



**MERTHYR MOTOR AUCTIONS, PANT ROAD, DOWLAIS,
MERTHYR TYDFIL**

**BAT SURVEY OF MUGA AT HEOLGERRIG PRIMARY
SCHOOL, MERTHYR TYDFIL**

OCTOBER 2023

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HEOLGERRIG PRIMARY SCHOOL, MERTHYR TYDFIL

Bat Survey of Heolgerrig Primary School

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NON-TECHNICAL SUMMARY

A bat survey was undertaken of a Multi Use Games Area at Heolgerrig Primary School, Heolgerrig, Merthyr Tysfil. As part of this application, it is requested that the area is lit some evenings in order to facilitate sporting events.

The area was considered as being of low potential for bats and a single evening activity survey was undertaken

There are no buildings within the land development application boundary that could offer bat roosting habitat although, there are a number of houses adjacent to the site on the south western and south eastern boundaries that may provide roosting potential for bats. It is possible that bats will also roost in the school building further to the south east.

A single bat species was found to be present on the site, namely common pipistrelle.

Due to the small number of bats, the low number of common species present at the site, the lack of roosting features present at the site, the fact that the MUGA will only be used infrequently, with the lights on during use only and the fact that there will be restrictions on timings, it is considered that any impacts on bats will be minor.

1 INTRODUCTION

1.1 OBJECTIVE

The objectives of this report are to:

- identify the potential for bats to be present on site;
- undertake species specific assessments and surveys as necessary;
- using the information gathered to determine whether there will be any impacts (both positive and negative) on bat species present;
- provide recommendations for further survey as necessary; and
- suggest outline mitigation and enhancement ideas and principles

1.2 METHODOLOGY

To achieve the objectives set out above, the following actions were taken:

- Field based assessments in respect of
 1. Bats;

1.3 SITE DESCRIPTION

The MUGA is located at Heolgerrig Primary School, Heolgerrig, Merthyr Tydfil.

The site is comprised of entirely hard standing with vegetation to the south east and north west.

The site is located in a wholly urban area, being surrounded by housing, roads and associated infrastructure. The site itself is not lit; however, streets and houses surrounding the site are constantly lit to the north east and there are lights already present to the south east in the car park of the school.

Photos are at Appendix A.

Figure 1 – Detailed view of the site (MUGA arrowed red) (Google Maps, 2023)

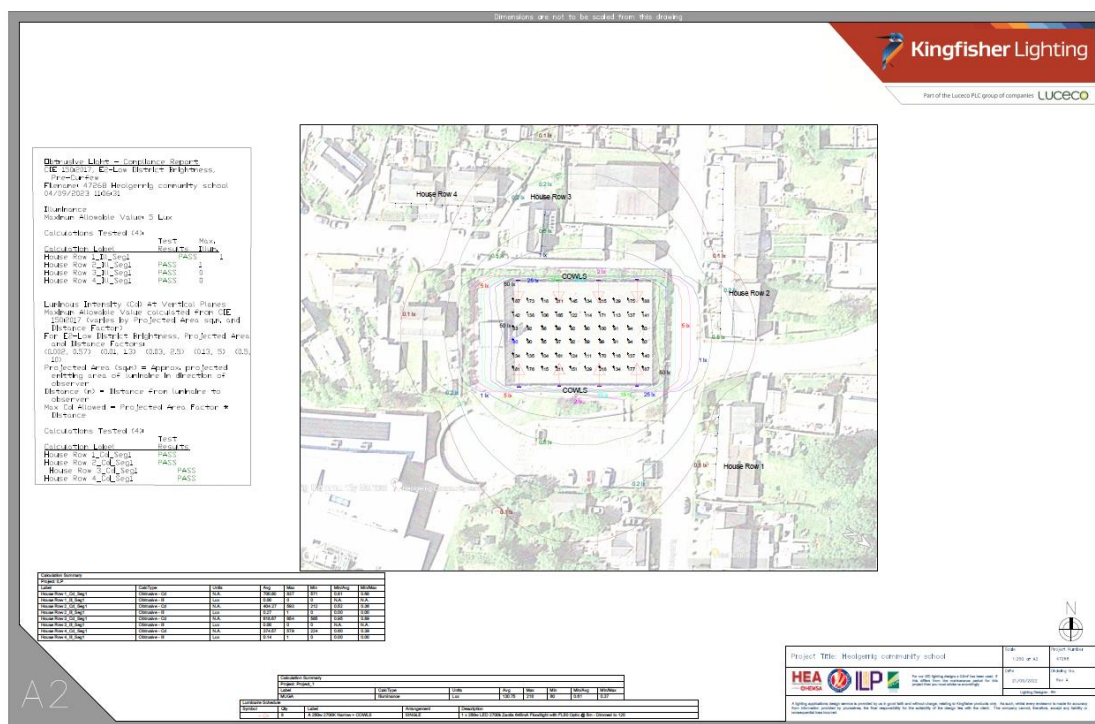


1.4 PROPOSED DEVELOPMENT

It is proposed to add lighting to the MUGA in order to extend the use of it into the evening.

1.5 STUDY AREA

The field survey looked at the red line development area itself Plans for the site are as follows.



2 REGULATORY FRAMEWORK

2.1 INTERNATIONAL

European Union legislation requires that member states designate sites for the protection of habitats and species included in the annexes of both Council Directive 92/43/EC on the Conservation of Natural Habitats and of Wild Flora and Fauna (the Habitats Directive) and Council Directive 79/409/EEC on the Conservation of Wild Birds (the Birds Directive). This legislation is implemented in the UK by the Conservation of Habitats and Species Regulations 2017 ("the Habitat Regulations"). This results in sites being designated as Special Areas of Conservation (SACs) and Special Protection Areas respectively (SPAs).

2.2 NATIONAL (UK)

The Wildlife and Countryside Act 1981 (as amended) allows sites to be designated as Sites of Special Scientific Interest (SSSI) for one or all of the following categories:

- Flora;
- Fauna;
- Habitat; and
- Geological importance.

European designated sites are automatically designated as SSSIs prior to their designation.

The relevant legislation includes:

- The Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999 (as amended);
- The Conservation of Habitats and Species Regulations 2017
- The Wildlife and Countryside Act 1981 (as amended);
- Countryside and Rights of Way Act 2000;
- Environment (Wales) Act 2016
- Wild Mammals (Protection) Act 1996;
- The Protection of Badgers Act 1992; and
- The Hedgerow Regulations 1997.

Section 40 of the Natural Environment and Rural Communities Act 2006 (as amended) requires all public bodies to have regard wherever possible to conserving biodiversity. Section 42 of the Act requires that a list of habitats and species of Principle Importance for the Conservation of Biological Diversity in Wales be produced.

The Environment (Wales) Act 2016 requires that all public authorities, when carrying out their functions in Wales, seek to "maintain and enhance biodiversity" where it is within the proper exercise of their functions. In doing so, public authorities must also seek to "promote the resilience of ecosystems".

This ensures that biodiversity is an integral part of the decisions that public authorities take in relation to Wales. It also links biodiversity with the long term health and functioning of our ecosystems, therefore helping to align the biodiversity duty with the framework for sustainable natural resource management provided in the Act.

In Wales, this legislation replaces and enhances the Natural Environment and Rural Communities Act (2006) which sought to raise the profile of biodiversity and to make sure that it is considered in all local authority decisions by ensuring that "Every public authority must, in

exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity.”.

Other elements of NERC 2006 may still apply.

Biodiversity Action Plans (BAPs) are tools which are used to monitor, manage and enhance those habitats and species which are of significance to an area or organisation, The United Kingdom BAP lists a number of priority habitats and species which are of conservation concern.

2.3 NATIONAL (WALES)

Planning Policy Wales (Welsh Government,) and Planning Policy Wales Technical Advice Note 5: Nature Conservation and Planning (Welsh Assembly Government, September 2009) set out the protection given to wildlife (sites, habitats and species) by the planning system operational in Wales.

2.4 LOCAL AND REGIONAL

The proposed development is wholly within the Merthyr Tydfil County Borough Council area of responsibility. Therefore, all policies adopted by the Council will apply, including policies which may not be specific to nature conservation or the natural environment that may apply or be relevant and should be considered during the planning process.

2.5 PLANNING FRAMEWORK

The proposed development will be undertaken wholly under the auspices of the Town and Country Planning Act 1990 (as amended).

3 DESK STUDY AND PROTECTED SITES (BATS)

3.1 METHODOLOGY

The South East Wales Biodiversity Records Centre (SEWBReC) were formerly requested to supply a Bat and Roof-nesting Birds (BARB) survey for the site. The survey to provide; bat records within a 2km buffer, roof nesting birds within 150m buffer plus a list of all Special Areas of Conservation (SAC) and sites of Special of Special Scientific Interest (SSSI) designated for bat species within a 10km site buffer. The reference for this date search is 0234-370.

3.2 DESK STUDY SUMMARY

There are no UK statutorily designated sites designated for their bat interest recorded within 10km of the development site. There were no non-statutorily designated sites designated for their bat interest recorded within 10km

There were a total of 151 bat records within 2km of the site

3.3 STATUTORY AND NON-STATUTORY SITES

There are no UK statutorily designated sites designated for their bat interest recorded within 10km of the development site. There were no non-statutorily designated sites designated for their bat interest recorded within 10km.

3.4 BAT RECORDS

The closest record to the site is that of common pipistrelles foraging 55m from the site. The bats were observed in flight and not identified roosting. Other records refer to myotis sp., pipistrelle and brown long-eared 350m from the site.

There are other records of bats within the data search, however, these are greater than 600m from the site. .

4 PROTECTED SPECIES

4.1 BATS

4.1.1 Summary

The following bat surveys were undertaken at the site:

- walked transects (one transect)

The only bat species recorded using the site was common pipistrelle.

4.1.2 Bat Ecology

British bats are small flying nocturnal mammals that feed exclusively upon insects. There are 17 species resident in Britain, ranging in size from the small pipistrelle species (*Pipistrellus* sp.) weighing in at approximately 5 g up to the larger noctule (*Nyctalus noctula*) weighing approximately 35 g. Bats are active from April through to October and hibernate when insects are in short supply in the winter months. Bats generally emerge from hibernation in late March - early April and move into transition roosts before the female bats move to maternity sites by the beginning of May where they give birth to a single baby between June and early July. The baby is reared solely by the mother and is weaned and independent by end of August. After breeding, bats move to transition roosts and females will visit males at mating roosts. During the autumn, bats feed intensively to gain sufficient weight for hibernation.

Although traditionally trees, caves and rock faces were used by roosting bats and are still used, many different structures are used nowadays by bats, which take advantage of readymade (manmade) roosts. Structures used frequently include bridges, ice-houses, pillboxes, disused railway tunnels, houses and barns etc. Bats do not hold territories but have foraging ranges which vary in size between species: from just 3-4km from the roost for the smaller bats while noctules may fly 20km or more. Threats to bats include habitat destruction and the severance of commuting routes, use of agricultural pesticides, intensification of farming methods and deliberate persecution by man. Bats have few natural predators; the domestic cat probably accounts for most losses.

4.1.3 METHODOLOGY

4.1.3.1 Activity surveys – personnel

Activity surveys were undertaken by Beth Evans of BE Ecological Ltd.

4.1.3.2 Activity surveys – walked transects

A single walked bat activity transect was undertaken. A dusk transect was undertaken on 5th June 2023.

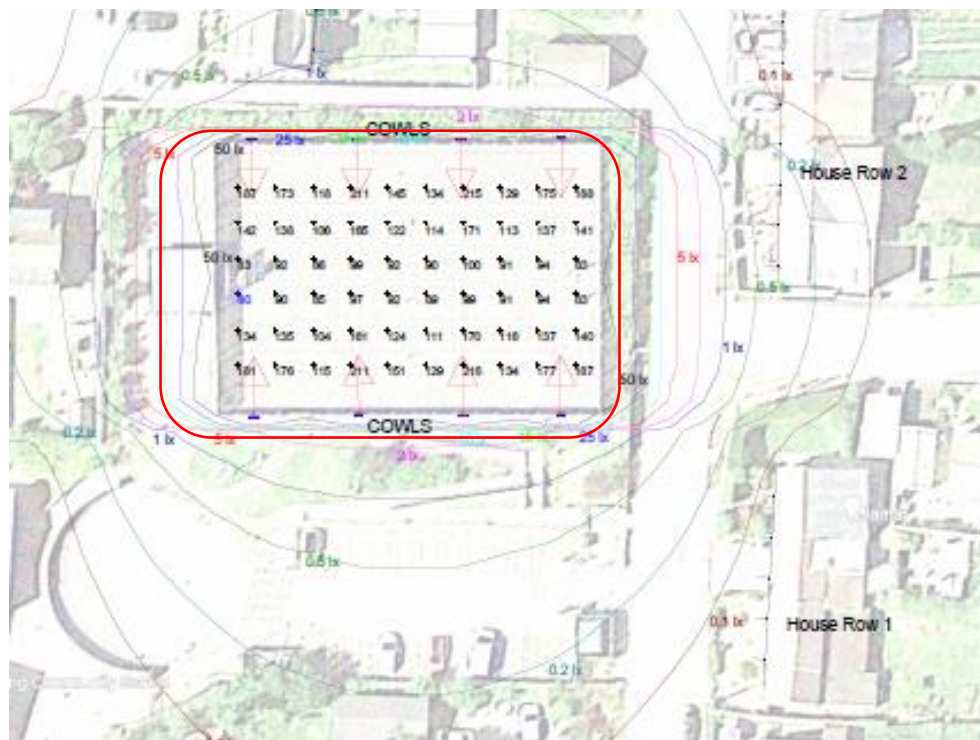
The surveys were designed to determine the bat species present on the site and whether any parts of the site were preferred (of a greater importance) by them for foraging and / or commuting.

The transect routes (Figure 3) were chosen to achieve good overall coverage of the site. Transects were carried out during periods of peak foraging, starting twenty minutes before dusk and continuing for up to 2.5 hours after dusk. A number of fixed point stops were also incorporated into the survey, in particular along the south western, north western and south eastern boundaries, interspersed along the chosen route. Each stop was between two and five minutes in length.

The survey on 5th June was walked in a clockwise direction

A Batlogger M2 detector was used.

Figure 3 – approximate route of walked transects



4.1.4 Results

4.1.4.1 Habitat Assessment

The site is dominated by hard standing.

The site is bounded to the south by a hedgerow to the south west, north west and north east with a lit carpark along the north eastern boundary.

The site is located in a wholly urban area, being surrounded to the north, west, east and south by housing, roads and associated infrastructure. The site itself is not lit; however, streets and houses surrounding the site are constantly lit.

4.1.4.2 Activity surveys – walked transects

The surveys were undertaken on the dates and under the conditions listed in Table 3 below.

Table 3 - Summary details of walked activity transects

Date	Survey time	Sunset/sunrise	Timing	Weather
5 th June 2023	Dusk	21:26	Twenty minutes prior to sunset, up to 2.5 hours post sunset	Start: 22°C; end: 20°C. 60% cloud, dry. No wind.

Transect 1 – 5th June 2023

A total of nine bat calls were heard throughout the course of the survey, all of which were common pipistrelle. The calls all came from two bats that were seen by the surveyor flying high over the MUGA. The first bat heard was a common pipistrelle seen flying high over the MUGA at 21:46 from south to north. Quiet/brief calls were then heard at 21:48, 21:50 and 21:51, however no bats were seen.

The second bat seen was again a common pipistrelle. The bat was seen at 22:08 commuting from south to north.

The only other bat calls heard were flitting with calls recorded at 22:08, 22:09, 22:17, 22:18, with the last call heard at 22:19.

All bats that were not seen were heard against the south western and north western boundaries.

No further bats were heard throughout the course of the survey.

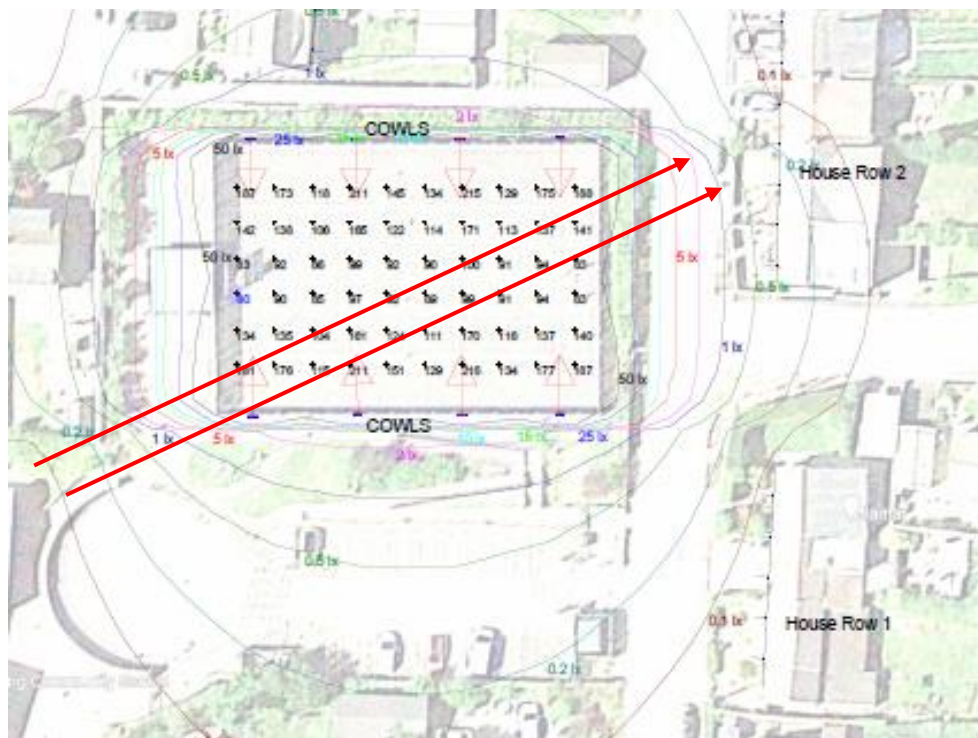


Figure 4: Location of common pipistrelle commuting route (arrowed red)

4.1.5 Bats - evaluation

Bats are protected by international and domestic legislation, a reflection of their increasingly threatened status; bats are therefore of **high international** value.

A small number of bat calls were heard at the site (nine). Only two bats were seen and heard by the surveyor.

Overall, within the context of the surrounding land use, it is considered that the proposed development site is of **low** value at a **local** level to and for bats.

4.1.6 Bats - impact characterisation and mitigation

Following a review of the plans, it appears that the lights used (Appendix B) do follow relevant guidance for bats and lighting. Due to the small size of the site, there is some lighting to hedgerows. Every attempt has been made to reduce light spill as far as possible, including the use of baffles. Two of the sites boundaries are already well lit.

It has been agreed that the lighting will only likely be required during the winter months, the end of autumn and the start of spring, when the evenings begin to draw in. The lights will only be in use as and when required and will be turned off immediately prior to events finishing. Lighting will be used no later than 21:30pm.

This will prevent impacts in the summer months as bats will emerge much later and will be able to continue to use the site undisturbed after 21:30pm. In the autumn, bat activity will reduce going into winter, with levels starting to increase towards spring.

The MUGA will not be used every night, only when events are scheduled in the evening.

4.1.7 Bats - impact without mitigation

It is considered that without mitigation there would be a **low** impact at a **local** (site) level.

4.1.8 Bats - impact with mitigation

It is considered that with mitigation there would be a low/negligible impact at a local (site) level.

5 CONCLUSION AND RECOMMENDATIONS

Overall the site appears to be of little importance to bats both in terms of roosting and foraging/commuting.

During the transect surveys, only one species (common pipistrelle) were identified on site and in low numbers only.

It is anticipated that the increased duration of lighting at the site will not have any adverse impact on foraging, commuting or roosting bats providing the mitigation stated in the various sections is implemented throughout the site.

6 REFERENCES

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APPENDIX A - PHOTOS

Plate 1- photograph of south western boundary



Plate 2- photograph of south eastern elevation

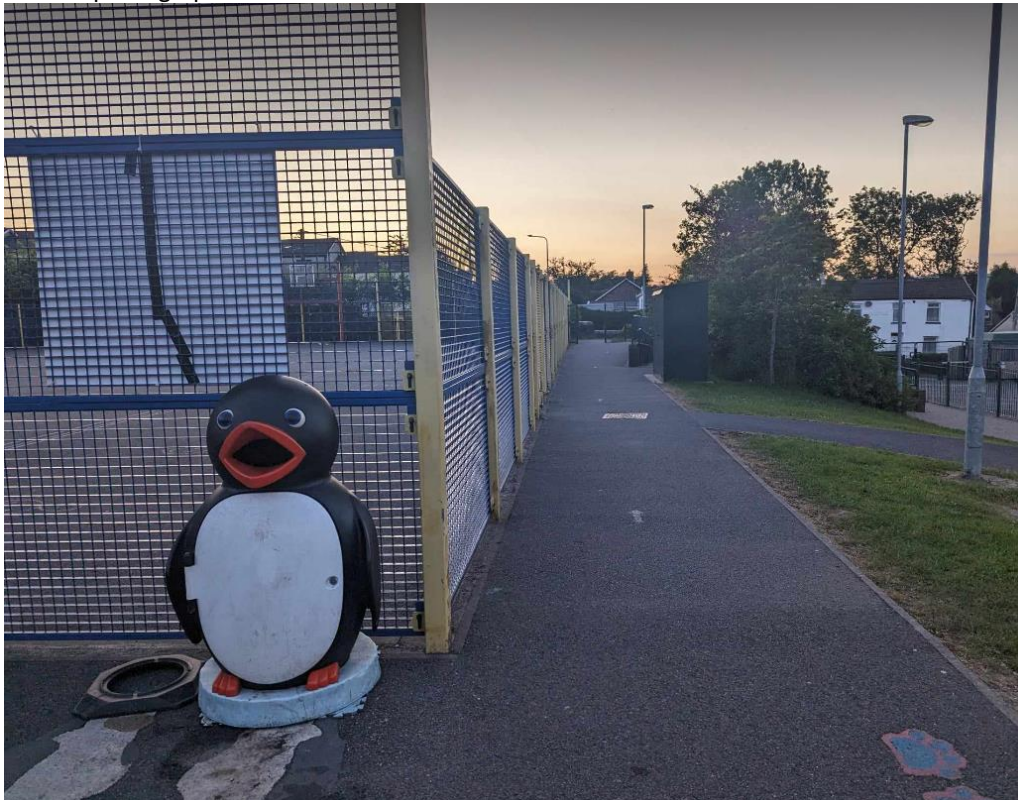


Plate 3- photograph of MUGA

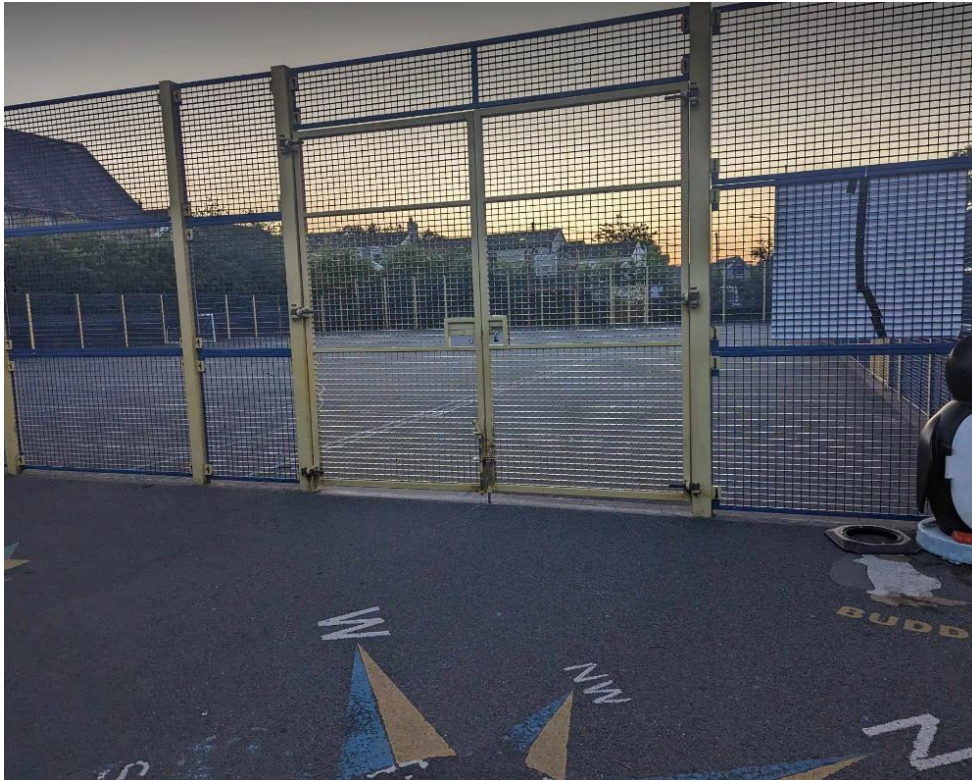


Plate 4- south western boundary



APPENDIX B- LIGHTING SPECIFICATION



Part of the LUCSCO, group of companies

Datasheet

Zactis



Product Description

Zactis is a high-performance flat-to-ground LED flood light perfect for sports, high mast and area applications. As well as facilitating easy installation and maintenance, the sleek, low-profile design, reduces the load together with decreasing windage.

Specification Text

The luminaire shall be manufactured from high-pressure die-cast aluminium. It shall have an LED efficacy of up to 134.0 lm/W and will be capable of producing up to 43,026 luminaire lumens at 2700K with a CRI >70. It shall have an asymmetric forward throw optic and is rated at IP65 and IK08.

Specification

Weight:	15.0 - 16.5kg
Windage:	0.1m ²
Material:	Die-cast Aluminium
Paint finish:	RAL7016 Anthracite Grey Marine Grade

Key Features

- 125.0 - 320.0W
- 16,447 - 43,026 Luminaire Lumens
- Efficacy up to 134 lm/W
- 2700K, CRI >70
- Lifetime >100,000hr, L70

LED
•••

IP65

IK08

DIM
■ ■ ■ ■ ■



 Control
Compatible

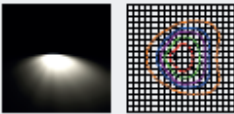
Mounting Options

- Stirrup Mount

Other Options

- Part Night Dimming
- Colour Temperature Options
- Photocell Option
- [Contact for details](#)

Optics



Asymmetrical Forward Throw Optic 70°



kingfisherlighting.com

01623 415900

sales@kingfisherlighting.com

KF ZACTIS

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Code	Power	Luminaire Lumens	Drive Current	Optic	CCT(K)	IP	IK	Weight kg	Paint Finish	Driver Included
ZAC-FW70-275-12SD	125.0	16,447	645	Asymmetrical Forward Throw Optic - 70°	2700	IP65	IK08	15.0	RAL7016 Anthracite Grey Marine Grade	Driver Inc
ZAC-FW70-277-160D	160.0	20,166	808		2700	IP65	IK08	15.0	RAL7016 Anthracite Grey Marine Grade	Driver Inc
ZAC-FW70-275-250D	250.0	33,327	645		2700	IP66	IK08	16.5	RAL7016 Anthracite Grey Marine Grade	Driver Inc
ZAC-FW70-277-320D	320.0	43,026	808		2700	IP66	IK08	16.5	RAL7016 Anthracite Grey Marine Grade	Driver Inc
ZAC-FW70-275-12SD	125	16,447	645		2700	IP65	IK08	15	RAL7016 Anthracite Grey Marine Grade	Driver Inc
ZAC-FW70-277-160D	160	20,166	808		2700	IP65	IK08	15	RAL7016 Anthracite Grey Marine Grade	Driver Inc
ZAC-FW70-275-250D	250	33,327	645		2700	IP66	IK08	16.5	RAL7016 Anthracite Grey Marine Grade	Driver Inc
ZAC-FW70-277-320D	320	43,026	808		2700	IP66	IK08	16.5	RAL7016 Anthracite Grey Marine Grade	Driver Inc

Dimensions

