atmos CONSULTING

C0233-ATM-GES-OX-RP-X-0002

Technical Report

Habitat Regulations Assessment

Blaen Cefn Temporary Accommodation

Hochtief UK Ltd

October 2023

Contents

Contents

Tables

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1 Introduction

1.1 Terms of Reference

Atmos Consulting Ltd (Atmos) were commissioned by Hochtief UK Ltd (HUK) in October 2022 to provide ecological support in relations to a temporary worker accommodation village, which is referred to as the 'Site' throughout this report. A Preliminary Ecological Appraisal has been submitted to Snowdonia National Park (SNPA) and should be read alongside this report (Ref: C0233-ATM-GES-OX-RP-X-0001). The Site is shown in Figure 1.

The temporary accommodation Site at Blaen Cefn Leisure Park is situated 0.3 km south of Meirionnydd Oakwoods and Bat Sites Special Area of Conservation and 0.8 km north pf Lleyn Peninsula and the Sarnau SAC. Therefore, the works have the capacity to potentially affect the conservation status of the SACs.

In Article 6(3) of the EC Council Directive 92/43/EEC, on the conservation of natural habitats and of wild fauna and flora – The Habitats Directive, any project or plan which is not directly connected with or necessary to the management of a European site but would be likely to have a significant effect either alone or in combination with other plans or projects shall be subject to an Appropriate Assessment of its implications for the European site in view of that site's conservation objectives. In light of the findings and subject to the provisions of Article 6(4) of the Habitats Directive, the Competent Authority shall agree to the plan or project only after ensuring that it will not affect the integrity of the European site. Whilst mitigation may be considered at the Appropriate Assessment stage it is not to be considered when initially screening the project in order to determine whether or not an Appropriate Assessment is needed.

Article 6(4) makes provision that if a negative assessment is made of the implications of the project on the site, and in the absence of other alternative solutions, the plan or project can go ahead for imperative reasons of overriding interest (IROPI) but that compensatory measures must be taken to ensure that the overall coherence of the site is protected/maintained. A distinction is to be drawn between mitigation and compensation.

Since this is a project, as defined by the Habitats Directive, and transposed into English and Welsh law in The Conservation of Habitats and Species Regulations (2017), which is not directly connected with or necessary to the management of the Meirionnydd Oakwoods and Bat Sites SAC, then a Habitats Regulations Assessment (HRA) will be required. This will be carried out by the Competent Authority, advised by the Statutory Nature Conservation Body. Although the United Kingdom has now left the European Union, the requirement has been transposed over into English and Welsh law as part of the departure arrangements and so it is still necessary to be carried out.

Hochtief UK Ltd has commissioned Atmos Consulting to prepare the HRA on the behalf of National Grid.

1.2 Objectives of this Report

The purpose of this report, which has been commissioned by Hochtief UK Ltd and National Grid is to carry out a Habitats Regulations Assessment (HRA), for discussion with the statutory nature conservation advisor, Natural Resources Wales (NRW) and to fulfil

National Grid's legal requirement to carry out an HRA. To do this, a two-stage assessment will be carried out:

- Screening – the determination of whether there is a likely significant effect (LSE) on the qualifying features of the SACs; and
- Appropriate assessment (only if a likely significant effect is identified).
- The appropriate assessment assesses the LSE to determine the scale of the effect and if it could adversely affect the integrity of the site. This is done by assessing the potential impacts against the conservation objectives of the SACs to determine if the conservation objectives can be maintained in light of the project going ahead.

1.3 Proposed works

The proposed works as identified are as follows.

Site Location

The construction of worker's accommodation is located at Blaen Cefn Leisure Park between Minffordd and Llandecwyn, Gwynedd. It includes the siting of 100 temporary cabins with parking provision within the Site. The site location is identified in Figure 1 below, and the extent of the red line boundary is shown in drawing C0233-DEW-PAR-CG-DR-A-001.

Figure 1: Site Location (not extent of boundary)

Nature of the Work

The proposed development is part of the Snowdonia VIP Project which has been granted planning permission from Snowdonia National Park Authority (Ref: NP5/77/336B). As part of these works, temporary accommodation is required, and a separate planning application is being prepared. The proposed accommodation block and parking area will be temporary and comprised of shipping container style accommodation blocks, with an access road from the A487.

Material will be taken off Site, and at the end of the works the ground will be restored in line with its current condition.

Sensitive lighting will be incorporated into the design and managed throughout the period the Site is in use. The lighting plan has been reviewed alongside this assessment and has been submitted alongside the application. The most up to date lighting plan has taken into account the habitat features likely to be used by bats (drawing ref: C0233-SUP-PTW-CG-DR-X-0001 C03).

Timescales

The works will take place following permission granted, during December 2023 and will be in place until the tunnelling works have completed.

There is a restoration plan for the Site following the removal of the temporary accommodation, and this includes restoring it to a grassland with wildflower mixes (drawing ref: WAL_23_052_PL02 Blaen Cefn Restoration Plan).

2 Relevant Legislation

Conservation of Habitats and Species Regulations (2017)

The Conservation of Habitats and Species Regulations 2017, (the Habitats Regulations) consolidate the Conservation of Habitats and Species Regulations 2010 with subsequent amendments. The Regulations transpose Council Directive 92/43/EEC, on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive), into national law. They also transpose elements of the EU Wild Birds Directive in England and Wales. The Regulations provide for the designation and protection of 'European Sites', the protection of 'European protected species', and the adaptation of planning and other controls for the protection of European Sites ('Natura 2000 Sites termed Special Areas of Conservation SACs or Special Protection Areas (SPAs). The Regulations designate these sites as being important for either habitats or species (listed in Annexes I and II of the Habitats Directive respectively).

3 Statutory Designations

The temporary accommodation site at Blaen Cefn Leisure Park is situated 0.3 km south of Meirionnydd Oakwoods and Bat Sites Special Area of Conservation and 0.8 km north of Lleyn Peninsula and the Sarnau SAC.

Due to the works taking place near these designated sites, before works can commence a Habitats Regulations Assessment (HRA) submitted to NRW.

3.1 Lleyn Peninsula and the Sarnau SAC

The Pen Llyn a`r Sarnau/ Lleyn Peninsula SAC encompasses 146,010 ha of sea, coast and estuary that support a wide range of marine habitats and species. It has been selected as an SAC for the presence of nine marine habitat types and associated species (Habitats Directive Annex I habitat types) and three mammal species (Habitats Directive Annex II species). Annex I habitats that are a primary reason for selection of this site is considered to be one of the best areas in the UK for:

- Reefs
- Large shallow inlets and bays
- Sandbanks which are slightly covered by seawater all the time
- Estuaries
- Coastal lagoons

Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site:

- Mudflats and sandflats not covered by seawater at low tide
- Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)
- *Salicornia* and other annuals colonising mud and sand
- Submerged and partially submerged sea caves

Annex II species present as a qualifying feature, but not a primary reason for site selection:

- Grey seal *Halichoerus grypus*
- Bottlenose dolphin *Tursiops truncatus*
- Otter *Lutra lutra*

These features are distributed throughout the SAC with no single feature occupying the entire SAC and with features overlapping in some locations. A number of the habitats and species listed within the SAC are also listed in the Section 7 list of habitats and Species of Principal Importance (SPI) in Wales (Environment (Wales) Act, 2016) and in the OSPAR List of Threatened and/or Declining Species and Habitats.

3.2 Meirionnydd Oakwoods and Bat Sites SAC

The Meirionnydd Oakwoods and Bat Sites SAC comprises 2,812 ha of various woodlands and heaths that support a wide range of habitats and species. It has been selected as an SAC for the presence of seven habitat types and associated species (Habitats Directive Annex I habitat types) and one mammal species (Habitats Directive Annex II species). Annex I habitats that are a primary reason for selection of this site is:

- Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles

- Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*)

Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site:

- Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation
- Northern Atlantic wet heaths with *Erica tetralix*
- European dry heaths
- *Tilio-Acerion* forests of slopes, screes and ravines
- Bog woodland

Annex II species that are a primary reason for selection of this site:

- Lesser horseshoe bat *Rhinolophus hipposideros*

Conservation Objectives

The conservation objectives for the Pen Llyn a`r Sarnau/ Lleyn Peninsula SAC and Meirionnydd Oakwoods and Bat Sites SAC (Countryside Council for Wales, 2009) are listed below.

To achieve favourable conservation status all the following, subject to natural processes, need to be fulfilled and maintained in the long-term. If these objectives are not met restoration measures will be needed to achieve favourable conservation status.

- Range- The overall distribution and extent of the habitat features within the site, and each of their main component parts is stable or increasing.
- Structure and function: The physical, biological and chemical structure and functions necessary for the long-term maintenance and quality of the habitat are not degraded.
- Typical species- The presence, abundance, condition and diversity of typical species are such that habitat quality is not degraded.

4 Stage 1- Screening

In the first stage of HRA, a project is screened to establish if there will be a likely significant effect, either alone or in combination with other proposals/projects with potential to have an effect upon the SACs. In reaching this conclusion it is settled law that a precautionary approach should be taken to this assessment and that an LSE should be assumed unless the risk can be excluded. Essentially, this test of likely significant effect (LSE) determines whether the second stage of the process, Appropriate Assessment (AA) is required. Where no LSE is identified, then AA is not required; conversely, where LSE is identified, then AA is required to determine if there will be adverse impacts which would prevent the conservation objectives from being met and therefore the integrity of the European site being adversely affected.

During the screening stage a review of documents published by NRW regarding the SAC – Site Citation and Core Management Plan (CMP) was carried out.

4.1 Data Obtained to inform this Assessment

As part of an original Extended Phase 1 survey and Preliminary Bat Roost Assessment, the habitats in the areas, and their suitability to support protected and notable species was assessed and a Preliminary Ecological Appraisal report submitted (Atmos ref: C0233-ATM-GES-OX-RP-X-0001). The results from this PEA are summarised below in context of the SACs.

Data was obtained from Cofnod, Local Environmental Records Centres (LERC) Wales. The Cofnod data shows the nearest record of lesser horseshoe bat was located 0.3 km from the Site boundary. The other records of the species were concentrated in the Gwaith Powdwr Nature Reserve. Lesser horseshoe bat is an Annex II species present as a primary reason for the selection of Meirionnydd Oakwoods and Bat Sites SAC.

No potential bat roosting features were identified within the working area of the Site. The mature trees in the wider area are suitable for roosting bats, however no works will be undertaken in this area. The tree lines, ditches and waterbodies on Site are considered suitable for foraging and commuting bats.

Cofnod hold over 1000 records of otter within 2 km of the Site, including within the ditches that run through the Site in 2004. There are no records of grey seal. Otter and grey seal are an Annex II species present as a qualifying feature of Lleyn Peninsula and the Sarnau SAC, but not a primary reason for site selection.

There were no incidental signs of otter recorded during the survey, but it is considered that the species may range through the area and the Site. Whilst Site had no suitable locations for couches or lay-up sites where otters may occasionally rest, the lake on Site would provide a suitable food source for otters and it is considered likely that they may be present on Site throughout the year.

4.2 Proposed Construction Works

As described in section 1.3, the proposed works involves the installation of 100 temporary cabins, parking and infrastructure at a temporary accommodation site adjacent to the A487 Trunk Road.

There are no habitats identified on the Site which are listed under the designated features within the SACs.

4.2.1 Lleyn Peninsula and the Sarnau SAC

The Site is located 0.8 km north of the Lleyn Peninsula and the Sarnau SAC.

The following features of the SAC do not occur in direct proximity to the Site, and they are sufficiently far enough away from the areas that it is considered there is no mechanism for a likely significant effect:

- Atlantic salt-meadows
- Estuaries
- Reefs
- Large shallow inlets and bays
- Sandbanks which are slightly covered by seawater all the time
- Coastal lagoons
- Submerged or partially submerged sea caves
- Salicornia and other annuals colonising mud and sand features

The following features of the SAC are mobile and could be impacted by an indirect pollution event, meaning that there is a potential for a likely significantly effect:

- Otter *Lutra lutra*
- Grey seal *Halichoerus grypus*
- Bottlenose dolphin *Tursiops truncates*

Connectivity and Impact Pathways

As set out above, the proposed works includes the erection of a temporary accommodation village. The drainage ditches on Site have been recorded to support otter, a qualifying feature of the SAC, and also drain into the SAC, therefore being functionally linked. Without appropriate mitigation, a pollution event has the potential to impact the mobile species related to the SAC designation. Further mitigation is required through appropriate assessment to ensure that the risk of a pollution event is reduced to a satisfactory level.

As a result, there is a finding of likely significant effect on features of the SAC, in the absence of mitigation, and therefore AA is required in order to establish whether proposed works would have an adverse impact such that the integrity of the SAC could not be maintained and if so whether appropriate mitigation can be developed which would allow the integrity of the SAC to be maintained.

4.2.2 Meirionnydd Oakwoods and Bat Sites SAC

The accommodation village is within 0.3 km of the SAC. However, the Site does not support habitats for which the SAC is designated, and the trees/buildings on Site are not suitable to support a Lesser Horseshoe bat roost. There is potential that the Annex II species lesser horseshoe bat may use the Site for foraging as it is present in the wider area and therefore could be indirectly impacted by the works.

Disturbance

All construction works will take place during daylight hours in line with the CEMP (C0233-HUK-GES-XX-PL-W-0001). Once constructed, the temporary accommodation block will have bat-sensitive light lighting plans, in line with the PEA and approved plans. A PBRA was carried out on all trees in the working area and no trees with potential for bat roosts are to be removed. A majority were young trees with smooth bark and did not exhibit any features which could be used by roosting bats.

The surrounding area represents a moderate-quality foraging habitat for a number of bat species, with some linear features (such as the hedgerow and ditches) and waterbodies, set within a wider built-up area, with no direct linkages to the SAC and SSSI areas designated for bats.

The construction works are planned to be short-term, and in a relatively small, localised area. The works are also approximately 0.3 km from the SAC and given their nature, are not considered to directly affect lesser horseshoe bats which may be utilising the woodland and surrounding habitats for foraging or roosting.

There is no direct connectivity to the SAC, and the Annex I habitats it is designated for are not present on Site, or connected to the Site in anyway, so will not be impacted by the proposed works.

However, without a dedicated lighting plan, designed to mitigate impacts on the Annex II species, lesser horseshoe bat, there is a risk that these bats could be indirectly disturbed via lighting.

As a result, there is a finding of likely significant effect on features of the Meirionnydd Oakwoods and Bat Sites SAC, in the absence of mitigation, and therefore AA is required in order to establish whether proposed works would have an adverse impact such that the integrity of the SAC could not be maintained and if so whether appropriate mitigation can be developed which would allow the integrity of the SAC to be maintained.

5 Stage 2 – Appropriate Assessment

Given that an LSE has been determined due to the effects of actions taken near the SACs to features indirectly linked to it, AA is required to determine if there is a potential adverse impact on the SACs, and if so whether it can be mitigated so as to avoid any such effect. In particular, an assessment must be made as to whether as a result of the works, without mitigation, the effects on the habitat feature are such that the conservation objectives could no longer be met/upheld.

5.1 Current Use of the Area

The working area is a caravan Site comprised of a mix of manmade hardstanding habitat and disturbed improved grassland. The Site is fairly disturbed with it being used throughout the year for caravan and camping, along with a fishing lake and public footpaths.

The Site is connected to the Pen Llyn a'r Sarnau SAC via the drainage ditches present on Site. There is no direct connectivity to Meirionnydd Oakwoods and Bat Sites SAC, but the lesser horseshoes it is designated for are a mobile species.

5.2 Assessment of Effects

5.3 Pen Llyn a'r Sarnau SAC

A summary of the impacts of the works against the Conservation Objectives of the Pen Llyn a'r Sarnau SAC is provided in Table 1. As it was considered there is only an LSE on species features, the species features were used for this assessment.

Table 1: Assessment of effects on Conservation Objectives for species of Pen Llyn a'r Sarnau SAC

Attribute	Specified Limit	Predicted Effects from Proposed Works
Populations	As part of this objective, it should be noted that: - For otter, grey seal and bottlenose dolphin; contaminant burdens derived from human activity are below levels that may cause physiological damage, or immune or reproductive suppression.	If the works resulted in the death of an otter, grey seal or bottlenose dolphin, this would affect their population. Pollution has the potential to affect these species' food sources and therefore negatively affect the population. At high levels pollution could kill the species themselves.
Range	The species population within the site is such that the natural range of the population is not being reduced or likely to be reduced for the foreseeable future. As part of this objective, it should be noted that for all three species features: - Their range within the SAC and adjacent inter-connected areas is not constrained or hindered. -There are appropriate and sufficient	The works will not reduce the any of the species range nor introduce any barrier effects to their movement. The works will also not affect the availability of food resources in terms of the range.

Attribute	Specified Limit	Predicted Effects from Proposed Works
	food resources within the SAC and beyond the sites and amount of supporting habitat used by these species are accessible and their extent and quality is stable or increasing.	
Supporting Habitats and Species	As part of this objective, it should be noted that; - The abundance of prey species subject to existing commercial fisheries needs to be equal to or greater than that required to achieve maximum sustainable yield and secure in the long term. - The management and control of activities or operations likely to adversely affect the species feature, is appropriate for maintaining it in favourable condition and is secure in the long term. - Contamination of potential prey species should be below concentrations potentially harmful to their physiological health. - Disturbance by human activity is below levels that suppress reproductive success, physiological health or long-term behaviour - For all three species there are sufficient sources within the SAC and beyond of high-quality water for drinking and bathing.	Otter holts have not been found in and around the working area, but they are known to be in the wider area. Grey seal and bottlenose dolphin have not been recorded within 2 km of Site As the works are short term and in a limited area, the low level of temporary disturbance will cause no effects on the extent and distribution of any of these species. The works are timed in the day so will not have impact on otter, a largely nocturnal species. A pollution event could potentially impact the potential prey species in the SAC, indirectly impacting all three species.

The review of the Conservation Objectives for the SAC has identified that there is the potential for features of the SAC to be affected and therefore would adversely impact the integrity of the SAC.

Given the sensitivity of the area, a review of mitigation which would be undertaken, including that designed into the works from an early stage has been provided in section 5.5.

5.3.1 Pollution

As the working area is 0.8 km from the Pen Llyn a'r Sarnau SAC, there will be no immediate effects on SAC habitats and therefore the conservation objectives relating to the extent, distribution, structure and function of this SAC will be met. However, there could be indirect impacts from pollution events, due to the connectivity to this SAC via the ditches, resulting in an LSE and further mitigation is required to avoid this.

There is a risk, without mitigation, that silt or other construction materials could be washed into the ditches and reach the SAC. It is therefore recommended that quick setting materials are used, and construction works are halted during heavy storm periods. Although a pollution event would have a negative effect on food sources in the immediate working area, there is only a limited amount of construction materials to

be used due to the design of using portacabins. Any pollution would be a small amount relative to the SAC and therefore the dilution of the pollution would be minimal by the time it has travelled to the SAC.

Further mitigation for pollution prevention is included below in section 4.6.

There is not considered to be any risk of pollution events of this matter in the Meirionnydd Oakwoods and Bat Sites SAC as there is no direct connectivity as above, and the main risk to this SAC is the lesser horseshoe, which are not sensitive to water pollution events.

5.4 Meirionnydd Oakwoods and Bat Sites SAC

As stated above, the only feature of the Meirionnydd Oakwoods and Bat Sites SAC to be potentially impacted by the proposed development is the lesser horseshoe bats.

The conservation objectives of this SAC are generally focused on the management of the surrounding habitats is of the appropriate type and sufficiently secure to ensure there is likely to be no reduction in population size or range, nor any decline in the extent or quality of breeding, foraging or hibernating habitat. Disturbance in the surrounding area could have an impact on the breeding, foraging and breeding habitat, along with reductions in the population range.

5.4.1 Lighting

The proposed development is 0.3 km from the Meirionnydd Oakwoods and Bat Sites SAC, and the Site supports numerous habitat features that would be used by foraging and commuting lesser horseshoe bats that are designated as a primary feature of the SAC. Lesser horseshoes are noted by BCT guidelines to be one of the most sensitive bat species to light disturbance, and are known to be negatively impacted by lighting as low as 3.6 lux, with research showing that hedgerows and other linear features that are well lit are usually avoided by lesser horseshoe species.

5.5 In-combination effects

A HRA (Ref: C0233-ATM-GES-ZZ-RP-X-0003) for ground investigation works adjacent to the SAC has been submitted to NRW. The ground investigation works has the potential to cause pollution and sedimentation to the SAC and appropriate mitigation measures are in place. The ground investigation works will take place well in advance of any temporary accommodation works and therefore no in-combination effects are considered.

A search of the Gwynedd County Council and Snowdonia National Park Authority Planning Portal was carried out on 18th October 2023 to search for planning applications in the vicinity of the discharge/abstraction points. There were no pending planning applications on or adjacent to the points, upstream or downstream or the nearby surrounding area that are of a similar nature to these works. As such, there are not known to be any other works taking place on this area during this time, therefore no in-combination effects are considered.

5.6 General Mitigation

Mitigation is required in order to pass the appropriate assessment as the work will be occurring adjacent to sensitive habitats where there would otherwise be indirect effects on the qualifying features through pollution. The following mitigation measures are incorporated into the proposals:

- A biosecurity risk assessment will be produced and followed so as not to introduce non-native species into the Llyn Peninsula and further afield. Vehicles will be fully washed and sprayed down with an effective but water safe spray in an area agreed with the Ecologist suitably distant and unconnected to the SAC prior to coming into the working area.
- An experienced Ecological Clerk of Works (ECoW) will be able to offer advice throughout the project.
- Refuelling: All refuelling will be carried out away from the ditches on Site. At every refuelling point a spill kit will be available, an absorbent spill blanket will be laid out whilst refuelling takes place. Fuel will be contained within its own compound; all fuel drums will be sited onto a bund that has a capacity of 110% of their contents and at the end of each day the fuel compound will be secured within the compound.
- All plant will be parked in the compound overnight so that there are no potential pollution incidents while staff are not on Site.
- There will be a number of pollution prevention measures in place that will be applied at all times (e.g. provision of a spill kit and inspection of all plant and equipment prior to use).

5.7 Bat Specific Mitigation - Lighting Plan

5.7.1 Construction Lighting Plan

There will be some temporary lighting for the construction period of the works, which will be undertaken ideally in December 2024, and completed by spring 2025.

The specification of the proposed construction lighting is included in Appendix A. The construction lighting will be cited to avoid illumination of any habitat features, to avoid potential disturbance to foraging and commuting bats.

As per the Construction Environment Management Plan (CEMP), the works will be limited to the daytime, with no additional lighting outside of the construction lighting during working hours (CEMP ref: C0233-HUK-GES-XX-PL-W-0001).

Working hours are planned to be 0800 – 1800 Monday to Friday and then 0800 to 1300 on Saturdays, with no works outside of these times.

5.7.2 Permanent Lighting Plan

Without the creation of a bat friendly lighting plan, the population of lesser horseshoes related to the SAC designation were at risk from being disturbed by the development. With this in mind, a lighting plan has been created and an assessment of this plan is included below.

The permanent lighting plan, referenced before (C0233-SUP-PTW-CG-DR-X-0001-C03) has been designed to be as sensitive to bat species as possible using the guidance note produced by the Bat Conservation Trust, 2023[1]. This guidance note suggests that bats can be affected by as low as 3.6 lux, with lesser horseshoe bats proven to avoid linear commuting routes that are lit with more than 3.6 lux.

The lighting plan has taken into consideration that the hedgerows, tree lines, ditch and waterbody are all features potentially used by foraging and commuting bats, including those that may be related to the SAC designation. None of these habitat features are illuminated to avoid disturbing or dissuading bats from using them.

The light fittings used for the proposed accommodation are included in Appendix B for both the bollards, post top lamp and overdoor light. The overdoor light has been created by the manufacturer to prevent the upward element being enabled, and this product will therefore provide down facing, direct lighting only. This will further prevent light spill outside of the main accommodation compound, onto the habitat features stated above. The lighting will be PIR activated, which is less sensitive than a microwave sensor and therefore will be highly unlikely to be triggered by flying bats.

The lighting has been designed to face inside the boundary of the Site, with the accommodation blocks acting as a barrier to light spill. The light fittings are all down facing and are designed to focus the lighting away inside the accommodation block, away from the habitat features, as per figure 2 below, which is an excerpt from the lighting plan.

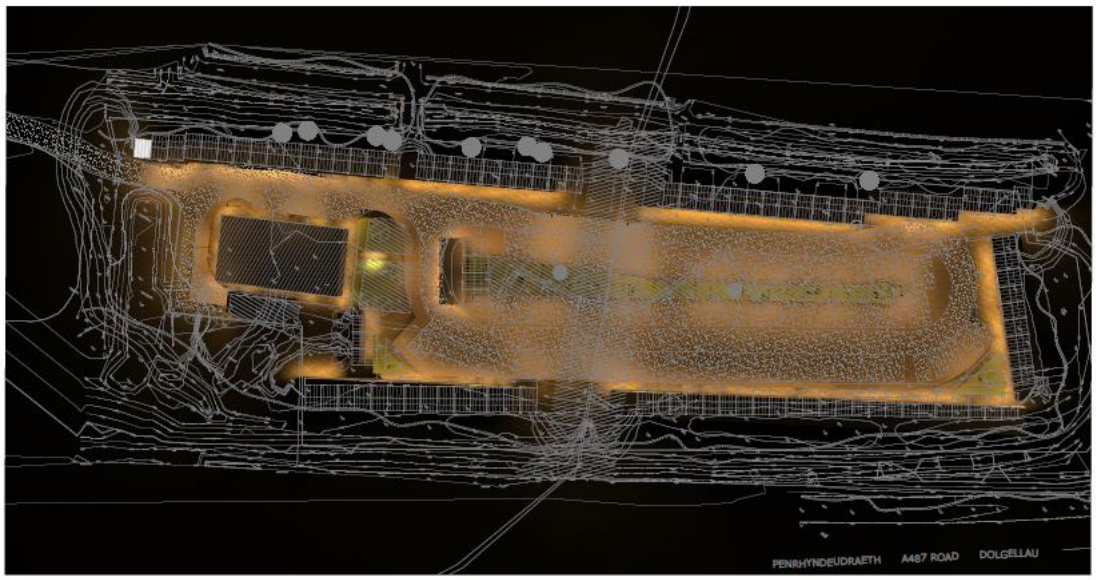

Figure 2: Illuminance Demonstration

5.7.3 Other Mitigation for Bat Species

None of the trees currently marked for removal were considered to present bat roost potential during the PBRA survey. The Site presents limited opportunities for roosting

[1] The Bat Conservation Trust, Guidance Note 08/23, Bats and Artificial Lighting in the UK, 2023.

bats, and is more suitable for foraging and commuting bats. It is recommended that a further PBRA would be required if the trees are left in situ for another year.

The works are currently planned to begin in December 2023, ending in Spring 2024. This is during the hibernation period of lesser horseshoe bats, which prefer stone structures and caves for their hibernation roosts. The Site does not present any suitable hibernation habitat for this species and this further reduces the potential for encountering them on Site.

It is also recommended that toolbox talks regarding the bat SAC and lesser horseshoes are completed so all contractors are aware of the limitations of the work. Whilst unlikely, if a bat is encountered during the works, the works will stop and advice will be sought by NRW and SNPA.

6 Conclusions

A HRA has been carried out for the temporary accommodation block works:

- Stage 1 – the project was screened, and a likely significant effect was identified for the proposed works through indirect pollution effects;
- Stage 2 – an Appropriate Assessment was carried out which assessed features of the SACs. This showed that the species present could be significantly affected and that the conservation objectives of the SACs would not be maintained if the works went ahead without mitigation.
- Mitigation was introduced and has considered all the LSE anticipated on the qualifying features and are reduced such that there is not anticipated to be any effects from the work on the integrity of the SACs, therefore, following the implementation of mitigation, the works pass appropriate assessment;

As a result, the HRA has shown that work can proceed without affecting the integrity of the Pen Llyn a`r Sarnau/ Llyn Peninsula and the Sarnau SAC and the Meirionnydd Oakwoods and Bat Sites SAC. Appropriate good working practices are to be put in place to minimise damage to habitats and minimise disruption of the typical species found within the SAC during the proposed works.

The lighting plan submitted and light fittings selected have been designed to avoid impacts on lesser horseshoes and other bat species, in turn further protecting the integrity of the SAC.

7 References

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8 Appendices

Appendix A – Construction Lighting Specification

(PDF Spec inserted on next page)

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- 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 tp 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	3.5kWA - 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

Trime UK Limited | B3 Spitfire Close, Huntingdon, Cambridgeshire PE29 6XY
01480 220500 | www.trimeuk.com | sales@trimeuk.com

TRIME® Lighting Towers

Appendix B – Permanent Light Fitting Specifications

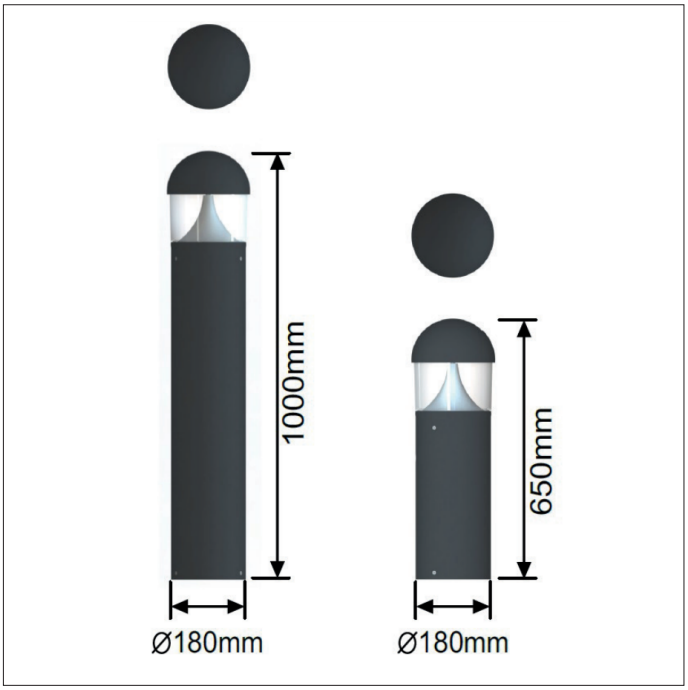
(PDF spec for bollards, post top lamp and overdoor light attached on next pages)

Hampshire

Bollards

Innovation.
Collaboration.
Illumination.

External Lighting



Accessories

- *For black option suffix* /BLK
- *Root Attachment* /HAM/ROOT

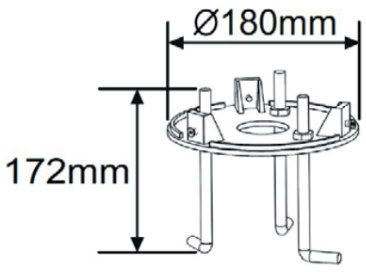
i.e. **HAM/10/1320/4/BLK** =
Hampshire LED Bollard, 1000mm, 1320lm, 4000K, Black.

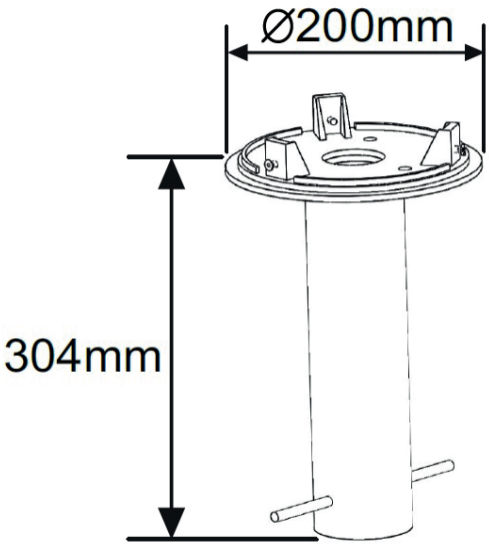
Part No.	W	Lm	Height (mm)
HAM/6/1780/4	10	1320	650mm
HAM/10/1780/4	10	1320	1000mm

For more information, please contact Sales@ldl.lighting

Key Features

- *IP65 suitable for external environments*
- *Impact rating of IK10*
- *Beam angle : Symmetrical*
- *Nominal life-time of 100,000h*
- *Colour stability with 3 step MacAdam*

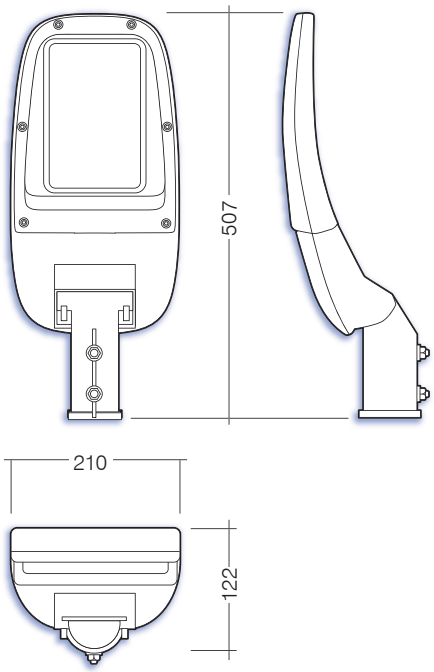




Street - Small

Post Top

Innovation.
Collaboration.
Illumination.



Overview

The Street LED fixture is a multi-use luminaire designed to meet the highest of specifications with both high efficiency and performance.

The cast aluminium fixture is fitted with high temperature toughened safety glass and incorporates the latest in LED technology and optics.

Three luminaire sizes are available with a large range of lumen outputs and wattages which incorporates five optic variants resulting in excellent performance making the fixture suitable for various external applications.

A universal bracket is supplied as standard making the fixture suitable for either horizontal or post top mounting, the relevant brackets and spigots can also be supplied on request.

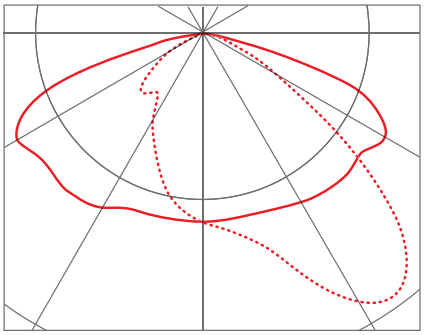
Key Features

- IP66 suitable for external environments
- Efficacy of up to 93lm/W
- Nominal life time of > 50,000 h
- Color rendering index of CRI > 70
- Temperature of Working Condition -40-50℃
- Humidity of Working Condition - 20%-90%RH
- Spigot size - ϕ 50mm
- Installation Height - 3-6m
- Net Weight - 3kg
- Colour temperature 4000K as standard

Street - Small

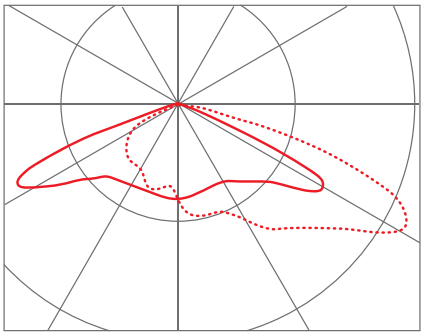
Post Top

Innovation.
Collaboration.
Illumination.



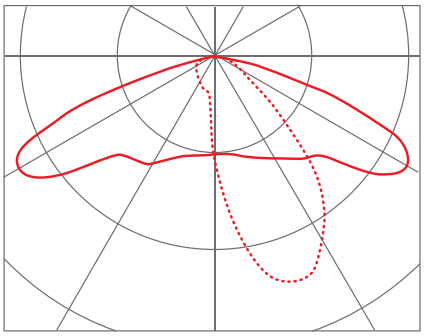
L1 STANDARD LENS

Part No.	Lumens	Wattage	Lumens/Watt
ST/S/L1/1400/74	1445	16	89
ST/S/L1/2300/74	2314	26	88
ST/S/L1/3000/74	3013	37	82



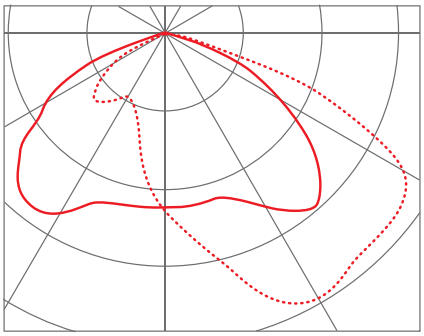
L2 WIDE LENS

Part No.	Lumens	Wattage	Lumens/Watt
ST/S/L2/1400/74	1363	16	84
ST/S/L2/2200/74	2190	26	84
ST/S/L2/2800/74	2846	37	78



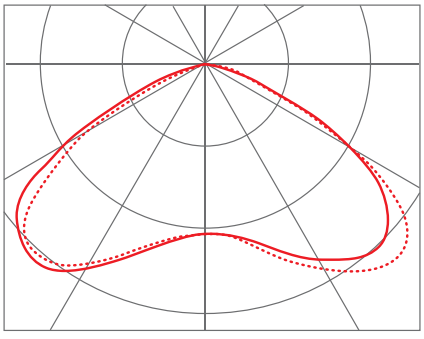
L3 STREET LENS

Part No.	Lumens	Wattage	Lumens/Watt
ST/S/L3/1500/74	1489	16	92
ST/S/L3/2400/74	2431	26	93
ST/S/L3/3300/74	3276	37	90



L4 FLOOD LENS

Part No.	Lumens	Wattage	Lumens/Watt
ST/S/L4/1600/74	1643	16	101
ST/S/L4/2600/74	2581	26	99
ST/S/L4/3300/74	3338	37	91



L5 CIRCULAR LENS

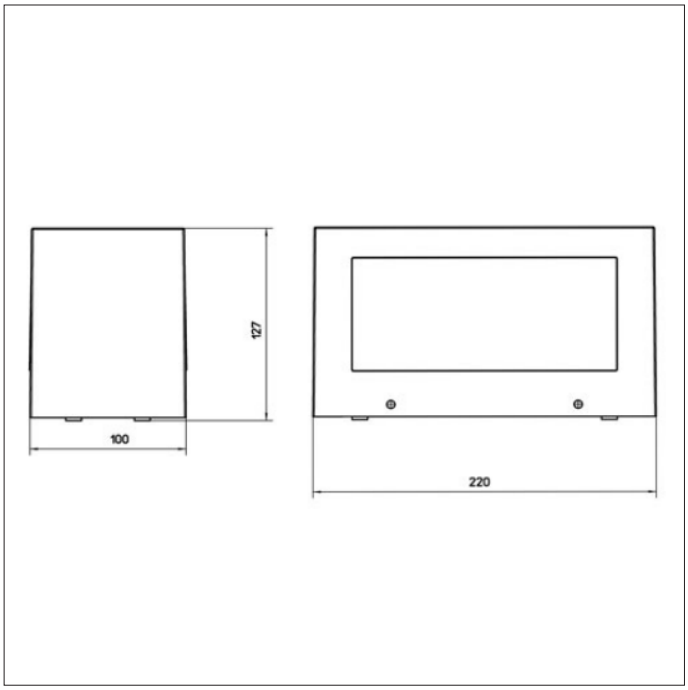
Part No.	Lumens	Wattage	Lumens/Watt
ST/S/L5/1700/74	1681	16	104
ST/S/L5/2600/74	2639	26	101
ST/S/L5/3500/74	3473	37	95

Leah

Direct Wall Light

Innovation.
Collaboration.
Illumination.

Outdoor Lighting



Overview

The Leah wall light utilises high spec Tridonic LED modules and a quality professional integral driver and can be fitted with integral 3 hour emergency.

It offers direct light output with a polycarbonate opal diffuser for homogeneous illumination and can be mounted vertically or horizontally.

Supplied in black as standard.

2700K avaliable on request

Options

- *For DALI dimmable suffix:* **/DIM**
- *For Casambi enabled suffix:* **/CAS**
- *For wireless dimmable system suffix:* **/WD**
- *For 3 hr integral emergency suffix:* **/EMR**
- *For self-test suffix:* **/ST**
- *For DALI addressable emergency suffix:* **/EMP**
- *For wireless addressable emergency suffix:* **/WAE**

- i.e.: Leah wall light, 7W, 616lm, 3000K, = **LEA/616/3**

Part No.	Lm	W	Lm/W	Weight	CCT
LEA/616/3	616	7	83	1.9kg	3000K

For more information, please contact Sales@ldl.lighting

Key features

- *IP65 suitable for external environments*
- *Impact rating of IK07*
- *Efficacy of up to 83lm/W*
- *Nominal life-time of 50,000 h (L80/B30)*
- *High colour rendering index CRI > 80*