

UoS Wide Lane Sports Centre
Wide Lane
Eastleigh
Southampton
Hampshire
SO50 5PE

Bat Activity Survey

Report ref.: R3568/b

Report Quality Control Information	
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March 2024

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CONTENTS PAGE

1	EXECUTIVE SUMMARY	3
2	INTRODUCTION	4
2.1	Project Background.....	4
2.2	Site Location and Context.....	4
2.3	Report Objectives	4
2.4	Legislative Background.....	5
3	SURVEY METHODOLOGY	7
3.1	Transect Surveys	7
3.2	Automated/static Surveys	7
3.3	Survey Constraints.....	8
4	SURVEY FINDINGS.....	9
4.1	Transect Surveys	9
4.2	Automated/static Surveys	10
5	DISCUSSION AND RECOMMENDATIONS.....	13
5.1	Status of Bat Species Recorded	13
5.2	Identification of Key Habitat Features	14
5.3	Impact Assessment.....	15
5.4	Mitigation Proposals.....	15
6	REFERENCES	18
	APPENDIX 1 – TRANSECT ROUTE AND STATIC DETECTOR LOCATIONS	19
	APPENDIX 2 – PLANS OF BAT ACTIVITY SURVEY RESULTS	20
	APPENDIX 3 – TRANSECT SURVEY METADATA	22
	APPENDIX 4 – PLAN OF BAT HABITAT FEATURES	23

1 EXECUTIVE SUMMARY

- 1.1.1** John Wenman Ecological Consultancy LLP was commissioned by the University of Southampton to conduct a bat activity survey at Wide Lane Sports Centre in Eastleigh, Southampton. The survey was commissioned to accompany a full planning application to be submitted to Eastleigh Borough Council (EBC) seeking consent for proposed sports pitch floodlighting.
- 1.1.2** This report follows a Preliminary Ecological Appraisal (PEA) report produced by John Wenman Ecological Consultancy LLP in March 2023 for a current planning application for the installation of two synthetic sports pitches. The PEA report highlighted potential roosting sites and suitable commuting and foraging habitat for bats on site and recommended activity surveys to determine the importance of the site for bats and inform any future lighting proposals.
- 1.1.3** Due to the presence of potential roosting sites and suitable commuting and foraging habitat for bats on site, activity surveys were conducted from May to October 2023 comprising monthly dusk transect and automated/static surveys. The transect surveys recorded an assemblage of at least five species on site: soprano pipistrelle, common pipistrelle, noctule, *Myotis* sp. (probable Daubenton's bat) and *Plecotus* sp. (probable brown long-eared bat). The automated/static surveys recorded the same assemblage minus *Plecotus* sp.
- 1.1.4** The distribution of bat calls recorded across the site during the transect surveys highlighted the habitat features used most on site by bats. The Key Habitat feature on site is the belt of woodland along the western and northern boundaries of the site; the tree-lines act as Supporting Habitat.
- 1.1.5** In the absence of mitigation, the addition of artificial night lighting could result in bats deserting roosts and also has the potential to deter bat species from using the Key Habitat feature on site. Another potential adverse impact could be the creation of a 'vacuum effect' from the surrounding area where insects could be drawn away from nearby habitats, reducing the availability of prey for slower-flying, light-shy bats foraging in these areas.
- 1.1.6** A '*Lighting Impact Report & Overspill Readings*' document has been prepared by Halliday Lighting (Version 8; March 2024) in order to mitigate any adverse impacts to bats. The strategy includes mitigation proposals set out in **Section 5.4**.

2 INTRODUCTION

2.1 Project Background

2.1.1 John Wenman Ecological Consultancy LLP was commissioned by the University of Southampton to conduct a bat activity survey at Wide Lane Sports Centre in Eastleigh, Southampton. The survey was commissioned to accompany a full planning application to be submitted to Eastleigh Borough Council (EBC) seeking consent for proposed sports pitch floodlighting.

2.1.2 This report follows a Preliminary Ecological Appraisal (PEA) report produced by John Wenman Ecological Consultancy LLP in March 2023 (Report ref.: R3270c) for a current planning application for the installation of two synthetic sports pitches, erection of fencing and associated access, engineering and landscaping proposals (Application ref.: F/23/95045). The PEA report highlighted potential roosting sites and suitable commuting and foraging habitat for bats on site and recommended activity surveys to determine the importance of the site for bats and inform any future lighting proposals.

2.2 Site Location and Context

2.2.1 The application site covers approximately 3.5ha of land at Wide Lane Sports Centre, situated to the west of Southampton Airport Parkway in Eastleigh. Wide Lane Sports Centre is bounded by Wide Lane to the east, the A335 to the south, Monks Brook to the west and Lakeside Country Park to the north.

2.3 Report Objectives

2.3.1 Due to the presence of potential roosting sites and suitable commuting and foraging habitat for bats on site, a bat activity survey was conducted from May to October 2023 comprising monthly dusk transect and automated/static surveys.

2.3.2 The key aims of this report are to:

- Describe the methodology of the bat activity surveys including any limitations;
- Detail the survey findings including tables of bats recorded/observed and an annotated plan of the site;
- Interpret the survey results including information on the species assemblage and the temporal and spatial distribution of recorded bat activity on site;
- Assess the impacts of the proposals on roosting, commuting and foraging

bats; and

- Provide outline recommendations including mitigation measures.

2.4 Legislative Background

2.4.1 All wild bat species are fully protected in England and Wales by the Wildlife & Countryside Act 1981 (as amended) and by the Conservation of Habitats and Species Regulations 2017 (as amended) ('Habitat Regulations'). In summary, the legislation combined makes it an offence to:

- Damage or destroy a breeding site or resting place or intentionally or recklessly obstruct access to a structure or place used for shelter by a bat;
- Deliberately, intentionally or recklessly disturb bats; in particular any disturbance which is likely to impair the ability of bats to survive, breed or reproduce or nurture their young; or in the case of hibernating or migrating bats, to hibernate or migrate; or to affect significantly the local distribution or abundance of the species; and
- Deliberately kill, injure or take any bat.

2.4.2 The government's statutory conservation advisory organisation, Natural England, is responsible for issuing European Protected Species (EPS) mitigation licences that would permit activities that would otherwise lead to an infringement of the Habitat Regulations. A licence can be issued if the following three tests have been met:

- **Regulation 55(9)(a)** - there is "no satisfactory alternative" to the derogation;
- **Regulation 55(9)(b)** - the derogation "will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range"; and
- **Regulation 55(2)(e)** - the derogation is for the purposes of "preserving public health or public safety or other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment".

2.4.3 Local Planning Authorities (LPAs) have a statutory duty under Regulation 7(3e) of the Habitat Regulations to have regard to requirements of the Habitats Directive in the exercise of their functions. The LPA must therefore consider and determine whether these three tests are likely to be satisfied by planning proposals affecting EPS before granting planning permission.

- 2.4.4** If an EPS mitigation licence is necessary, a licence can be sought once all the necessary planning consents have been granted. Natural England aims to issue a decision on licence applications within 30 working days of submission.
- 2.4.5** Licensable projects affecting small numbers of seven commonly occurring species occupying roosts of low conservation importance may fall under the remit of the low impact Bat Mitigation Class Licence WML-CL21 (BMCL), which would enable consultants registered by Natural England, or accredited agents appointed by them, to carry licensable work under the BMCL once sites have been registered in advance with Natural England. Registration forms must be submitted at least three weeks before work is due to start, and if acceptable, Natural England aims to register sites within two weeks.
- 2.4.6** Survey data supporting EPS mitigation licence applications or the registration of the site under the BMCL must be up to date, i.e. have been conducted within the current or most recent optimal survey season, i.e. May to August. Therefore, if surveys show bats are present and licensable work is delayed until during or after the next survey season, updated surveys will be required to support an application or site registration.

3 SURVEY METHODOLOGY

3.1 Transect Surveys

- 3.1.1** The transect surveys were carried out in pairs of surveyors led by Conor Watson ACIEEM – registered under Natural England Bat Survey Class Licence CL17 (Registration no.: 2020-44817-CLS-CLS) – and Meghan Porter – registered under Natural England Bat Survey Class Licence CL17 (Registration no.: 2023-11300-CL17-BAT) – and assisted by Katie Ferry and Emma Jacobs.
- 3.1.2** The surveys were conducted monthly on the following dates: 25th May, 29th June, 31st July, 22nd August, 12th September and 4th October. The application site was considered to represent moderate quality habitat overall due to the presence of grass sports pitches (low quality habitat), tree-lines (low-to-moderate quality habitat) and a belt of woodland along the western and northern boundaries (moderate-to-high quality habitat), which connect to high-quality habitat adjacent to the site.
- 3.1.3** A transect route was developed to sample all habitat types within the site but with weighting towards the tree-lines and woodland belts. The transect was walked twice during each survey visit and the direction was changed throughout the season to overcome the limitation of missing bat activity in different areas of the site. The transect route was subdivided into five fixed listening points where surveyors would stop and record bat activity for 8-minute intervals (see **Appendix 1**).
- 3.1.4** The transect surveys were undertaken as dusk surveys, which began at sunset and finished at least two hours after sunset in accordance with the third edition of the Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins 2016). **N.B. the bat transect surveys were planned prior to the release of the fourth edition of the guidelines.**
- 3.1.5** The surveys were undertaken using a BATLOGGER M2 bat detector to listen to and record bat calls. The BATLOGGER recordings were analysed after each survey using the BatExplorer computer software.
- #### 3.2 Automated/static Surveys
- 3.2.1** Automated static bat detectors, in the form of Anabat Express, were deployed at two fixed sample locations along the transect route (see **Appendix 1**). The static detectors recorded for a period of five consecutive nights across four months of the season and were configured to turn on 30 minutes prior to sunset and off again 30

minutes after sunrise. The Anabat recordings were analysed after each survey using the AnalookW computer software.

3.3 Survey Constraints

- 3.3.1** There were no significant constraints to the bat transect surveys because they were undertaken at a suitable time of year in conditions suitable for bat activity, i.e. dry with air temperatures above 9°C.

4 SURVEY FINDINGS

4.1 Transect Surveys

Overview

- 4.1.1** The bat calls recorded during the transect surveys undertaken each month are summarised in **Table 1** below; a plan showing the transect route on site is illustrated in **Appendix 1**; plans displaying the bat activity survey results are presented in **Appendix 2**; and survey metadata is detailed in **Appendix 3**.

Results

- 4.1.2** The transect surveys completed in 2023 recorded an assemblage of at least five species on site: soprano pipistrelle (*Pipistrellus pygmaeus*), common pipistrelle (*Pipistrellus pipistrellus*), noctule (*Nyctalus noctula*), *Myotis* sp. and *Plecotus* sp. (see **Table 1** below).

Table 1. Transect Survey Results.

Month	Bat species (no. of recordings)					Total no. of recordings
	Soprano pipistrelle	Common pipistrelle	Noctule	<i>Myotis</i> species	<i>Plecotus</i> species	
May	15	38	64	0	0	117
June	47	83	0	19	0	149
July	32	92	82	1	0	207
August	81	39	23	1	2	146
September	65	198	0	0	0	263
October	37	81	0	0	0	118
% total	27.7	53.1	16.9	2.1	0.2	

- 4.1.3** The bat activity recorded during the transect surveys was predominantly soprano pipistrelle (*P. pygmaeus*) and common pipistrelle (*P. pipistrellus*), accounting for 80.1% of all recordings. These pipistrelle species are the most abundant and widespread bats in Great Britain; occurring in almost any habitat type and well adapted to the built environments (Mathews *et al.* 2018).
- 4.1.4** Although the pipistrelle bat activity was generally constant, the noctule (*N. noctula*), *Myotis* and *Plecotus* bat activity varied throughout the seasons. Noctule (*N. noctula*) was the third most recorded species, accounting for 16.9% of all recordings, but was only present in the May, July and August surveys; this species was primarily observed foraging low in the northwestern corner of the site where a minimum of two bats were seen out in the open at the same time. Noctule (*N. noctula*) is a widespread species in England and Wales capable of commuting long distances

(Mathews *et al.* 2018).

4.1.5 *Myotis* species – probable Daubenton’s bat (*Myotis daubentonii*) – represent 2.1% of all recordings and were present in surveys from June to August, but most of the activity was recorded in June. The activity for *Myotis* species was restricted to the belt of woodland along the western and northern boundaries of the site, as would be expected for these species to avoid predation in open landscapes and commute to high quality foraging habitat suited to Daubenton’s bat (*M. daubentonii*) in the form of lakes at Lakeside Country Park to the north of the site. Daubenton’s bat (*M. daubentonii*) is a widespread species in Great Britain strongly associated with riparian habitats, preferring large waterways with abundant woodland in the local environment (Mathews *et al.* 2018).

4.1.6 *Plecotus* species – probable brown long-eared bat (*Plecotus auritus*) – were only recorded twice on site during the August survey, accounting for 0.2% of all recordings. The *Plecotus* species was recorded and observed low in a corner of intersecting tree-lines at a time when the existing floodlighting was switched off; these species are extremely light-shy and artificial night lighting can potentially sever commuting routes and reduce moth availability (Mathews *et al.* 2018). The brown long-eared bat is a widespread species in Great Britain commonly associated with broadleaved and mixed woodland habitats; there are very few colonies of grey long-eared bat (*Plecotus austriacus*) known in Great Britain but this species is found almost exclusively in lowland regions of southern England, near to the coast (Mathews *et al.* 2018).

4.2 Automated/static Surveys

Overview

4.2.1 The bat calls recorded during the automated/static surveys undertaken for a period of five consecutive nights across four months of the season are summarised in **Table 2** below and a plan showing the two fixed sample locations on site is illustrated in **Appendix 1**.

Results

4.2.2 The automated/static surveys completed in 2023 recorded an assemblage of at least four species on site: soprano pipistrelle (*Pipistrellus pygmaeus*), common pipistrelle (*Pipistrellus pipistrellus*), noctule (*Nyctalus noctula*) and *Myotis* sp. (see **Table 1** below).

Table 2. Automated/static Survey Results.

Month	Static detector	Bat species (no. of recordings)				Total no. of recordings
		Soprano pipistrelle	Common pipistrelle	Noctule	<i>Myotis</i> species	
June	SD1	316	812	5	32	1165
	SD2	75	102	43	87	307
July	SD1	57	729	48	1	835
	SD2	40	38	577	7	662
August	SD1	91	285	13	13	402
	SD2	101	71	242	10	424
September	SD1	32	972	17	4	1025
	SD2	133	1085	21	123	1362
% total		13.7	66.2	15.6	4.5	

4.2.3 The levels of bat activity recorded by each static detector fluctuated throughout the season. SD1 recorded higher levels of bat activity than SD2 in June and July, whereas SD2 recorded higher levels than SD1 in August and September. September was the month with the greatest combined total number of bat call recordings but SD1 had its peak total in June.

4.2.4 The bat activity recorded during the automated/static surveys was predominantly common pipistrelle (*P. pipistrellus*), accounting for 66.2% of all recordings; soprano pipistrelle (*P. pygmaeus*) maintained a constant level activity throughout the season despite only being the third most recorded species after noctule (*N. noctula*), accounting for 13.7% of all recordings. As mentioned in relation to the transect surveys above, these species are the most abundant and widespread bats in Great Britain (Mathews *et al.* 2018).

4.2.5 Although there were no direct observations of pipistrelle bats emerging from roosts during the transect surveys, the static detectors recorded these species within their typical emergence periods (i.e. common pipistrelle 6.9-42.7mins after sunset; soprano pipistrelle 12-55mins after sunset) throughout the season (Collins 2023). Therefore, it is considered likely that these species may be utilising potential roosting sites in the belt of woodland along the western and northern boundaries of the site.

4.2.6 Noctule (*N. noctula*) was the second most recorded species during the automated/static surveys, accounting for 15.6% of all recordings. The level of activity for this species was higher at SD2 where bats were observed foraging during the transect surveys; the number of recordings significantly peaked during July and August. This species forages out in the open, often over trees with a strong affinity to water and has been reported to prefer broadleaved woodland and pastoral

habitats in southwest England (Collins 2023); summer roosts are usually located in tree holes in parkland, suburban or woodland settings (Mathews *et al.* 2018).

- 4.2.7** Although no bats were directly observed emerging from roosts during the transect surveys, noctule bats (*N. noctula*) were recorded during their typical emergence period (i.e. 16mins before sunset to 31min after sunset) throughout the season (Collins 2023). This species emerges early, particularly during lactation (Mathews *et al.* 2018), so bat calls recorded prior to sunset during July and August indicates that a maternity colony of this species may be roosting nearby. Therefore, it is considered likely that these species may be utilising potential roosting sites in the belt of woodland along the western and northern boundaries of the site.
- 4.2.8** *Myotis* bat calls, the majority of which were considered probable Daubenton's bat (*M. daubentonii*), accounted for 4.5% of all recordings during the automated/static surveys. *Myotis* species are cryptic as call parameters overlap, making specific identification through bat call analysis difficult; however, the majority of the calls had parameters that were indicative of Daubenton's bats (*M. daubentonii*), including distinctive social calls (Russ 2012). There was a disparity in the levels of activity between the static detectors, with more recordings at SD2 in June, July and September. The location of SD2 was in the northwestern corner of the site where existing floodlighting had less of an influence and the static detector was closer to the lakes at Lakeside Country Park, representing a high-quality foraging resource where Daubenton's bats (*M. daubentonii*) can gaff insects from the surface of the water (Mathews *et al.* 2018).
- 4.2.9** No Daubenton's bats (*M. daubentonii*) were directly observed emerging from roosts during the transect surveys and only one recording was registered on the SD2 during their typical emergence period from tree roosts (i.e. 34-56mins after sunset) in August (Collins 2023), so it is considered unlikely that this species is roosting on site.

5 DISCUSSION AND RECOMMENDATIONS

5.1 Status of Bat Species Recorded

Pipistrelle bats

5.1.1 Common pipistrelle (*Pipistrellus pipistrellus*) and soprano pipistrelle (*Pipistrellus pygmaeus*) are an abundant and widespread species (Wray and Reason 2023) that very frequently use the site for commuting and foraging. The activity for these species was distributed along the tree-lines (to an extent) and primarily the belt of woodland along the western and northern boundaries of the site. Both species tend to avoid foraging over open landscapes as it increases their susceptibility to predation (Dietz *et al.* 2009) and this was reflected in the survey data.

5.1.2 There were no direct observations of pipistrelle bats emerging from roosts during the transect surveys, but the static detectors recorded these species within their typical emergence periods throughout the season. Therefore, it is considered likely that these species may be utilising potential roosting sites in the belt of woodland along the western and northern boundaries of the site.

Noctule

5.1.3 Noctule (*Nyctalus noctula*) is a widespread but less abundant species (Wray and Reason 2023) that frequently uses the site for foraging. The activity for this species was concentrated in the northwestern corner of the site where a minimum of two bats were observed foraging at the same time low and out in the open above the grass sports pitches. Noctule bats (*N. noctula*) are sometimes thought to benefit from artificial night lighting (Mathews *et al.* 2018) so the existing floodlighting on site could be having a positive effect on this species.

5.1.4 None were directly observed emerging from roosts during the transect surveys, but noctule bats (*N. noctula*) were recorded during their typical emergence period throughout the season. This species emerges early, particularly during lactation (Mathews *et al.* 2018), so bat calls recorded prior to sunset during July and August indicates that a maternity colony of this species may be roosting nearby. Therefore, it is considered likely that these species may be utilising potential roosting sites in the belt of woodland along the western and northern boundaries of the site.

Probable Daubenton's bat

- 5.1.5** Daubenton's bat (*Myotis daubentonii*) is a widespread but less abundant species (Wray and Reason 2023) that infrequently use the site for commuting and foraging. The activity for this species was restricted to the belt of woodland along the western and northern boundaries of the site and concentrated in the northwestern corner closer to the lakes at Lakeside Country Park and where existing floodlighting has less of an influence.
- 5.1.6** None were directly observed emerging from roosts during the transect surveys and only one automated/static detector recording was registered during their typical emergence period from tree roosts, so it is considered unlikely that this species is roosting on site.

Probable brown long-eared bat

- 5.1.7** Brown long-eared bat (*Plecotus auritus*) is an abundant and widespread species (Wray and Reason 2023) that very infrequently uses the site for commuting and foraging. This species was only recorded during one transect survey where it was observed low in a corner of intersecting tree-lines at a time when the existing floodlighting was switched off, as these species are extremely light-shy (Mathews *et al.* 2018).

5.2 Identification of Key Habitat Features

- 5.2.1** The plans presented in **Appendix 2** show the distribution of bat calls recorded across the site during the transect surveys in 2023, highlighting the habitat features used most on site by bats. The results of the transect surveys indicate that the Key Habitat feature on site is the belt of woodland along the western and northern boundaries of the site (see **Appendix 4**). This habitat feature supported the highest level of bat activity and was the only place where the light-shy *Myotis* species – probable Daubenton's bat (*M. daubentonii*) – were recorded on site.
- 5.2.2** The transect surveys highlighted that the tree-lines on site act as Supporting Habitat for commuting and foraging pipistrelle bats; they are also very rarely used by light-shy *Plecotus* species – probable brown long-eared bat (*P. auritus*) (see **Appendix 4**).

5.3 Impact Assessment

- 5.3.1** The proposals involve the installation of artificial night lighting including new floodlighting and path lighting associated with two proposed synthetic sports pitches. In the absence of mitigation, the addition of artificial night lighting could result in bats deserting roosts and also has the potential to deter bat species from using the Key Habitat feature on site, particularly the light-shy species such as Daubenton's bat (*M. daubentonii*) and brown long-eared bat (*P. auritus*) (ILP 2023). Another potential adverse impact of artificial night lighting could be the creation of a 'vacuum effect' from the surrounding area where insects could be drawn away from nearby habitats, such as the lakes at Lakeside Country Park, reducing the availability of prey for slower-flying, light-shy bats foraging in these areas (ILP 2023).

5.4 Mitigation Proposals

- 5.4.1** A '*Lighting Impact Report & Overspill Readings*' document has been prepared by Halliday Lighting (Version 8; March 2024) in order to mitigate any adverse impacts to bats.

- 5.4.2** This detailed lighting strategy document has aimed to satisfy the illumination guidance set out by Eastleigh Borough Council:

- Louvres/baffles to be considered to limit light spill;
- Curfew timers for floodlights, reducing light levels 10 minutes before the end of evening/night-time usage and switching off luminaires where the site is no longer occupied;
- Minimise light spill above the column height;
- Column height that maximises light coverage on the pitch and limit light spill;
- Luminaire colour temperature of 2700k;
- Limit light spill into adjacent habitats to 1lux maximum; and
- Maintenance factor of 1 for analysis on the ecological habitats.

Louvres/baffles to be considered to limit light spill

- 5.4.3** Upward light spill cowls have been included with the floodlights and horizontal cut-off (zero upward light) lanterns have been used for the path lighting to limit light spill; BLC (Black Light Control) lanterns are proposed.

Curfew timers for floodlights and a control regime

- 5.4.4** A lighting control system will be provided for the floodlights with settings for the 75/120/200lux outputs and curfew timers; the path lighting will operate within the same curfews as the floodlights. The curfew timers will reduce the light levels 10 minutes before the end of evening/night-time usage and switch off when the site is no longer occupied.

Minimise light spill above the column height

- 5.4.5** Upward light spill cowls have been included with the floodlights and horizontal cut-off (zero upward light) lanterns have been used for the path lighting to limit light spill; BLC (Black Light Control) lanterns are proposed.

Column height that maximises light coverage on the pitch and limit light spill

- 5.4.6** The floodlight columns will be equal height and make use of asymmetric floodlights at the appropriate height to minimise light spill.

Luminaire colour temperature of 2700K

- 5.4.7** A very warm light (i.e. 2700K) is considered sub-optimal for the purpose of sports floodlighting where 4000-5000k is used as standard. Therefore, the floodlights have been designed at 3000K to reduce the blue wavelength lighting for bats without compromising their performance.

Limit light spill into adjacent habitats to 1lux maximum

- 5.4.8** The floodlights have been designed with upward light spill cowls, zero tilt and column height parameters to minimise illumination on the Key Habitat features (i.e. the belt of woodland long the western and northern boundaries of the site). Less than 1lux on the horizontal and vertical planes has been achieved for the 75/120lux outputs and for the majority of the 200lux output.

Maintenance factor of 1 for analysis on the ecological habitats

- 5.4.9** A maintenance factor of 0.90 has been used on all horizontal calculations and a maintenance factor of 1 has been used on all vertical, indirect and direct calculations.

6 CONCLUSION

- 6.1.1** The '*Lighting Impact Report & Overspill Readings*' document prepared by Halliday Lighting (Version 8; March 2024) has succeeded in satisfying the majority of the illumination guidance set out by Eastleigh Borough Council. Where the guidance has not been satisfied, efforts have been made to get the lighting strategy as close as possible.
- 6.1.2** Most notably, the floodlights have been designed to minimise illumination on the Key Habitat features (i.e. the belt of woodland long the western and northern boundaries of the site) and have achieved less than 1lux for the 75/120 outputs and for the majority of the 200lux output. This mitigation will prevent bats deserting roosts and should minimise the deterrence of bat species from using the Key Habitat feature on site.

7 REFERENCES

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APPENDIX 1 – TRANSECT ROUTE AND STATIC DETECTOR LOCATIONS



APPENDIX 2 – PLANS OF BAT ACTIVITY SURVEY RESULTS





APPENDIX 3 – TRANSECT SURVEY METADATA*Table 3. Transect Survey Metadata.*

Date	Sunset time	Survey timings	Weather conditions (at sunset)
25/05/2023	20:59	21:00-23:00	Gentle breeze (BF3); 1/8 cloud cover; 17°C; no precipitation
29/06/2023	21:23	21:23-23:00	Moderate breeze (BF4); 1/8 cloud cover; 20°C; no precipitation
31/07/2023	20:53	20:53-22:53	Light breeze (BF2); 8/8 cloud cover; 18°C; light rain at start
22/08/2023	20:13	20:13-22:13	Light air (BF1); 2/8 cloud cover; 19°C; no precipitation
12/09/2023	19:27	19:27-21:27	Light breeze (BF2); 7/8 cloud cover; 18°C; no precipitation
04/10/2023	18:38	18:38-20:38	Moderate breeze (BF4); 8/8 cloud cover; 16°C; no precipitation

APPENDIX 4 – PLAN OF BAT HABITAT FEATURES

