egress route to this side of the building

3.4 SKY GLOW & BACKSPILL

Sky glow and back spill from the proposed lighting has been negated due to the fact the luminaires have zero upward light component. All light output is directed in a downward direction.