southern scientific services ltd.

Supporting document for application for Derogation License to Disturb Natterer's bat breeding or resting place. (With particular reference to Section 10 and Sections 11.1 - 11.4)

Requested For:	**Frank Curran on behalf of Michael Ryan**
Prepared By:	**Colette Murray BSc MSc** **Southern Scientific Services Ltd**
Our Reference:	**24P-160**

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Contents

1. Introduction 3

2. Background 4

3. Response to Question 10 - Derogation Licence Application Form 9

4. Response to Question 11 - Derogation Licence Application Form 10

Question 11.1 10

Question 11.2 12

Question 11.3 13

Building: 13

Surrounding landscape: 13

Building and Surrounding Landscape: 14

Question 11.4 16

5. References 17

6. Appendix A – Site Photos 18

7. Appendix B – Maps 23

1. Introduction

This document is being submitted in support of the **Application for a Derogation Licence under the European Communities (Birds and Natural Habitats) Regulations 2011 - 2022 - No 54 (SI No 477 of 2011).** It has been prepared by Colette Murray ecologist of Southern Scientific Services Ltd.

This derogation license application is for the potential disturbance of a Natterer's bat (*Myotis nattereri*) *roost (EU Habitats Directive Annex IV species) as provided for by Article 16 of the Habitats Directive.* Ireland's nine species of bats are all Red data listed and receive protection through the Wildlife Act (1976 & 2000) and Annex IV of the EU Habitats Directive, under which it is an offence to intentionally disturb, kill or injure a bat or disturb its resting place. Any works that have the potential to interfere with bats and especially their roosts, may only be carried out under a derogation license granted by National Parks and Wildlife Service (NPWS) pursuant to Regulation 54 of the European Communities (Birds and Natural Habitats) Regulations 2011 (which transposed the EU Habitats Directive into Irish law). The proposed works being the renovation and extension of an old derelict house and the installation of a septic tank and percolation area at Derreen, Mastergeehy, Co. Kerry (see figure 1 below).

This report has been compiled in response to sections 10 and 11 of the derogation license application form and includes the following information:

1. The reason why this application qualifies under regulation 54(2)(A-E) of the European Communities (Birds and Natural Habitats) Regulations.
2. Why the derogation license sought is the only available option for works and that no suitable alternative exists as per regulation 54 of the European Communities (Birds and Natural Habitats) Regulations.
3. Evidence that the actions permitted by the derogation license will not be detrimental to the maintenance of the populations of the species to which the Habitats Directive relates at a favourable conservation status in their natural range as is required under Section 54(2) of the European Communities (Birds and Natural Habitats) Regulations.
4. Details of any mitigation measures planned for the species affected by the derogation at the location, along with evidence that such mitigation has been successful elsewhere.
5. As much information as possible to allow a decision to be made on this application.

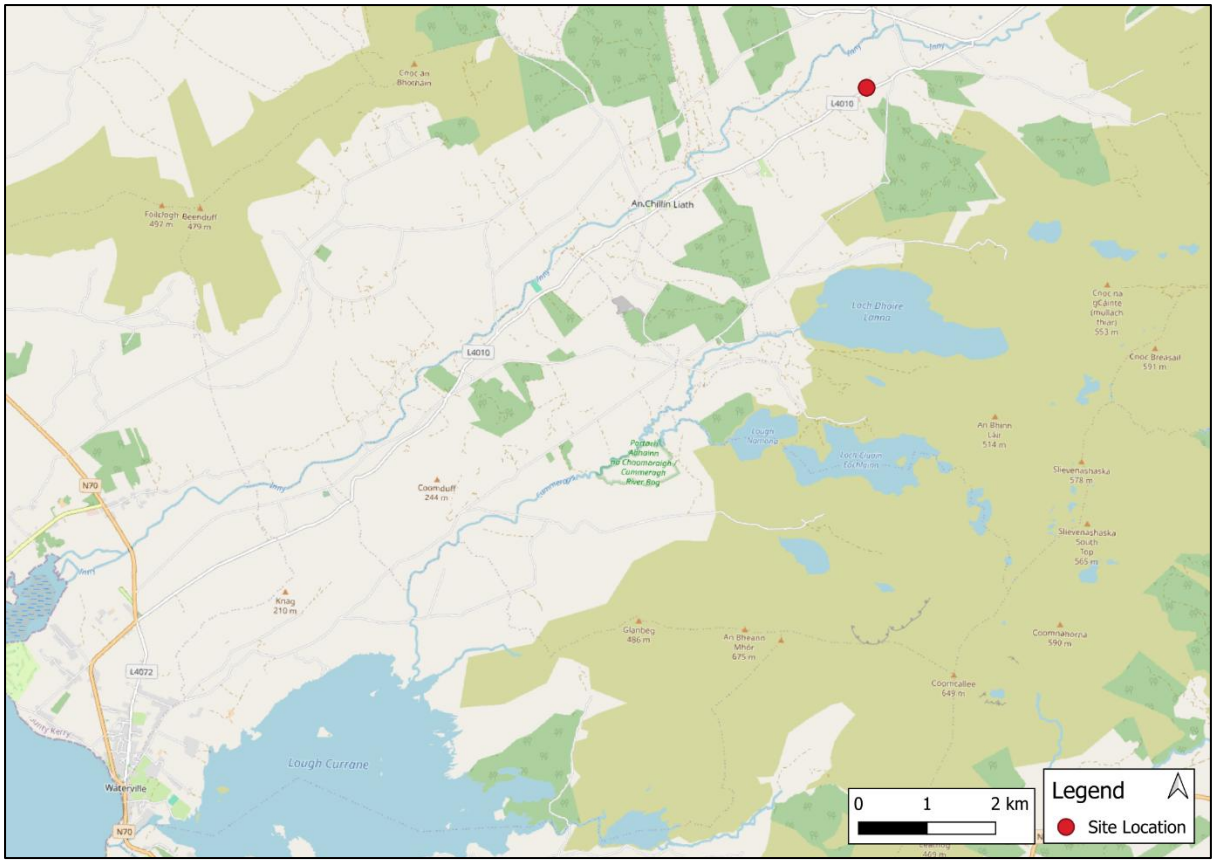

Figure 1: Site Location.

2. Background

Frank Curran of Frank Curran Engineering Ltd acting on behalf of Michael and Helen Ryan applied to Kerry County Council (KCC), in January 2024, for planning permission to renovate and extend an old derelict house and to install a septic tank and percolation area at Derreen, Mastergeehy, Co. Kerry (Planning Registration number: 24/21). In response to this application KCC issued a Further Information Request (FIR) dated 15th March 2024 requesting that a Bat Impact Assessment Report (BIAR) be prepared and submitted to KCC in relation to the proposed development. This BIAR was to include a bat activity survey to be undertaken in the spring/summer months. Southern Scientific Services Ltd were therefore commissioned to carry out this Bat Impact Assessment survey and accompanying report.

The site boundary consists of an old building and the adjoining field (see figure 2 below). The building was the subject of an internal and external bat roost inspection survey as well as an emergence survey and the adjoining field was the subject of a bat activity survey. These surveys took place on the 13th August 2024 which is within the optimum season for bat activity surveys. Conditions were optimum for bat activity at the time of the survey being warm and dry with a temperature of 14°C.

Figure 2: Site boundary

Building

The building was first inspected internally and externally for any signs of roosting bats as well as to identify any potential roost access points. There was no evidence of bat occupancy found during the internal survey. Such signs would include living or dead specimens, bat droppings, urine splashes, fur-oil staining and / or squeaking noises. It was not possible to access the upstairs area of the building due to its derelict nature and instability. The external survey found there to be a number of possible access points, including windows missing glass as well as cracks and crevices. It was therefore concluded that the potential for bats roosting within the building could not be ruled out and an emergence survey was required.

The emergence survey involved 2 ecologists positioned around the building so that all aspects of the building were in view at all times. A small number of Natterers Bats were observed exiting and re-entering the building through an open window on the southeast of the building. There were no other bat species detected exiting or entering the building. It was therefore determined that this building is a Natterer's bat roost. Local NPWS staff were contacted and informed of the roost.

The bat activity survey involved walking the project area with handheld bat detectors (Batlogger M and Magenta Bat 5). Bat detectors convert bats echolocation into a sound audible to humans. The Batlogger M records these sounds allowing for them to be analysed and recorded to species level. During this survey bat activity was high with 7 of Irelands 9 species of bat recorded including a number of observations of Lesser Horseshoe bat flying along the hedgerows to the east and west of the building as well as along the treeline and scrub directly across the road. (see figure 3 below).

Figure 3: Lesser Horseshoe Bats flight path.

Table 1: Results of Bat Activity survey

Date	Time	File	Species
13/08/2024	20:59:46	49520001.wav	NYCLEI
13/08/2024	20:59:56	49520003.wav	NYCLEI
13/08/2024	21:30:40	49520097.wav	PIPPIP
13/08/2024	21:31:10	49520101.wav	PIPPYG
13/08/2024	21:33:22	49520102.wav	PIPPIP
13/08/2024	21:33:56	49520104.wav	MYODAU

13/08/2024	21:34:09	49520106.wav	PIPPIP
13/08/2024	21:34:44	49520108.wav	MYODAU
13/08/2024	21:35:46	49520111.wav	PIPPYG
13/08/2024	21:36:32	49520113.wav	PIPPYG
13/08/2024	21:37:14	49520115.wav	PIPPIP
13/08/2024	21:37:53	49520117.wav	NYCLEI
13/08/2024	21:38:23	49520118.wav	MYODAU
13/08/2024	21:39:27	49520126.wav	PIPPIP
13/08/2024	21:45:20	49520140.wav	MYONAT
13/08/2024	21:51:12	49520149.wav	RHIHIP
13/08/2024	21:53:34	49520150.wav	RHIHIP
13/08/2024	21:54:45	49520152.wav	RHIHIP
13/08/2024	21:57:14	49520157.wav	RHIHIP
13/08/2024	21:58:40	49520163.wav	RHIHIP
13/08/2024	21:58:58	49520165.wav	RHIHIP
13/08/2024	21:59:37	49520167.wav	RHIHIP
13/08/2024	22:01:58	49520174.wav	PIPPYG
13/08/2024	22:02:07	49520175.wav	PIPPYG
13/08/2024	22:02:13	49520176.wav	PIPPYG
13/08/2024	22:02:21	49520178.wav	PIPPYG
13/08/2024	22:02:26	49520179.wav	PIPPYG
13/08/2024	22:03:59	49520181.wav	PIPPIP
13/08/2024	22:04:17	49520182.wav	MYONAT
13/08/2024	22:05:10	49520185.wav	MYONAT
13/08/2024	22:05:15	49520187.wav	MYODAU
13/08/2024	22:05:21	49520189.wav	PIPPIP
13/08/2024	22:05:26	49520190.wav	MYONAT
13/08/2024	22:06:47	49520196.wav	PIPPIP
13/08/2024	22:07:02	49520198.wav	RHIHIP
13/08/2024	22:07:06	49520199.wav	RHIHIP
13/08/2024	22:08:06	49520201.wav	PIPPIP
13/08/2024	22:09:45	49520205.wav	MYONAT
13/08/2024	22:09:48	49520206.wav	MYONAT

13/08/2024	22:10:28	49520208.wav	MYOMYS
13/08/2024	22:14:51	49520224.wav	PIPPIP
13/08/2024	22:14:59	49520225.wav	PIPPIP
13/08/2024	22:15:21	49520226.wav	MYONAT
13/08/2024	22:15:27	49520227.wav	MYONAT
13/08/2024	22:15:30	49520228.wav	PIPPIP
13/08/2024	22:15:43	49520230.wav	PIPPIP
13/08/2024	22:16:10	49520234.wav	MYONAT
13/08/2024	22:17:12	49520238.wav	RHIHIP
13/08/2024	22:20:15	49520241.wav	PIPPIP

Key:

Acronym	Species
NYCLEI	Leisler's bat (*Nyctalus leisleri*)
PIPPIP	Common Pipistrelle (*Pipistrellus pipistrellus*)
PIPPYG	Soprano Pipistrelle (*Pipistrellus pygmaeus*)
MYODAU	Daubenton's bat (*Myotis daubentonii*)
MYONAT	Natterer's bat (*Myotis nattereri*)
RHIHIP	Lesser Horseshoe Bat (*Rhinolophus hipposideros*)
MYOMYS	Whiskered bat (*Myotis mystacinus*)

3. Response to Question 10 - Derogation Licence Application Form

Question 10*: Please tick which reason below explains How this Application Qualifies under Regulation 54(2)(A-E) of the European Communities (Birds and Natural Habitats) Regulations:*

a.	In the interests of protecting wild flora and fauna and conserving natural habitats
b.	To prevent serious damage, in particular to crops, livestock, forests, fisheries and water and other types of property
c.	In the interests of public health and public safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment
d.	For the purpose of research and education, of re-populating and re-introducing these species and for the breeding operations necessary for these purposes, including artificial propagation of plants
e.	To allow, under strictly supervised conditions, on a selective basis and to a limited extent, the taking or keeping of certain specimens of the species to the extent specified therein, which are referred to in the First Schedule

Answer: c - *In the interests of public health and public safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment*

Frank Curran of Frank Curran Engineering Ltd acting on behalf of Michael and Helen Ryan applied to Kerry County Council (KCC), in January 2024, for planning permission to renovate and extend an old derelict house and to install a septic tank and percolation area at Derreen, Mastergeehy, Co. Kerry (Planning Registration number: 24/21). In response to this application KCC issued a Further Information Request (FIR) dated 15th March 2024 requesting that a Bat Impact Assessment Report (BIAR) be prepared and submitted to KCC in relation to the proposed development. This BIAR was to include a bat activity survey to be undertaken in the spring/summer months. Southern Scientific Services Ltd were therefore commissioned to carry out this Bat Impact Assessment survey and accompanying report.

The subsequent survey determined the presence of a Natterer's bat *(Myotis nattereri)* summer satellite roost within the building. Any works that have the potential to interfere with bats and especially their roosts, may only be carried out under a derogation license granted by National Parks and Wildlife Service (NPWS) pursuant to Regulation 54 of the European Communities (Birds and Natural Habitats) Regulations 2011 (which transposed the EU Habitats Directive into Irish law). In order to adequately renovate and extend the building, thereby creating a habitable residence, it will be necessary to remove the current roost space. However, the mitigation measures proposed as part of this derogation license application have been designed to ensure that no Natterer's Bats will be injured or disturbed as a result of these works and that sufficient replacement roosting habitat will be provided in the form of bat boxes to ensure the local population as a whole will not be affected by this development.

4. Response to Question 11 - Derogation Licence Application Form

Question 11 *has four sections to be addressed, namely 11.1 to 1.4:*

11.1	Explanation as to why the derogation licence sought is the only available option for works and no suitable alternative exists as per Regulation 54 of the European Communities (Birds and Natural Habitats) Regulations.
11.2	Evidence that actions permitted by a derogation licence will not be detrimental to the maintenance of the populations of the species to which the Habitats Directive relates at a favourable conservation status in their natural range as is required under Section 54(2) of the European Communities (Birds and Natural Habitats) Regulations.
11.3	Details of any mitigation measures planned for the species affected by the derogation at the location, along with evidence that such mitigation has been successful elsewhere.
11.4	As much information as possible to allow a decision to be made on this application.

Question 11.1

Explanation as to why the derogation licence sought is the only available option for works and no suitable alternative exists as per Regulation 54 of the European Communities (Birds and Natural Habitats) Regulations.

This derogation licence has been sought to allow renovation of a derelict building where a summer satellite roost for Natterer's bats has been confirmed as present. Any works that have the potential to interfere with bats and especially their roosts, may only be carried out under a derogation license granted by National Parks and Wildlife Service (NPWS) pursuant to Regulation 54 of the European Communities (Birds and Natural Habitats) Regulations 2011 (which transposed the EU Habitats Directive into Irish law). Several alternative options to derogation were considered and their viability assessed:

1. *Leave the building as it currently is.*

This option was considered as a potentially suitable short-term option. The building is not currently in use, a number of windows are boarded up, but there are several open windows and small openings present on all faces of the building. The roof of the building is currently intact. If the building is left to remain in its current state it is likely that it will fall into a state of further dereliction, and its suitability as a bat roost location would be significantly reduced. While this option is considered a suitable solution in the short term, it is deemed that it is not viable as a long term alternative to the proposed project as it will result in loss of roost habitat and the continued loss of a habitable building.

2. *Retain roosts within the building during renovation*

This option was considered as a way to minimise impact on bats. As mentioned in Section 2, a summer satellite Natterer's Bat roost was detected during the bat activity survey on the 13th August 2024, with approximately 9 individual bats observed exiting the building.

Modification of the building, and consequently, the roost characteristics can lead to roosts becoming unsuitable for bats and ultimately being abandoned (Reason and Wray, 2023). If the modifications lead to abandonment, the implications for local bat populations would be the same as for roost loss. If the roost is not abandoned, it may support fewer bats, or their winter survival rate, or reproductive success may be reduced.

While it is possible to retain specific sections of the building as potential roost locations, it is unlikely that renovation and extension can occur whilst still retaining all current features of the current roost. This is deemed a sub-optimal solution as increased disturbance from anthropogenic sources during both the construction and operational phases of development will most likely result in the project site being avoided by bats for use as a roost location.

3. Renovate the building with suitable bat mitigation

The final option considered for the project is to renovate the building whilst adhering to mitigation recommended as part of the bat activity survey carried out in August 2024. This involves the installation of bat boxes on the southeastern side of the newly renovated building. These bat boxes are to be optimised for use by Natterer's Bats and NPWS will be consulted as to the most effective type and design of bat box to be used. Additionally, bat friendly lighting will be installed both internally and externally to avoid disturbance to all bat species in the locality. Commuting and foraging habitat will be retained on site. It is also a requirement that works do not commence until bats have moved to their winter hibernation site an emergence survey has been carried out by an ecologist who will confirm their absence. These measures are best practice guidelines (Reason & Wray 2023).

The building is currently in a derelict state. The proposed renovation works will allow the building to once again be habitable and the recommended mitigation will ensure no adverse impact on bat populations in the area. As a result this derogation license is the only available option to allow these works to take place and no suitable alternative exists.

Question 11.2

Evidence that actions permitted by a derogation licence will not be detrimental to the maintenance of the populations of the species to which the Habitats Directive relates at a favourable conservation status in their natural range as is required under Section 54(2) of the European Communities (Birds and Natural Habitats) Regulations.

The following are the most pertinent reasons in respect of Question 11.2:

- The actions permitted by this derogation license are designed to ensure that no individual bats will be injured or disturbed.
- Works will be carried out when a suitably qualified ecologist has carried out an emergence survey and has determined that the bats have vacated the building.
- Bat boxes will be provided as a replacement roosting habitat.
- In addition, the retention of vegetation, as well as restrictions relating to artificial lighting, will ensure the immediate surrounding area continues to be optimum for bat activity.

Therefore, the maintenance of the local bat populations is not expected to be effected by these works.

Question 11.3

Details of any mitigation measures planned for the species affected by the derogation at the location, along with evidence that such mitigation has been successful elsewhere.

Building:

Seasonal Timing of Works on the building.

The BIAS carried out on the 13th August 2024 found the building to be occupied by roosting Natterer's Bats. It was therefore determined that the building is a summer satellite roost. No other bat species were found to be roosting in the building or recorded exiting the building at that time, however it cannot be ruled out that other bat species will utilise this building as a roost in the future. Given the building's many openings it is unlikely to be used by hibernating bats as they prefer stable cool temperatures. Natterers Bats typically hibernate underground in caves or mines but have also been recorded in canal and railway tunnels, ice houses and tree cavities (Collins 2023). Therefore, works should not be carried out between March 31st to September 30th as bats can be found roosting in summer roosts during this time. This is in order to ensure that disturbance or displacement impacts on roosting bats are avoided. These measures are best practice guidelines (Reason & Wray 2023).

Surveys prior to work commencement.

Prior to the commencement of works the building is to be thoroughly inspected for the presence of bats. This is to include an internal inspection of the building for any signs of hibernating bats. In addition, a bat emergence survey and activity survey is to take place. These surveys are to be carried out by a competent ecologist and works are only to commence once the ecologist is satisfied that there are no bats within the building. These measures are best practice guidelines (Reason & Wray 2023).

Installation of bat boxes.

Bat boxes are to be installed on the southeastern side of the newly renovated building. These boxes are to be optimised for use by Natterer's Bats. NPWS are to be consulted as to the most effective type and design of bat box to be used. These measures are best practice guidelines (Reason & Wray 2023).

Surrounding landscape:

Retain flight paths.

The hedgerows and treelines located to the east and west of the building are to be retained (see figure 3 above). These areas are the most favourable foraging and commuting habitat for bat species particularly Lesser Horseshoe Bats which were observed utilising these areas for commuting and foraging throughout the activity survey on 13th August 2024. These measures are best practice guidelines (Reason & Wray 2023).

Building and Surrounding Landscape:

Bat friendly lighting:

The following measures are best practice guidelines (Bat Conservation Trust 2023).

Both internal and external lighting:

- Artificial lighting is only to be erected where it is needed, illuminated during the period it will be used and at the level that enhances visibility.
- The lowest levels of lighting permitted for health and safety are to be used.
- All luminaires are to lack UV elements when manufactured. Metal halide, compact fluorescent sources are not to be used.
- LED luminaires are to be used when possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability.
- A warm white light source (2700 Kelvin or lower) should be adopted to reduce blue light component.
- Light sources should feature peak wavelengths higher than 550 nm to avoid the component of light most disturbing to bats.

Internal lighting:

- The following measures are best practice guidelines (Bat Conservation Trust 2023).
- Internal luminaires are to be recessed (as opposed to using a pendant fitting) where installed in proximity to windows to reduce glare and light spill.

External lighting:

- Light is to be directed away from the hedgerow to the west of the building and from the scrub and treeline located across the road from the building (see figure 4 below).
- Low level lighting of less than 1m is to be used as it is higher projecting lighting that is of concern.

- Only luminaires with a negligible or zero upward light ratio, and with good optical control, should be considered.
- Luminaires should always be mounted horizontally, with no light output above 90 degrees and/or no upward tilt.
- Where appropriate external security lighting should be set on motion sensors and set to as short as possible a timer (1-2 minutes approximately) as the risk assessment will allow.
- Reduce light spill to ensure that light reaches only the areas that need illumination.
- Shielding or cutting light can be achieved through the design of the luminaire or with accessories such as hoods, cowls, louvres and shields to direct the light.
- The times of which lights are on are to be limited to provide some dark periods for wildlife.

Figure 4: Direct lighting away from hedgerows to the west of the building and the scrub and treeline across the road as illustrated.

Question 11.4

As much information as possible to allow a decision to be made on this application.

It is the opinion of the author that this report, in conjunction with the corresponding application for Derogation Licence under the European Communities (Birds and Natural Habitats) Regulations 2011-2021 and Bat Impact Assessment dated 10/09/2024, together contain sufficient information to allow a decision to be made on this application.

5. References

Bat Conservation Trust (BCT) (2023). Guidance note GN08/23 Bats and Artificial Lighting at Night.

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

Marnell, F., Kelleher, C. & Mullen, E., 2022. *Marnell, F., Kelleher, C. & Mullen, E. (2022) Bat mitigation guidelines for Ireland V2. Irish Wildlife Manuals, No. 134.*. Ireland: National Parks and Wildlife Service, Department of Housing, Local Government and Heritage, Ireland.

Reason, P.F. and Wray, S. (2023). UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for development affecting bats. Version 1.1. Chartered Institute of Ecology and Environmental Management, Ampfield.

Roche, N., Langton, S. and Aughney T. (2012) Car-based bat monitoring in Ireland 2003-2011. *Irish Wildlife Manuals,* No. 60. National Parks and Wildlife Service, Department of the Arts, Heritage and the Gaeltacht, Ireland.

Roche, N.et al., 2024. *Irish Bat Monitoring Schemes: Annual Report for 2023*. Ireland: www.batconservationireland.org.

6. Appendix A – Site Photos

Figure 5: Western end of building.

Figure 6: Northern side of building.

Figure 7: Southern side of building

Figure 8: Southern side of building continued.

Figure 9: South eastern side of building including Natterer's bat exit point (Top right window).

7. Appendix B – Maps

Figure 10: Site location

Figure 11: Site location.