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Bowling Green Building Services Planning Report

GHX0031 Bowls Club Site Infrastructure

Garth Wymott 2

608623-0000-PEV-GHX0031-XX-RP-ME-0001
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S3 – Suitable for Review and Comment
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Ministry of JUSTICE

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Document History

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P01	11/06/2021	First Issue S3 - Suitable for Review & Comment	AR	JA/AI
P02	16/07/2021	MACE Comments Incorporated	AR	JA/AI
P03	21/07/2021	Planning Amendments	AR	JA/AI
P04	06/08/2021	Legal's comments incorporated	AI	JA

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1.0 Introduction

This report will provide information on the utility services and external lighting that will be necessary for the relocation of the existing Bowling Club due to the proposed location of the new prison at Garth Wymott 2.

The current Bowling Club occupy a small section of land inside the red line boundary of the proposed new prison site and therefore a proposal has been submitted to relocate the club to a new area just south of the existing prisons site.

This report has been prepared to provide additional information to the following external drawings.

- 608623-0000-PEV-GHX0031-ZZ-DR-E-6310-D0100 Bowling Green External Lighting Layout - Sheet 01
- 608623-0000-PEV-GHX0031-ZZ-DR-E-6311-D0100 Bowling Green External Lighting Layout - Sheet 02
- 608623-0000-PEV-GHX0031-ZZ-DR-E-0600-D0100 Bowling Green Utility Services

The drawings referenced above detail the levels of light expected across the site and along the boundary.

Information provided within in this report has been done in conjunction with the following organisations.

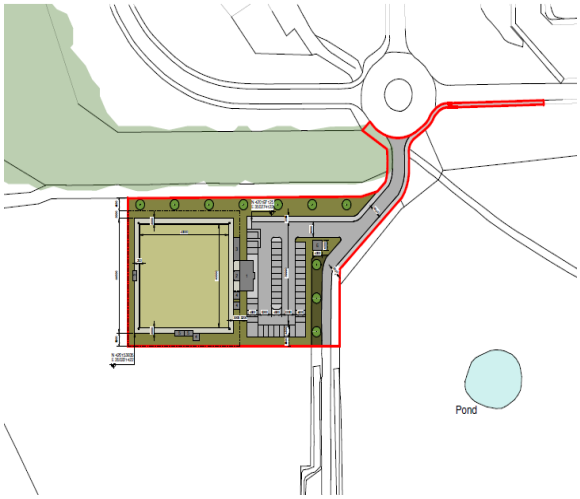
- Kingfisher Lighting [External Lighting]
- Electricity North West Ltd [Electrical DNO]
- United Utility [Water Authority]

Drawings at this stage are intended to show expected levels of lighting for planning stages and locations of local authority equipment and not intended for scale measurements at this time. Scaled drawings for this project shall follow at Stage 3.

Final connection points on highways will be finalised as the design and enquiries progress with the utility companies.

2.0 Proposed Site & Utility Connections.

The prosed site is currently green fields and has no existing connections for any utility services. As part of the scope for the relocation of the bowling clubs 'requirements, we have made applications for new electrical and water connections for the site.



Electrical

An electrical connection of 5kVA has been made to Electricity North West Ltd to facilitate the small electrical demand required by the site.

To enable the electrical connection to this site Electricity North West Ltd will require a substation to be positioned locally as only High Voltage [HV] cabling is in the vicinity. This is expected to be located on the bowling green site, between the car park and main road in a suitable GRP enclosure for a package substation. This can be seen on the architectural site plan and utility drawings for the site.

Low Voltage [LV] connections will then be made from this location to the bowls clubs incoming distribution position by the DNO.

Water

A new 32mm water connection with external boundary meter has been made for the bowls club with United Utilities (UU) based on connections for 3 toilets a small kitchen and maintenance /ground irrigation / keeping supplies. This is still being processed and designed by United Utilities, Budget estimates from UU have been received to-date. It is likely that the final connection to the water main will come from Moss Lane.

3.0 External Lighting.

An external lighting scheme has also been designed for this development that covers the car park, bowling green and connection to the local highway.

The external lighting design consists of 3 main areas.

- Access Road
- Car Park Area
- Bowling Green Area

The access road will be developed further through the next stages of design with the highways agency and local authorities as we progress, to ensure we meet the requirements for adoption or extension of existing systems. Currently this has been achieved using 3 single column mounted luminaries mounted at a height of 6 meters to achieve an average lux of 10 lux.

The car park has been illuminated using 4 single column mounted luminaries at a height of 6m to achieve an average of 20 lux across the space.

The bowling green has been designed at this stage to provide an average of 500lux using 12 luminaires mounted at 10 metres on galvanised columns. This will consist of 4 columns installed to the corners of the green, with 3 luminaires each. These luminaires shall be dimmable to enable more precise levels to be commissioned and provide flexibility.

The lighting scheme for this project has been developed to an advanced stage and information on night-time pollution levels can be found in section 5 under the BREEAM calculations for this project.

The lighting design for this planning stage can be found on drawings that accompany this report.

4.0 Product Specification Details

Luminaire Information

Luminaire Schedule				
Symbol	Qty	Label	Arrangement	Description
	12	A	SINGLE	1 x 900w Amnis Flood with NST Optic @ 10m
	3	B	SINGLE	1 x 40w LED Viva City Pro 4000k 804mA with FW70 Optic @ 6m
	4	C	SINGLE	1 x 60w LED Viva City Pro 4000k 600mA with FW70 Optic @ 6m

Kingfisher SPORT

Datasheet

Amnis Pro

Specification Text

The luminaire shall be manufactured from high pressure die-cast aluminium. It shall have an LED efficacy of up to 115 luminaire lm/W and will be capable of producing up to 105,000 luminaire lumens at 4000K with a CRI >70. It shall have an asymmetric forward throw optic and is rated at IP66 and IK08.

Specify 2700K and bracket adjustment fixed to +/- 10° for IDA compliance.

Specification

Weight:

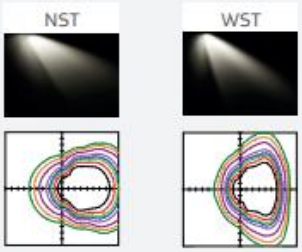
Fitting:	26.30 kg
Driver:	10.10 kg
Fitting with integral driver:	31.07 kg

Windage: 0.19m²

Material: Die-cast Aluminium

Paint Finish: Marine Grade Powder Coated Anthracite Grey

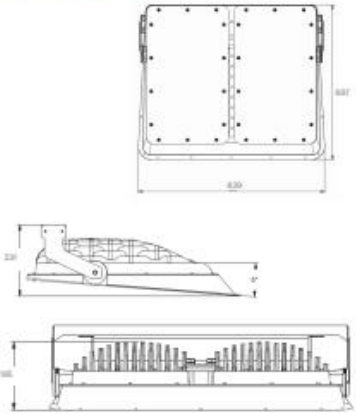
Optics



Key Features

- 620W - 910W
- 71,000 - 105,000 Luminaire Lumens
- Efficacy up to 115lm/W
- 2700K, 4000K
- CRI >70, CRI >80, CRI >90 Lifetime
- >100,000hr
- Asymmetrical
- Marine grade paint
- Bracket adjustment for site leveling fixed to +/- 10°

Dimensions



Typical Package Substation

5.0 BREEAM

For BREEAM Credit Evidence please refer to the information contained on the following drawings:-

- 608623-0000-PEV-GHX0031-ZZ-DR-E-6310-D0100 Bowling Green External Lighting Layout - Sheet 01
- 608623-0000-PEV-GHX0031-ZZ-DR-E-6311-D0100 Bowling Green External Lighting Layout - Sheet 02