

Bat Activity Survey - Site

South Tyneside College

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Avant Homes

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	Name	**Position**	**Date**
Report Originator	Becky White	Senior Ecologist	October 2022
Reviewed	Mark Osborne	Director	October 2022
Updated	James Streets	Director	September 2023
Updated	James Streets	Director	December 2023

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Summary

OS Ecology Ltd were commissioned by Avant Homes to assess the impacts of a proposed development on bats at South Tyneside College. The assessment utilises surveys completed in 2022 which are detailed within this report and comprised transect surveys and remote monitoring of the site. This report also includes an assessment of the roosting potential of the trees on site. Dusk emergence surveys of the buildings on site are detailed within a separate report. The site is proposed for residential development.

Summary Table	
Impacts on Designated Sites	No impacts on sites designated for bats are predicted from the development.
Activity Survey Findings	Transect surveys recorded low levels of common pipistrelle activity with clusters of activity associated with tree cover to the east of the site and sheltered areas associated with buildings to the west. No other species were recorded. Remote monitoring recorded two species: common and soprano pipistrelle. No other species were recorded. A total of 36,513 records of activity were obtained over 37 nights of monitoring at the site, utilising two monitoring points. Common pipistrelle was the most frequently recorded species at both monitoring points with 95% of all calls attributable to this species. 0.5% of calls were attributed to Soprano pipistrelle with the remainder of calls categorised as '50KHz' pipistrelle, calls that could not be attributed to species, but which will be either common or soprano pipistrelle. The site is concluded to be of local value to bats with areas of tree cover of particular value, supporting foraging and commuting common pipistrelle with occasional soprano pipistrelle.
Ground Based Tree Assessment	A total of 7 trees were found to be of moderate suitability for roosting bats, with 4 of these proposed for removal within the scheme. Survey work of the site in 2022 recorded no emergences of bats from these trees however. As such these trees are not considered to support roosting bats.

1. Introduction

Site Location

1.1 The site is located in South Shields at an approximate central grid reference of NZ 37361 65957. The site location is illustrated within figure 1 in the appendices.

Site Description

1.1 The site is approximately 9.3ha in size and comprises a college campus with buildings, gardens, car parking and sports pitches.

Objectives of the Study

1.2 The objectives of this report are:

- To identify and describe any potential ecological receptors that may be present on site or within an identified zone of influence.
- To identify and assess whether proposals may impact on the identified receptors.
- To identify potential mitigation, compensation or enhancement measures if required.
- To identify and detail further surveys if required.

Development Proposals

1.3 The site is proposed for residential development.

2. Methodology

Scope of Study

2.1 The site was surveyed to identify whether the following were present for legislative and planning purposes:

- Habitats of conservation value
- Priority Habitats
- Protected and Priority Species

2.2 The ecological characteristics of the site were reviewed to identify the scope of the assessment, with the zone of influence determined through professional judgement.

2.3 The survey area comprised the "site" defined within figure 2 (Appendix 4) and where access was available an approximate 50m buffer[1].

2.4 Access permitting, all potential bat roosting sites within the survey area were assessed.

Desk Study

2.5 Desk study was completed as part of the ecological appraisal and the results are detailed within a separate report[2].

Field Survey

Transect Survey

2.6 Survey work followed the guidance produced by the Bat Conservation Trust[3] and comprised surveys on a monthly basis to sample the habitats present between April and September, in line with the guidance for a moderate suitability site. A single transect route was sufficient to cover the site.

2.7 Surveys commenced at sunset and continued for at least 2 hours.

2.8 Surveys were undertaken by Mike Perkins, Dominic Hall, Ally Vitali, Kat Bluff, Sarah Bosnyak, Vince Cassidy and Emma Surtees.

2.9 The following equipment was utilised during survey:

- Anabat Scout

[1] The survey buffer may be increased depending on the species present and their identified core sustenance zones.
[2] Ecological Appraisal, South Tyneside College, South Shields, July 2022 OS Ecology Ltd
[3] Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn). The Bat Conservation Trust, London

2.10 The surveys were undertaken under the following weather conditions:

Table 2.1: Transect Survey Conditions

Date	Start Time	End Time	Sunset/ Sunrise	Dusk/ Dawn Temp. (°C)	Cloud Cover (%)	Precipitation	Wind Conditions
26th April 2022	20:25	22:30	20:30	10	80	Dry	F1-2
16th May 2022	21:09	23:11	21:11	11	100	Light drizzle	F1-2
13th June 2022	21:45	23:45	21:45	14	50	Dry	F1-2
19th July 2022	21:30	23:30	21:30	28	50	Dry	F1-2
8th August 2022	20:54	22:54	20:54	20	20	Dry	F1-2
9th August 2022	03:29	05:31	05:31	14	20	Dry	F2
20th September 2022	19:10	21:10	19:10	17	100	Dry	Still

Remote Monitoring

2.11 Remote monitoring was undertaken at the site on a monthly basis as per the guidance provided by the Bat Conservation Trust[4] for a moderate suitability site. Due to the timing of commission, April monitoring was not undertaken, with monitoring being carried out from May to September.

2.12 Two remote detectors, Anabat Choruses, were placed in the same locations for at least 5 nights on each occasion. The detectors were set to record from dusk through until dawn.

2.13 The remote monitoring was undertaken on the following dates:

Table 2.2: Remote Monitoring Dates

Date	Month	Number of Monitoring Nights
21st – 28th May 2022 (RMP1)	May	7
1st to 6th June 2022 (RMP2)*	June	5
18th – 25th June 2022 (RMP1 and 2)	June	7

[4] Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn). The Bat Conservation Trust, London

Table 2.2: Remote Monitoring Dates		
Date	**Month**	**Number of Monitoring Nights**
17th – 23rd July 2022 (RMP1 and 2)	July	6
14th – 19th August 2022 (RMP1 and 2)	August	5
17th – 24th September 2022 (RMP1 and 2)	September	7
*Due to an equipment failure at this monitoring point during May, the detector was redeployed at this location in early June.		

Limitations to Survey

2.14 There were considered to be no significant constraints to survey.

2.15 Due to the timing of commission, remote monitoring was not undertaken in April, however a transect survey was completed during April and given the extensive survey completed at the site, including vantage point surveys of the buildings undertaken over 14 nights from June to August, this is not considered to be a significant constraint.

Analysis of Data

2.16 Following the survey, all bat calls are manually assessed and analysed using Analook Insight and or Bat Explorer software, enabling the full spectrum of the call to be assessed.

2.17 Where possible bat calls are identified to species, referencing call parameters as detailed within Russ (2012)[5], Middleton et al (2014)[6] and Barataud (2015)[7].

2.18 Bats are identified to species, where possible, though it is noted that there can be a significant overlap in call parameters in some species, particularly the *Myotis* genus.

2.19 *Myotis* bat calls are assessed using a range of indicators, though due their modulated calls a number of external factors can impact the reliability. As such *Myotis* bats will often be identified as *Myotis* sp. where identification to species cannot be confirmed.

2.20 Where possible further detail on the *Myotis* species will be gathered, such as DNA. The use of full spectrum detectors gives a greater success rate in identification. This can also be backed up by computer programmes such as Bat Classify.

2.21 Although a greater certainty can be provided in other species, there is still an overlap in calls between other genera of bats such as *Pipistrellus* and *Nyctalus,* which can be

[5] Russ, J. (2012) British Bat Calls: A Guide to Species Identification. Pelagic Publishing
[6] Middleton, N., Froud, A. and French, K. (2014) Social Calls of the Bats of Britain and Ireland. Pelagic Publishing
[7] Barataud, M. (2015) Acoustic Ecology of European Bats – Species Identification, Study of their Habitats and Foraging Behaviour

affected by a range of environmental factors. The following table details the parameters utilised by OS Ecology Ltd and are based on "typical" open flight calls.

Table 2.3: Bat Species Identification Parameters	
Species	**Peak Frequency Range (KHz)[5]**
Pipistrellus	
Common pipistrelle	>42 and <49
Soprano pipistrelle	≥51
Nathusius' pipistrelle	<39
Common or soprano pipistrelle ('50KHz pip')	≥49 and <51
Common or Nathusius' pipistrelle ('40KHz pip')	≥40 and ≤42
Nyctalus	
Noctule	≥17 and <23.5
Leisler's	≥23.5 and <29.9
Eptesicus	
Serotine	≥24.1 and <32.2
Plectocus	
Brown Long-eared Bat	≥25.5 and <42.1
Barbastellus	
Barbastelle	≥29.2 and <44.7
Rhinolophus	
Greater Horseshoe	77-84
Lesser Horseshoe	107-114

2.22 Where there is uncertainty in species identification species are identified to genus.

Ground Based Tree Risk Assessment

2.23 Survey effort has been based on that provided by the Bat Conservation Trust Good Practice Survey Guidelines[8].

2.24 Trees within the site and adjacent to the site, were inspected[9], where access was available, for potential roosting features (PRFs) and to record any field signs, including bats, if present[10].

2.25 In line with the Guidelines provided by the Bat Conservation Trust[11], an initial assessment of the suitability of any trees on site for use by roosting bats was undertaken with tree suitability categorised as follows.

[8] Collins, J. (ed) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition) The Bat Conservation Trust, London

[9] It should be noted that assessment relates entirely on the structure or tree's suitability to support bats and or other protected species. Assessment must in no way be taken as an assessment of the structure's integrity or safety.

[10] If bats are recorded during appropriate measures are undertaken to limit any potential disturbance

[11] Collins, J. (ed) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition) The Bat Conservation Trust, London

Table 2.2: Preliminary Assessment of Tree Suitability for Roosting Bats	
Suitability	**Description**
NONE	Either no PRFs in the tree or highly unlikely to be any
FAR	Further assessment required to establish if PRFs are present in the tree
PRF	A tree with at least one PRF present

2.26 Where PRFs within trees were identified and could be inspected from ground level, these were categorised as follows, as per the guidelines:

- PRF-I – PRF only suitable for individual bats or very small numbers of bats either due to size or lack of suitable surrounding habitats.
- PRF-M – PRF is suitable for multiple bats and may therefore be used by a maternity colony.

2.27 Survey was undertaken by Mike Perkins an experienced bat surveyor who holds a Class 2 Natural England survey licence.

2.28 The following equipment was utilised during survey:

- High power LED torch.
- 8x30 binoculars.
- Digital camera.

2.29 The survey was undertaken on the 4th December 2023 in the following weather conditions:

Table 4: Daytime Survey Conditions				
Date	**Temperature**	**Cloud Cover**	**Precipitation**	**Wind Conditions**
4th December 2023	5°C	100%	Heavy	F2W

Assessment Methodology

2.30 Guidance from the Chartered Institute of Ecology and Environmental Management (CIEEM) is utilised to provide habitat valuations.

2.31 The level of value of specific ecological receptors is assigned using a geographic frame of reference. For, example international value being most important (SACs, SPAs and pSPAs), then national (SSSIs), regional, county (LWS), district (LNR), local and lastly, within the immediate zone of influence of the site only (low).

2.32 In terms of species, for example breeding birds, should the population within the site constitute greater than 1% of the geographic population, it would be considered

significant at that level. In addition, presence of designated sites, scarce species and or quality[12]/diversity of habitats are used to guide that valuation

2.33 Assessment methods for bats have been undertaken with reference to Wray et al. (2007)[13], which correlates with the geographic frame of reference. Within which they define the relative rarity of each species based on the known distribution[14] at the time and the value of the roost type, assuming that roosts such as feeding perches are of lower value that maternity roosts or sites that have a high level of fidelity.

[12] Quality can be subjective and vary in different geographic areas. Reasoned professional judgement is therefore used to inform the assessment.

[13] Wray et al (2007) Valuing Bats in Ecological Impact Assessment. In Practice. Based on a presentation at the Mammal Society – Specific Issues with Bats

[14] It should be noted that there are regular changes to our understanding of distribution as further studies are undertaken.

3. Results

Field Survey

Transect Surveys

3.1 The following table summarises the results of the transect surveys undertaken at the site. Figures illustrating the results are provided within the appendices.

Table.1: Transect Survey Results	
Survey	**Results**
26th April 2022	No bat activity recorded.
16th May 2022	Low levels of common pipistrelle activity recorded with a cluster of activity associated with buildings to the west of the site. The majority of activity recorded was attributable to individual bats, briefly heard but not seen.
13th June 2022	Similar results to the May survey with low levels of common pipistrelle activity recorded and a cluster of activity recorded adjacent to buildings to the west of the site. The majority of activity recorded was attributable to individual bats, briefly heard but not seen or briefly foraging or commuting.
19th July 2022	Low levels of common pipistrelle activity recorded associated with tree cover to the east of the site. The majority of activity recorded was attributable to individual bats, briefly heard but not seen but with two records of individual bats commuting.
8th/9th August 2022 (Dusk and Dawn)	Common pipistrelle recorded with records associated with areas of tree cover within and on the site boundary. No other species recorded. All records were of bats briefly heard but not seen.
20th September 2022	Similarly low levels of common pipistrelle activity recorded, the majority associated with tree cover to the east of the site. The majority of records were individual bats briefly heard but not seen with a single record of two bats commuting.

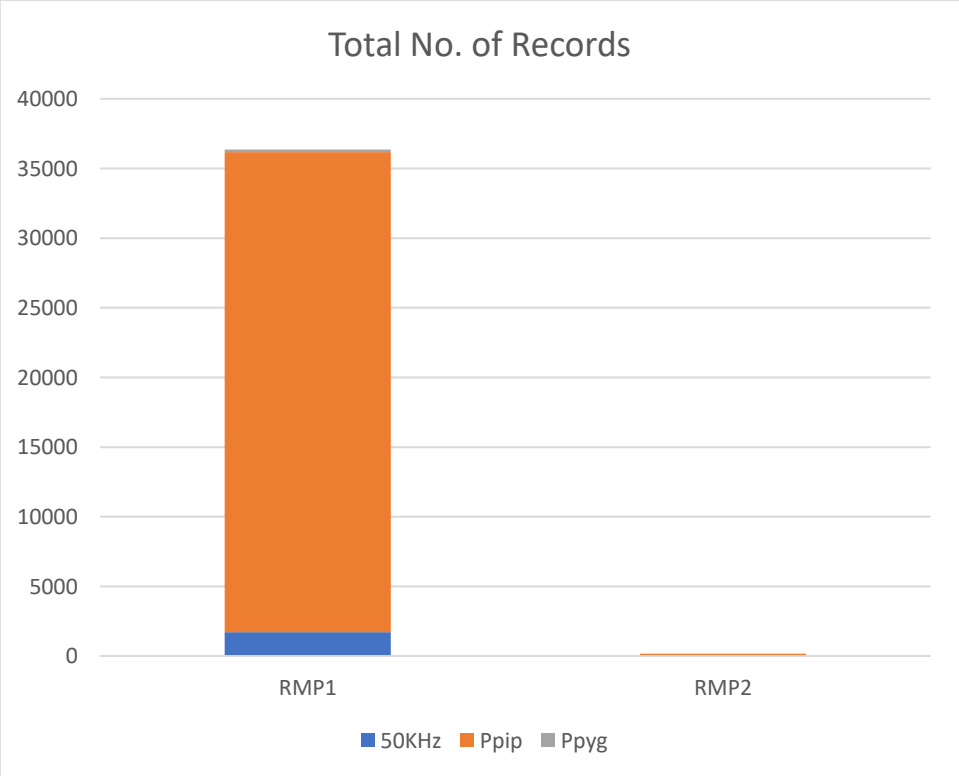
Remote Monitoring

3.2 Remote monitoring recorded two species; common and soprano pipistrelle. Further calls have been categorised as '50KHz', calls where the species could not be confirmed based on call characteristics, but that are attributable to either common or soprano pipistrelle. No other species were recorded. A total of 36,513 records of activity were obtained over 37 nights of monitoring at the site.

3.3 Common pipistrelle was the most frequently recorded species at both monitoring points with 95% of all calls attributable to this species. In addition, 0.5% of calls were attributed to soprano pipistrelle, with the remainder of calls categorised as '50KHz' pipistrelle.

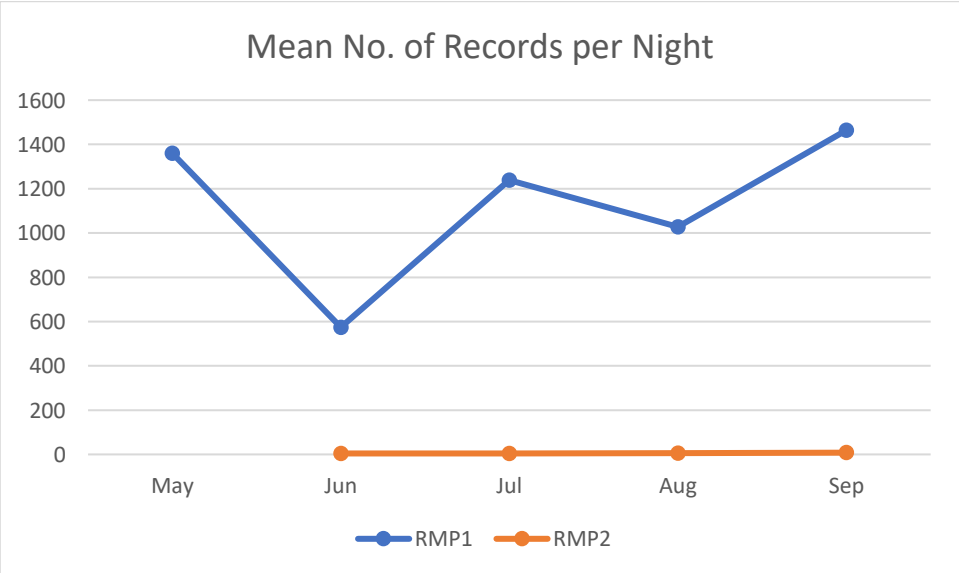
3.4 The following chart details the total number of records at each monitoring point and the proportion attributable to each species/species group. The vast majority of activity was recorded at RMP1 (>99%). This monitoring point lies within an area of tree cover to the east of the site which will most likely provide a foraging resource and potential

commuting route. RMP2 lies within a courtyard area between buildings, habitats likely to be of lower suitability to foraging bats.



3.5 The following chart details the mean number of records obtained per night at each monitoring point during each month. Levels of activity at monitoring point 1 were relatively high throughout the survey period (mean number of records per night in the range of 1027-1464) with a slight dip recorded in June (a mean of 574 records per night).

3.6 Levels of activity at RMP2 remained low through the monitoring period, in the range of a mean of 4-8 records per night.



3.7 Common and soprano pipistrelle were consistently recorded at both monitoring points during all monitoring periods with a peak of over 3000 records in a single night attributable to common pipistrelle and of 32 to soprano pipistrelle.

3.8 The following table details the full results of monitoring while a figure illustrating the location of the monitoring points is provided within the appendices.

Table 3.2: Remote Monitoring Data

Night	'50KHz' Pipistrelle		Common Pipistrelle		Soprano Pipistrelle		Grand Total
	RMP1	RMP2	RMP1	RMP2	RMP1	RMP2	
21-May	7	-	289	-	1	-	297
22-May	7	-	879	-	0	-	886
23-May	11	-	1500	-	0	-	1511
24-May	64	-	2318	-	6	-	2388
25-May	41	-	1679	-	5	-	1725
26-May	34	-	1912	-	3	-	1949
27-May	18	-	732	-	11	-	761
01-Jun	-	1	-	14	-	1	16
02-Jun	-	0	-	4	-	2	6
03-Jun	-	2	-	7	-	6	15
04-Jun	-	1	-	5	-	3	9
05-Jun	-	0	-	0	-	0	0
18-Jun	135	0	1008	2	14	1	1160
19-Jun	16	0	563	0	2	0	581
20-Jun	28	0	663	0	1	1	693
21-Jun	0	0	59	0	0	0	59
22-Jun	5	0	222	0	0	0	227
23-Jun	0	0	114	2	0	0	116
24-Jun	22	0	1168	0	0	0	1190
17-Jul	18	0	792	2	3	0	815
18-Jul	21	0	753	1	0	0	775
19-Jul	25	0	1064	1	5	1	1096
20-Jul	18	0	796	2	3	0	819
21-Jul	53	0	1890	10	4	0	1957
22-Jul	64	0	1916	9	5	0	1994
14-Aug	23	3	397	5	0	1	429
15-Aug	30	0	1024	7	4	0	1065
16-Aug	42	0	1591	1	1	0	1635
17-Aug	62	0	523	8	7	0	600
18-Aug	21	1	1412	1	2	0	1437
17-Sep	130	3	1605	20	32	0	1790
18-Sep	61	0	739	2	19	0	821
19-Sep	184	1	2008	20	20	0	2233
20-Sep	85	1	1263	2	9	0	1360
21-Sep	440	0	3007	1	24	0	3472
22-Sep	15	0	301	1	1	0	318
23-Sep	24	0	274	5	8	0	311
Grand Total	**1704**	**13**	**34461**	**132**	**190**	**16**	**36516**

Ground Based Tree Risk Assessment

3.9 The results of the ground-based tree risk assessment are shown below:

Table 3.3: Ground-based Tree Risk Assessment

Ref. No.	Species	Description of PRFs	Bat Suitability	Photograph
1 (254)	Ash	Two tear offs on main leader with possible cavities. Possibly suitable for multiple bats.	Moderate Proposed for felling	
2 (181)	Sycamore	Large knothole, north facing on main leader at 2m. Large Cavity likely extending upwards	Moderate Proposed for felling	
3 (166)	Sycamore	Two knot holes on main stem at 3 and 4 metres.	Moderate Proposed for felling	

4 (173)	Sycamore	Basal cavity on eastern side in main leader. Extends at least 15cm up the main steam in arrow cavity.	Moderate Proposed for felling	
5 (124)	Sycamore	Hollow main stem supported by small wall, and regular cankers. Several large cavities.	Moderate To be retained	
6 (8)	Ash	Tear off main leader at 10m east facing, with potential cavity	Moderate To be retained	
7 (34)	Ash	Extensive aerial dead wood. cavity at base of main leader, north facing. Extended upwards 20-30cm into tree.	Moderate To be retained	

8 (218)	Cherry	No obvious feature but some ivy.	Fell to MS if required	
9 (210)	Sycamore	No obvious feature but some ivy.	Fell to MS if required	
10 (108)	Sycamore	No obvious feature but some ivy.	Fell to MS if required	
11 (107)	Sycamore	No obvious feature but some ivy.	Fell to MS if required	
12 (72)	Sycamore	No obvious feature but some ivy.	Fell to MS if required	

13 (54)	Ash	No obvious feature but some ivy.	Fell to MS if required	
14 (not picked up on the AIA due to small size)	Unknown due to small size	Memorial tree	N/A	
15 (122)	Sycamore	25mm/32mmbird box	N/A	
16 (233)	Sycamore	25mm/32mm bird box	N/A	

17 (227)	Acer sp.	25mm/32mm bird box	N/A	
18 (223)	Cherry	25mm/32mm bird box	N/A	
19 (76)	Poplar	25mm/32mm bird box	N/A	

4. Site Assessment

Assessment of Survey Findings - Habitats

4.1 The site is concluded to be of local value to bats with areas of tree cover of particular value, supporting foraging and commuting common pipistrelle with occasional soprano pipistrelle.

Assessment of Survey Findings - Trees

4.2 Of the trees assessed within the site, the majority have no suitable roosting features for bats. Those that have suitable roosting features for bats are numbered 1-7 with these having the potential to support multiple bats due to the size of the roosting features recorded.

4.3 Detailed vantage point surveys of the site were completed in 2022, including the trees within the survey area with no emergences recorded from any of the trees. Details of the survey methods, timings and results are provided within the separate bat survey report for the site however these results have been overlaid with the tree locations in the appendices for clarity. Trees 5-7 are to be retained and as such no vantage point surveys are required to assess these trees.

4.4 Overall there are therefore considered to be no bats roosting within the trees on site at the site. Further recommendations are provided within the Ecolgical Impact Assessment for the site.

Appendix 1 – Bat Suitability and Survey Effort

Classifications of suitability are based on those provided within the Bat Conservation Trust Good Practice Survey Guidelines[15], with the table below taken from page 35 of the guidelines (table 4.1).

Guidelines for assessing the potential suitability of proposed development sites for bats (based on the presence of habitat features within the landscape, to be applied using professional judgement)		
Suitability	**Description**	
	Roosting Habitats	**Commuting and foraging habitats**
Negligible	Negligible habitat features on site, likely to be used by roosting bats	Negligible habitat features on site, likely to be used by commuting and foraging bats
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions[a] and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e unlikely to be suitable for maternity or hibernation[b]. A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential[c].	Habitat that could be used by small numbers of commuting bats such as gappy hedgerow or unvegetated stream, but isolated, i.e not very well connected to the surrounding landscape by other habitat. Suitable but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions[a] and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions[a] and surrounding habitat	Continuous high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree lined watercourse and grazed parkland.

[15] Collins, J. (ed) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd Edition). Bat Conservation Trust

		Site is close to and connected to known roosts.

a. For example in terms of temperature, humidity, height above ground level, light levels or levels of disturbance.
b. Evidence from the Netherlands shows mass swarming events of common pipistrelle bats in the autumn followed by mass hibernation in a diverse range of building types in urban environments (Korsten et al., 2015). This phenomenon requires some research in the UK but ecologists should be aware of potential for larger numbers of this species to be present during the autumn and winter in larger buildings in highly urbanised environments.
c. The system of categorisation aligns with BS 8596:2015 Surveying for bats in trees and woodland (BSI, 2015)

The classification of the suitability relates to the level of further survey recommended.

Survey effort and timing depending on suitability of the structure or tree (Tables 7.1-7.3 in the BCT Guidelines			
	Low roost suitability	**Moderate roost suitability**	**High roost suitability**
Survey Effort	One survey visit One dusk emergence or dawn re-entry survey	Two separate visits One dusk emergence and a separate dawn re-entry survey	Three separate visits At least one dusk emergence and a separate dawn re-entry survey. The third can be either dusk or dawn.
Timings	May-August (structures) No further survey (trees)	May to September. At least one must be in the optimum period (May to August)	May to September. two must be in the optimum period (May to August)
If bats are recorded	If bats emerge during surveys, the survey schedule will be adjusted to increase the survey effort so that enough information can be collected to characterise the roost and provide data should a Natural England Licence be required.		

Appendix 2 – Policy and Legislation

Planning Policy

National Planning Policy Framework (NPPF)[16]

The revised National Planning Policy Framework sets out the government's planning policies for England and how these are expected to be applied. It provides a framework within which locally prepared plans for housing and other development can be produced. Planning law requires that applications for planning permission be determined in accordance with the development plan. The key paragraphs from the relating to the natural environment are detailed below.

Ecologically Relevant Paragraphs of the NPPF	
Paragraph	**Statement**
8	Achieving sustainable development means that the planning system has three overarching objectives, which are interdependent and need to be pursued in mutually supportive ways (so that opportunities can be taken to secure net gains across each of the different objectives): a) an economic objective – to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right types is available in the right places and at the right time to support growth, innovation and improved productivity; and by identifying and coordinating the provision of infrastructure; b) a social objective – to support strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and by fostering well-designed, beautiful and safe places, with accessible services and open spaces that reflect current and future needs and support communities' health, social and cultural well-being; and c) an environmental objective – to protect and enhance our natural, built and historic environment; including making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy
174	Planning policies and decisions should contribute to and enhance the natural and local environment by: a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan); b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland; c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate; d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures; e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate
175	Plans should: distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries
179	To protect and enhance biodiversity and geodiversity, plans should: a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local

[16] National Planning Policy Framework July 2021 (https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1005759/NPPF_July_2021.pdf)

Ecologically Relevant Paragraphs of the NPPF	
Paragraph	**Statement**
	partnerships for habitat management, enhancement, restoration or creation; and b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.
180	When determining planning applications, local planning authorities should apply the following principles: a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused; b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest; c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons63 and a suitable compensation strategy exists; and d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.
181	The following should be given the same protection as habitats sites: a) potential Special Protection Areas and possible Special Areas of Conservation; b) listed or proposed Ramsar sites64; and c) sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites
182	The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.

Government Circular ODPM 06/2005 Biodiversity and Geological Conservation[17] (England only)

This Circular provides administrative guidance on the application of the law relating to planning and nature conservation as it applies in England.

Part IV - Conservation of Species protected by Law details that the presence of a protected species is a material consideration when considering a development proposal that may result in harm to the species or its habitat and that planning authorities must have regard to species protected under the Habitat Regulations.

It goes on to say that: *it is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is granted, otherwise all relevant material considerations may not have been addressed in making the decision. The need to ensure ecological surveys are carried out should therefore only be left to coverage under planning conditions in exceptional circumstances, with the result that the surveys are carried out after planning permission has been granted.*

[17]ODPM Circular 06/2005 Office of the Deputy Prime Minister Eland House, Bressenden Place, London SWIE 5DU Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System

Natural Environment and Rural Communities (NERC) Act 2006[18] [19]

Section 40 – To conserve biodiversity

Section 40 puts a duty on public authorities to conserve biodiversity when undertaking its duties and functions,

Section 41 – Biodiversity list and Action

Section 41 – Requires the Secretary of State *to publish a list of the living organisms and types of habitat which in the Secretary of State's opinion are of principal importance for the purpose of conserving biodiversity*. They must also *take such steps as appear to the Secretary of State to be reasonably practicable to further the conservation of the living organisms and types of habitat included in any list published under this section or promote the taking by others of such steps*.

The 2007 lists were superseded by the UK Post-2010 Biodiversity Framework.

UK Priority Habitats (excl. marine habitats)[20]	
UK BAP broad habitat	**UK BAP priority habitat**
Rivers and Streams	Rivers
Standing Open Waters and Canals	Oligotrophic and Dystrophic Lakes
	Ponds
	Mesotrophic Lakes
	Eutrophic Standing Waters
	Aquifer Fed Naturally Fluctuating Water Bodies
Arable and Horticultural	Arable Field Margins
Boundary and Linear Features	Hedgerows
Broadleaved, Mixed and Yew Woodland	Traditional Orchards
	Wood-Pasture and Parkland
	Upland Oakwood
	Lowland Beech and Yew Woodland
	Upland Mixed Ashwoods
	Wet Woodland
	Lowland Mixed Deciduous Woodland
	Upland Birchwoods
Coniferous Woodland	Native Pine Woodlands
Acid Grassland	Lowland Dry Acid Grassland
Calcareous Grassland	Lowland Calcareous Grassland
	Upland Calcareous Grassland
Neutral Grassland	Lowland Meadows

[18] https://www.legislation.gov.uk/ukpga/2006/16/section/40
[19] https://www.legislation.gov.uk/ukpga/2006/16/section/41
[20] http://jncc.defra.gov.uk/page-5706

	Upland Hay Meadows
Improved Grassland	Coastal and Floodplain Grazing Marsh
Dwarf Shrub Heath	Lowland Heathland
	Upland Heathland
Fen, Marsh and Swamp	Upland Flushes, Fens and Swamps
	Purple Moor Grass and Rush Pastures
	Lowland Fens
	Reedbeds
Bogs	Lowland Raised Bog
	Blanket Bog
Montane Habitats	Mountain Heaths and Willow Scrub
Inland Rock	Inland Rock Outcrop and Scree Habitats
	Calaminarian Grasslands
	Open Mosaic Habitats on Previously Developed Land
	Limestone Pavements
Supralittoral Rock	Maritime Cliff and Slopes
Supralittoral Sediment	Coastal Vegetated Shingle
	Machair
	Coastal Sand Dunes

Protected Species Legislation

European Protected Species

European Protected Species (EPS) are species of plants and animals (other than birds) protected by law throughout the European Union. They are listed in Annexes II and IV of the European Habitats Directive and receive full protection under The Conservation of Species and Habitats Regulations 2017 (as amended). This make it an offence to:

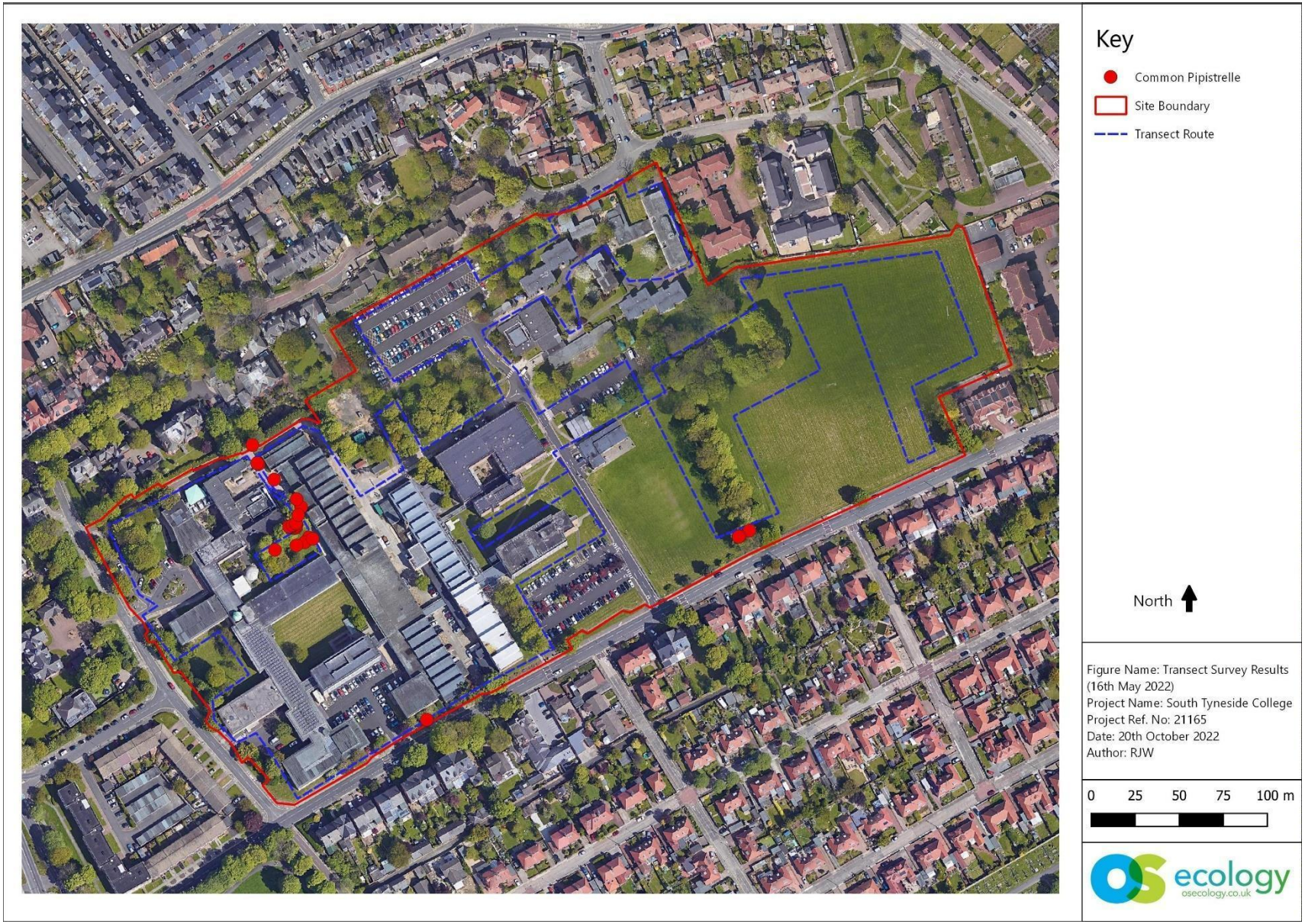
- deliberately capture, injure or kill any European Protected Species (EPS)
- to deliberately disturb any European Protected Species (EPS);
- to damage or destroy a breeding site or place of rest or shelter used by any European Protected Species (EPS).

The Wildlife and Countryside Act 1981 (as amended) adds further protection by making it an offence to intentionally or recklessly[21] disturb an EPS while it is occupying a structure or place which it uses for shelter or protection, or to obstruct access to any structure or place the species uses for shelter or protection.

[21] Under the Countryside and Rights of Way Act 2000 (CROW Act) extended the protection to cover reckless damage or disturbance

European Protected Species relevant to the UK			
Animals		**Plants**	
All bat species	Great Crested Newt	Shore dock	Creeping marshwort
Large blue butterfly	Otter	Killarney fern	Slender naiad
Wild cat	Smooth snake	Early gentian	Fen Orchid
Dolphins, porpoises and whales (all species)	Sturgeon fish	Lady's slipper	Floating-leaved water plantain
Dormouse	Natterjack toad	Yellow marsh saxifrage	
Sand lizard	Pool Frog		
Fisher's Estuarine Moth	Snail, Lesser Whirlpool Ram's-horn		
Marine turtles			

Appendix 3 – Figures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Project Name: South Tyneside College
Project Ref. No: 21165
Date: 20th October 2022
Author: RJW
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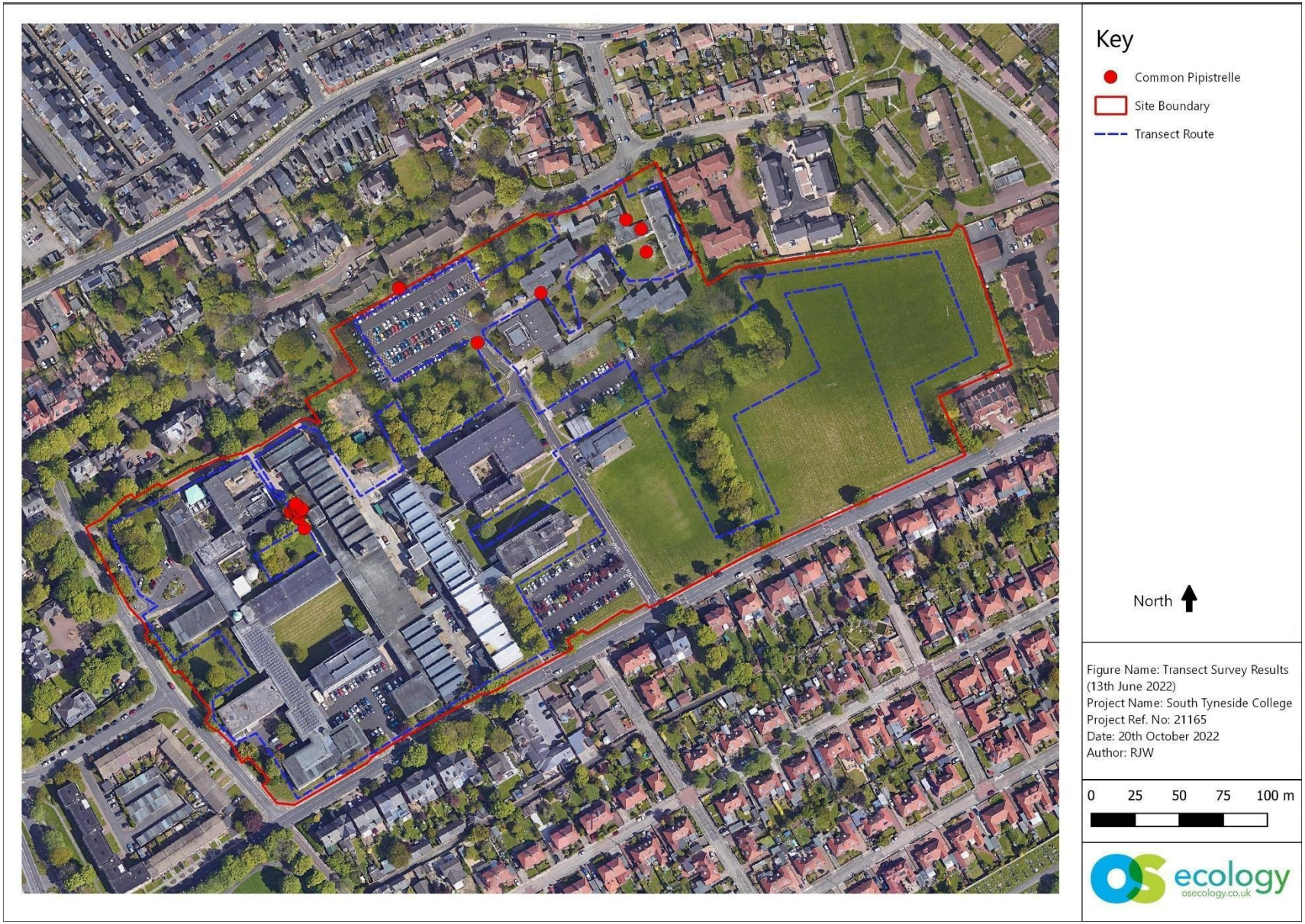
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Site Boundary
Transect Route
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Project Name: South Tyneside College
Project Ref. No: 21165
Date: 20th October 2022
Author: RJW
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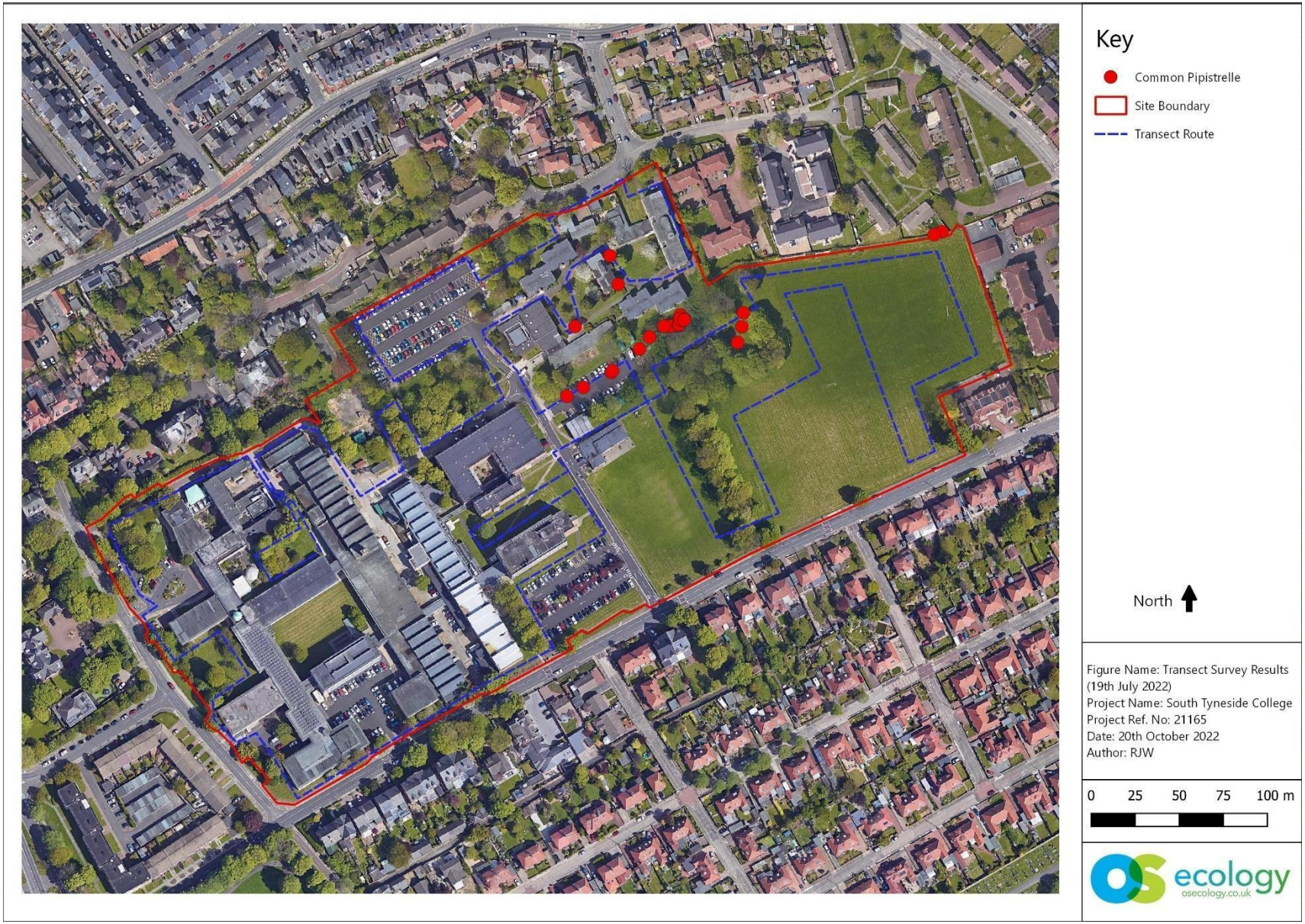
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Site Boundary
Transect Route
North
Figure Name: Transect Survey Results (19th July 2022)
Project Name: South Tyneside College
Project Ref. No: 21165
Date: 20th October 2022
Author: RJW
0 25 50 75 100 m



Key

- Common Pipistrelle
- Site Boundary
- Transect Route

North

Figure Name: Transect Survey Results (8th August 2022)
Project Name: South Tyneside College
Project Ref. No: 21165
Date: 20th October 2022
Author: RJW

0 25 50 75 100 m



Key

- Common Pipistrelle
- Site Boundary
- Transect Route

North

Figure Name: Transect Survey Results (9th August 2022)
Project Name: South Tyneside College
Project Ref. No: 21165
Date: 20th October 2022
Author: RJW

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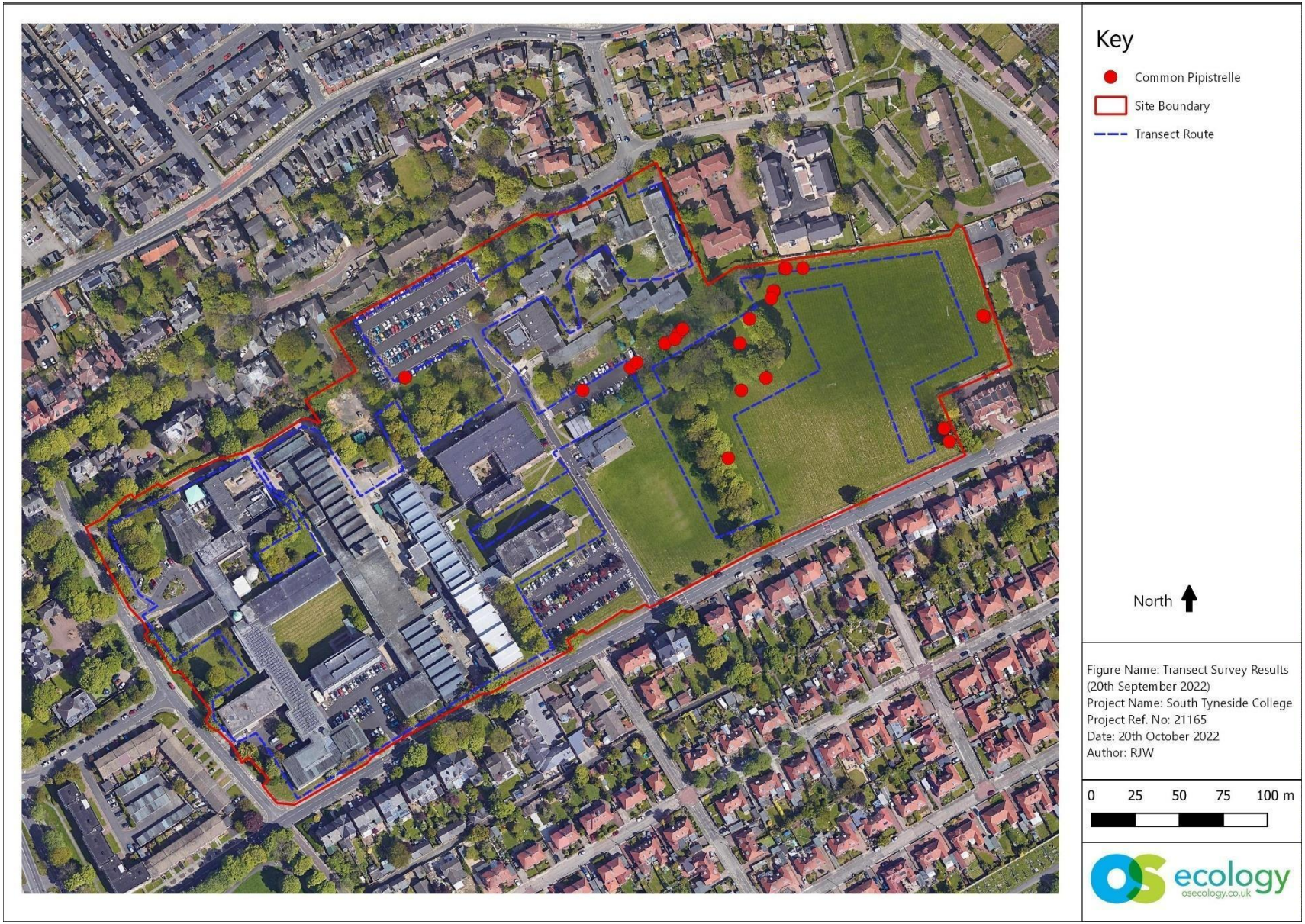
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Common Pipistrelle
Site Boundary
Transect Route
North
Figure Name: Transect Survey Results (20th September 2022)
Project Name: South Tyneside College
Project Ref. No: 21165
Date: 20th October 2022
Author: RJW
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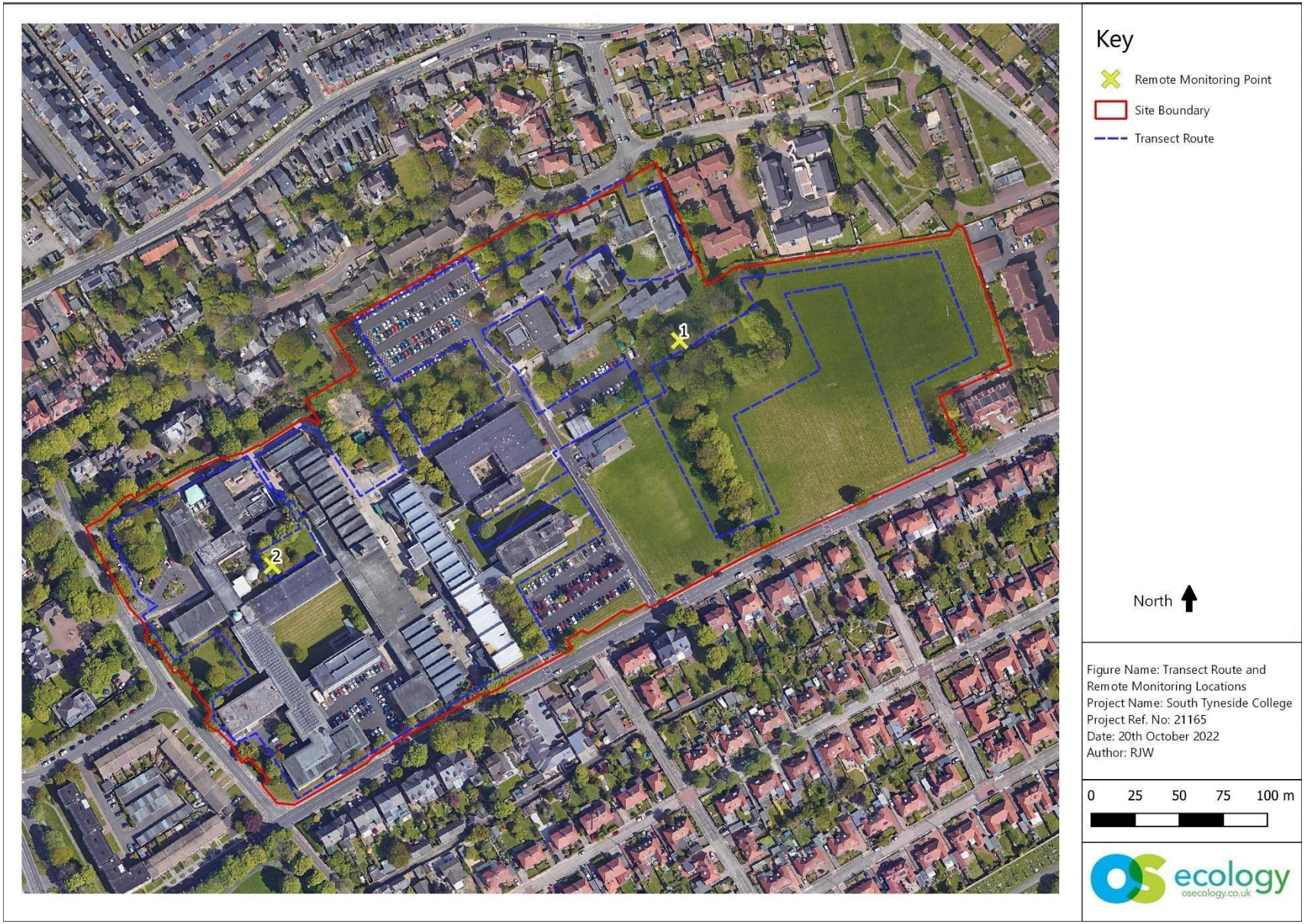
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Remote Monitoring Point
Site Boundary
Transect Route
1
2
North
Figure Name: Transect Route and Remote Monitoring Locations
Project Name: South Tyneside College
Project Ref. No: 21165
Date: 20th October 2022
Author: RJW
0 25 50 75 100 m
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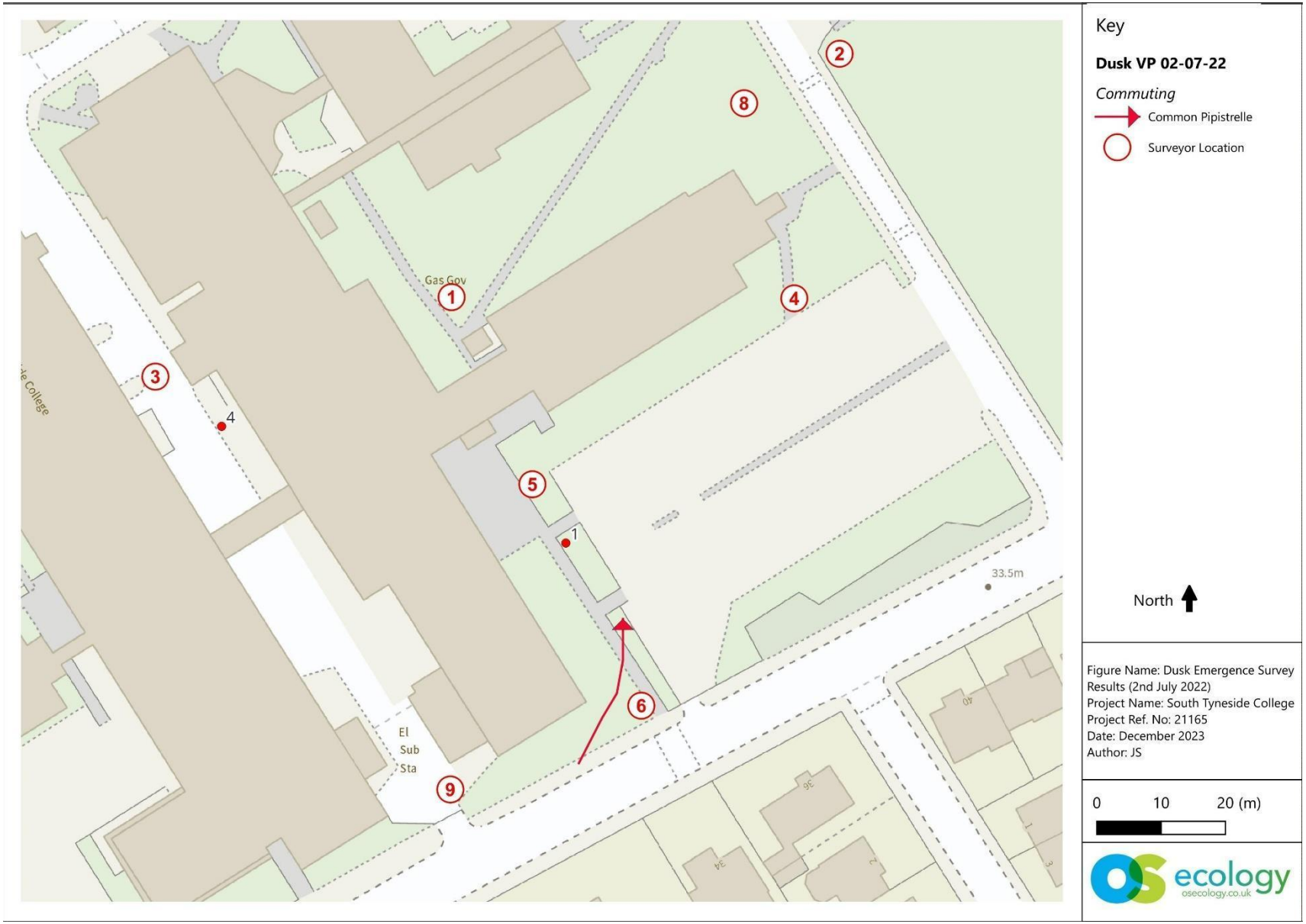
osecology.co.uk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Commuting
Common Pipistrelle
Surveyor Location
North
Figure Name: Dusk Emergence Survey Results (2nd July 2022)
Project Name: South Tyneside College
Project Ref. No: 21165
Date: December 2023
Author: JS
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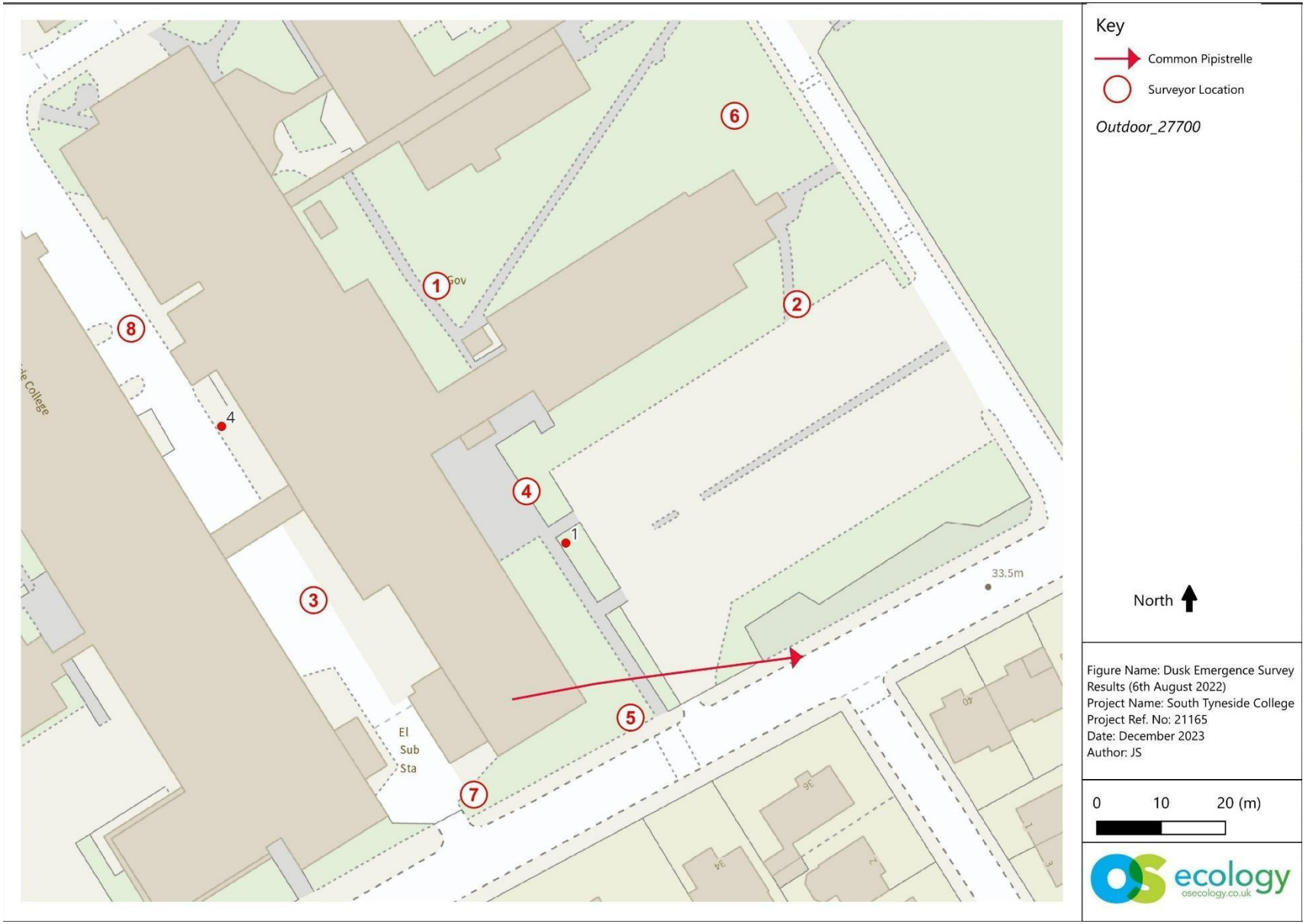
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Surveyor Location
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Project Ref. No: 21165
Date: December 2023
Author: JS
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Key
Dusk VP 17-07-22
Surveyor Location
Foraging Area
Commuting
Common Pipistrelle
North
Figure Name: Dusk Emergence Survey Results (17th July 2022)
Project Name: South Tyneside College
Project Ref. No: 21165
Date: December 2023
Author: JS
0
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20 (m)
Westoe Hall
2 to 7
Pond
Ponds
South Tynside College
1
2
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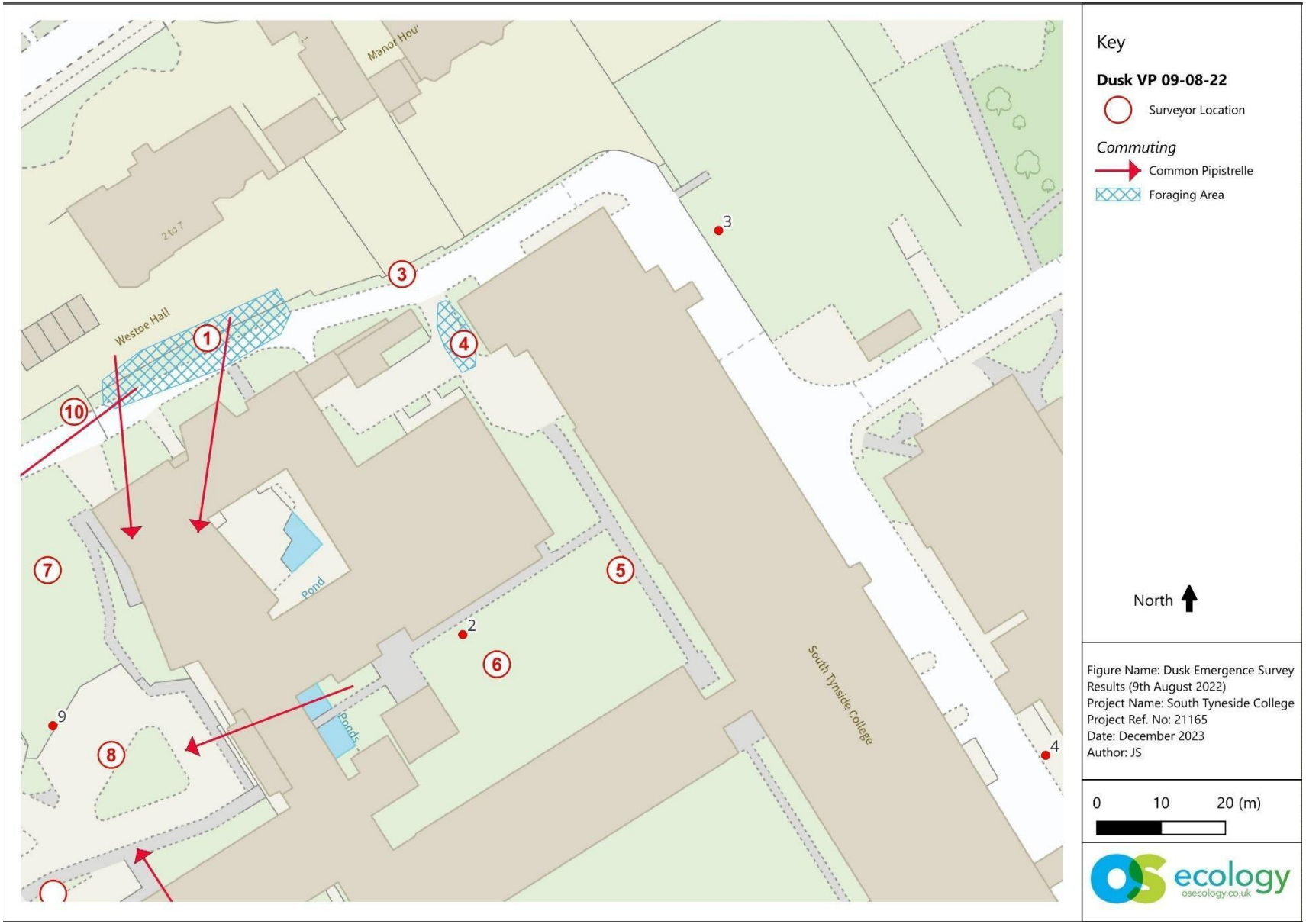
Manor Hou
2 to 7
Westoe Hall
1
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4
5
6
7
8
9
10
Pond
Ponds
South Tyneside College
Key
Dusk VP 09-08-22
Surveyor Location
Commuting
Common Pipistrelle
Foraging Area
North
Figure Name: Dusk Emergence Survey Results (9th August 2022)
Project Name: South Tyneside College
Project Ref. No: 21165
Date: December 2023
Author: JS
0
10
20 (m)


35.4m
Chapel House
15
5
3
6
7
8
Key
Dusk VP 10-07-22
Commuting
Common Pipistrelle
Surveyor Location
Foraging Area
North
Figure Name: Dusk Emergence Survey Results (10th July 2022)
Project Name: South Tyneside College
Project Ref. No: 21165
Date: December 2023
Author: JS
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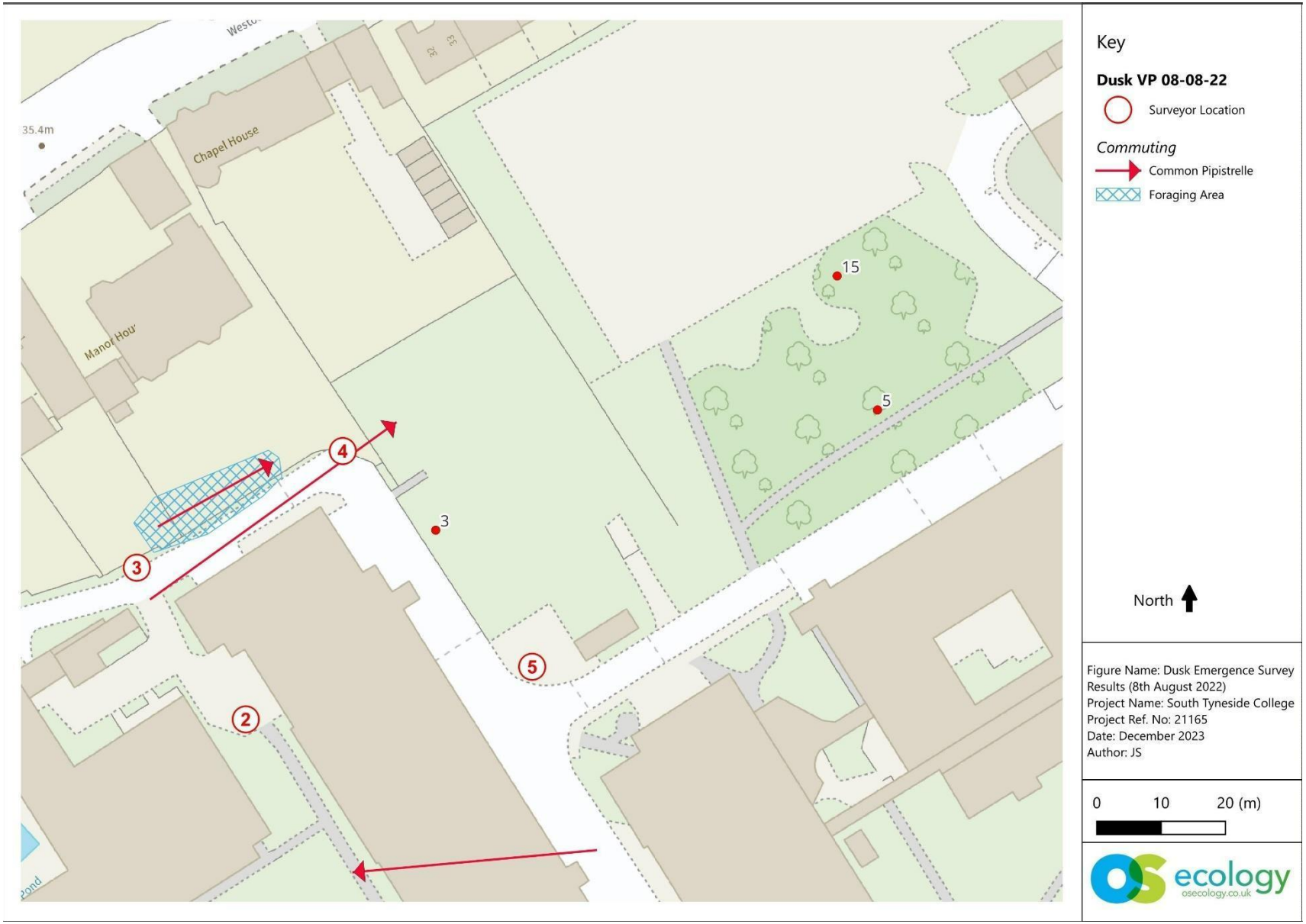
10
20 (m)


35.4m
Chapel House
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3
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2
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Dusk VP 08-08-22
Surveyor Location
Commuting
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Foraging Area
North
Figure Name: Dusk Emergence Survey Results (8th August 2022)
Project Name: South Tyneside College
Project Ref. No: 21165
Date: December 2023
Author: JS
0
10
20 (m)