



Project Number: BAU 4670

ABERAERON COSTAL DEFENCE SCHEME



Lighting Plan



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Issue and Revision Record

Revision	Date	Originator	Checker	Approver	Description
P01	26/09/2023	Gethin Thomas	Andrew Pointon-Bell	Ray Jones	First issue
P02	05/10/2023	Gethin Thomas	Andrew Pointon-Bell	Ray Jones	Comments Addressed
P03	23/10/2023	Gethin Thomas	Andrew Pointon-Bell	Ray Jones	Additional Comments Addressed



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1 Introduction

The Aberaeron Costal Defence Scheme (hereafter referred to as “the Scheme”) is a priority scheme for Aberaeron County Council (CCC). The Scheme comprises the improvement of flood defences for Aberaeron including, South Beach, Aberaeron Harbour, River Aeron & Pwll Cam.

The location of the works is spread over 5 different areas of the Site as noted below:

- Construction of a new rock breakwater.
- Refurbishment and re-building of the pier-head of South Pier
- Improvements to the existing defences on the South Beach
- Construction of a flood gate at Pwll Cam inner harbour.
- Flood wall construction at the following locations:
 - Quay Parade
 - Pwll Cam
 - River Aeron

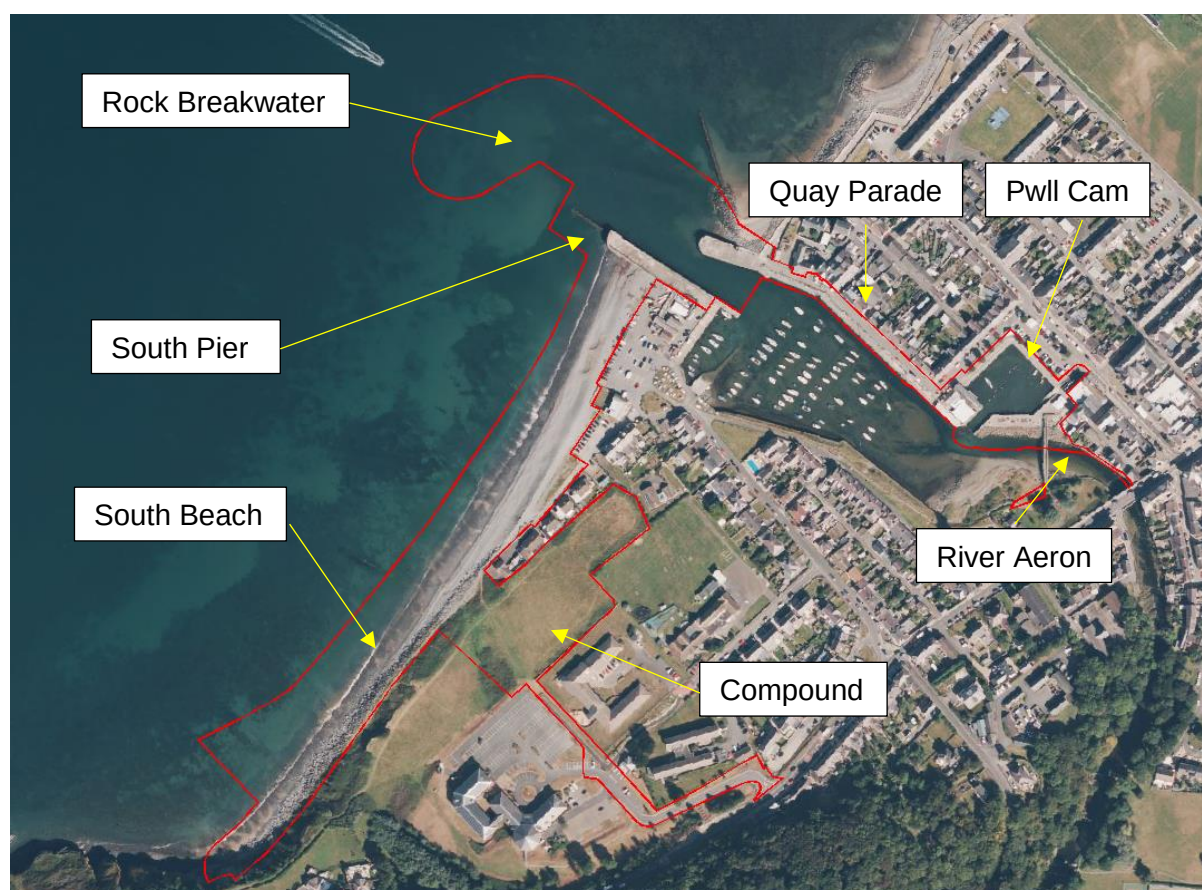


Figure 1 Works Locations

The purpose of this document is to show the lighting requirements and management of lighting through the works.

Throughout the duration of the project temporary lighting will be required to allow works to continue outside of daylight hours, this will mainly occur during the winter months. The type of lighting required is split into two main categories comprising of Permanent work lighting which will be temporary lighting installed in the same place throughout the project and task specific lighting which will be in place for specific sections of the works for a shorter length of time.

2 Sensitive Areas

Construction works will be taking place throughout Aberaeron Harbour itself, including the South Beach and alongside the River Aeron from the harbour entrance up to the A487 Bridge.

The main sensitive areas around these works include the River Aeron and the South Beach, care will also have to be taken around local residences and businesses.

As well as the work locations care will also have to be taken around the compound location which neighbours Ysgol Gynradd Aberaeron & Min y Môr residential care home.

A dark corridor will be maintained along the River Aeron to ensure there is no light spillage along this section (grey section in Figure two)

All lighting will be directed away from all sensitive areas as mentioned and the additional use of directional hoods will be used where possible.



Figure 2 Works Location



Figure 3 Compound Location

3 Lighting Position

Flood lighting, security lights, and any other obtrusive external lighting shall be sensitively located so as to avoid nuisance to neighbouring properties and should only provide the necessary luminance for the relevant tasks.

All task specific lighting will be positioned to minimise disturbance to otters. This will include avoiding night time lighting where possible, and if lighting is necessary, it will be directed away from suitable habitats for the otters which have been known to use the banks of the River Aeron, and Grey Seals along South Beach. Such positioning and directing will be at the guidance and to the satisfaction of the project Environmental Engineers/Ecological Clerk of Works (ECoW).

Examples of these lights are below,

Permanent work lighting;

- Site compound and accommodation lighting installed to light up compound walkways and access.
- This lighting will be permanently directed into the site compound throughout the duration of the works causing no disturbance to the local environment outside of the compound, and the project ECoW consulted to ensure this.
- The lighting to be installed around the compound is Toughflood Commercial as shown in appendix A.

Task specific lighting;

- Mobile Tower lights
- Hand held lighting & Head torches
- Vehicle and Plant lighting
- All temporary lighting will be directed away from the sensitive areas identified by the ECoW.
- The task specific lighting to be used is shown in appendix B.



Figure 4 Permeant Work Lighting (Exact Locations to be Confirmed)



Figure 5 - Task Specific Lighting (locations to Change throughout works, light to always face away from rive)

4 Additional Measures

The main points stipulated in this lighting plan will be reiterated in the site induction which all persons involved in the project will receive. As well as this an additional toolbox talk will be briefed to those involved in setting up site lighting so they are aware of the requirements.

Otter & Seal surveys will be undertaken on a daily basis which will assist with the placement and direction of onsite lighting, to ensure there is no disturbance.

Site Supervisors will continuously monitor the need, position, and duration needed for site lighting to ensure only the required lighting is used and keeping it to a minimum; there will be no excessive use of lighting.

A weekly environmental inspection will be carried out by the appointed Site Environmental Engineer which will review lighting needs, positions, and luminosity during their inspection.

Where possible and safe to do so, some lights may be fitted with motion sensors and timers to avoid any prolonged unnecessary illumination, directional hoods used on lights to avoid excessive light spill to be used where possible.

Some lights could be fitted with shields to appropriately direct the light where it is required and/or away from areas that could lead to Otter or Seal disturbance.

5 Appendix A – Compound Lighting



JC050006

Toughflood Commercial

Toughflood Commercial 100W 8500lm 85pcW 4000K IP65 Black

Features & Benefits

- Up to 90 LpcW
- Driver less technology, instant start up
- Polycarbonate Diffuser: Suitable for food preparation
- 2M pre-wired H05RN-F cable for exterior applications
- ADC12 die-cast aluminium body, corrosion resistant, lightweight for easier installation
- Easy access installation with 55° angled Galvanized steel bracket
- 110° beam angle



RATING



WARRANTY



RATING



CLASS I



BEAM



CRI:RA

General Information

Mounting	Wall
Environment	Outdoor
Product Range	Commercial Exterior
Trade Name	Toughflood
Color Finish	Black
Product Shape	Rectangular
Product Weight(kg)	1.8
Overall Dimensions	322 x 265 x 38mm
Light Source	LED
Light Source Features	Neutral White
Recommended Product Location	Exterior, general security lighting
Method Of Fix	Mounting Bracket with suitable fixings (not supplied)
IP Rating	IP65
Origin of manufacturer	China
Warranty	2 years standard warranty extends to 3 years when registered within the first year of purchase (See Website for

Driver Manufacturer	terms and conditions)
LED Manufacturer/Type	No driver, mains LED Chips
Lighting Product Type 1	Optoelectronics 2835
	Wall Light

Electrical

Voltage Rating	220-240
Primary Running Current(Amp)	0.51
Operating Frequency Hz	50/60Hz
Luminaire Circuit Wattage	100
Class	I
EMC Compliant (EN55015)	Yes
Power Factor Correction	0.9
Input Electrical Connections	Live, Earth and Neutral
Dimmable	No
Supplied cable rating	2M pre-wired H05RN-F

Thermals

Operating Temperature Range °C	-20 to +40
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Performance Data

LED Life (Hours)	54000
Hours life stated is an indication of expected L70 chip and light output calculations when operating in optimum conditions. Product warranty period supports the full product during the term given. The L70 hours expectancy is not correlated with the full product warranty term, nor is it a representation of lumen depreciation during the warranty period.	
Energy Rating	This product contains a light source of energy efficiency class F
Actual Lumen Output	8500
Lumens Per Circuit Watt	85
Standard Deviation Colour Matching - SDCM	<6
Color Rendering Index	50-79
CRI: Ra	70
Correlated Color Temperature	4000K
Beam Angle °	110
LOR (Light Output Ratio) %	100
Photometry Available	Yes

Construction

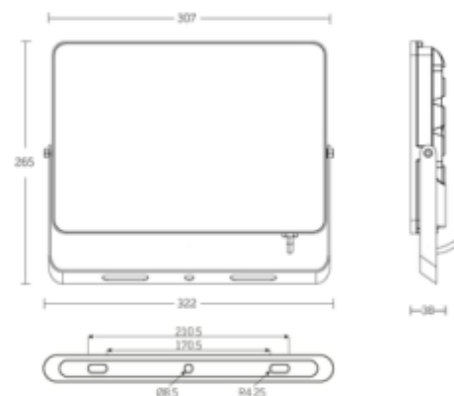
Primary Material	ADC12 die-cast aluminium
Outer Diffuser	Opaque Polycarbonate

Packaging

Product carton overall dimensions(cm)	33 x 27 x 4.5 cm
Product Packaged Weight(kg)	2
Quantity Per Outer Carton	5
Outer carton(L)- cm	34.2
Outer carton(W)- cm	28.2
Outer carton(H)- cm	24.5
Outer carton Net weight- kg	10.00kg
Outer carton Gross weight- kg	10.50kg
Product Bar Code EAN-13 Number	5052544105982
Outer carton Bar Code ITF-14 Number	15052544105989

Standards & Approvals

Manufactured In Accordance To	BS EN 60598-2015,2-1,2-5
CE Marked	Yes
UKCA Marked	Yes
Date code/Purchase order No.	Yes
WEEE Symbol	Yes
Certificate Of Conformity	Available on request
Accredited Members	LIA, ISO9001-2015, ISO14001-2015





JCC Lighting LTD Innovation Centre, Beeding Close, Southern Cross Trading Estate, Bognor Regis, West Sussex PO22 9TS
Sales: 01243 838999 (8am to 5pm Monday to Friday) Fax: 01243 838998 | sales@jcc.co.uk | www.jcc.co.uk
Company Registration Number: 03044848 | VAT Number: 918544112

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6 Appendix B – Tower Lights

X-ECO
6x160W - 48V LED - 8.5M

12
units
per truck



ENGINE POWERED Line

Features

- Multi-directional adjustable and tiltable floodlights
- 6x160W, 48V LED lights
- 48V power between the generator and the lights
- 7 section hydraulic vertical tower 8.5 m, 340° rotatable
- Amoss safety system
- Galvanised metalworks
- 80 µm powder coating
- Compact dimensions for easy handling & transportability
- Central lifting eye, longitudinal and transversal forklift pockets for effective handling
- Plug & play, colour coded cables and connectors
- Light heads certified protection level IP67
- Guided main coiled cable to avoid damage during tower operation
- Control panel alarms for engine protection and fuel level indicator
- Circuit breaker for electrical protection against overload
- External emergency stop button
- Fully bunded tank, 110%
- Certified wind stability up to 110 km/h
- 4 height adjustable stabilisers
- On board levels for guidance during stabilisation

Reduce your CARBON FOOTPRINT by using **TRIME** Lighting Towers

Dimensions and Weight	
Dimensions min (mm) LxWxH	2540 x 1390 x 2420
Dimensions max (mm) LxWxH	2540 x 1550 x 8500
Weight (kg)	920

Floodlights	
Type	Led
Power (each)	160W
Floodlights number	6
Options	Timer
Illuminated area (sqm)	4200

Mast	
Lifting Method	Hydraulic
Maximum Height (m)	8.5 m
Maximum Wind Speed (km/h)	110 km/h
Rotation (°)	340°

Alternator	
Model	Synchronous
Frequency (Hz)	50
Insulation class	H
Degree of protection	IP 23
Single phase voltage	3.5kVA - 230V
Auxiliary outlets	1.2 kVA

Engine	
Model	Kubota Z482
Fuel	Diesel
r.p.m.	1500
Tank capacity (l)	110
Consumption (l/h)	0.55
Running time	200 h
Noise level (dBA) at 7m	65

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01480 220500 | www.trimeuk.com | sales@trimeuk.com

TRIME
Lighting Towers