

SPRINGWOOD, WHALLEY ROAD STONYHURST

Nocturnal Bat Survey Report

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Report Control Sheet

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1 INTRODUCTION

1.1. SCOPE & PURPOSE

- 1.1.1. Collington Winter Environmental Ltd was commissioned by Mr David Moore to undertake a Nocturnal Bat Survey at Springwood, Whalley Road, Stonyhurst, BB7 9PN. This report has been produced to inform a planning application for the site relating to the renovation of the existing barn.
- 1.1.2. The author of this report is Andrew Taylor MSc, Graduate Ecologist at Collington Winter Environmental Ltd. The project has been managed and overseen by Olivia Collington BSc (Hons), MEnvSc, CEnv, Director and Principal Ecologist at Collington Winter. Olivia is highly experienced managing schemes and has produced many ecological reports to inform planning management plans. Olivia holds a Class 1 Natural England Bat Licence.
- 1.1.3. A Preliminary Roost Assessment was undertaken of the site in August 2023 by Olivia Collington which found that the barn provided **moderate bat roosting potential**, based on the number of crevices available which could be used by crevice dwelling bats. Therefore, two nocturnal emergence/re-entry surveys were recommended.

1.2. LOCATION

- 1.2.1. Please refer to Figure 1.1 for the approximate site location. The site is located in Stonyhurst, approximately 4.5km southwest from Clitheroe.



Figure 1.1 Site Location

1.3. OBJECTIVES

- 1.3.1. The objectives of the Nocturnal Bat Survey are as follows:
- Identify any bats roosting within the building.
 - Assess the value of the building for roosting bats.
 - Identify the species assemblage of bats using the site.
 - Provide recommendations on any further surveys or mitigation required for bats.

2 METHODOLOGY

2.1. NOCTURNAL BAT SURVEY

2.1.1. The nocturnal surveys were undertaken as dusk surveys on 24th August and 9th September 2023, by three suitably experienced surveyors.

2.1.2. Please refer to Figure 2.1 for locations of vantage points used during the surveys.

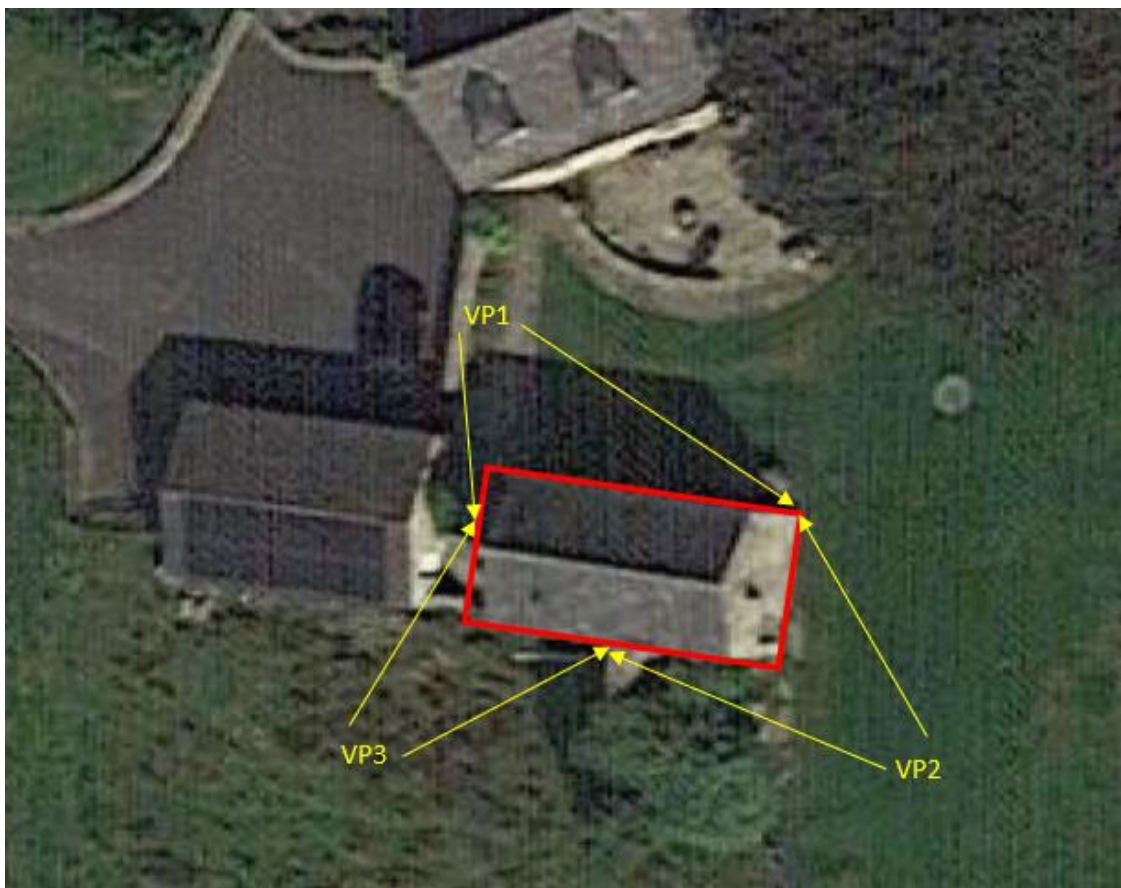


Figure 2.1 Surveyor Locations

2.1.3. The surveys were undertaken in line with guidance as set out in Collins (2016). Surveyors used heterodyne handheld bat detectors. All surveyors were suitably experienced undertaking bat emergence surveys. Please refer to Table 2.1 below for details of surveyors.

Table 2.1 – Bat Survey Details

Date	Sunset/ Sunrise Time	Start	Finish	Surveyors	Weather Conditions
24/08/2023	20:20	20:05	21:50	VP1 – Iman Rafiq VP2 – Charlotte Nuttall VP3 – Andrew Taylor	Temp at start/end: 14 Celsius Cloud cover: 0 Wind: 1 max (Beaufort scale) Precipitation: None
07/09/2023	19:46	19:31	21:16	VP1 – Iman Rafiq VP2 – Charlotte Nuttall VP3 – Jacob Ng	Temp at start: 23 Celsius Cloud cover: 8 Wind: 1 max (Beaufort scale) Precipitation: None

2.2. ROOST ASSESSMENT AND MITIGATION

2.2.1. UK Bat Mitigation Guidelines (2023) was utilised to assist in mitigation proposals, where necessary.

2.3. SURVEY LIMITATIONS

- 2.3.1. Due to the surveys being conducted by observation during low light conditions, this may cause constraint of visual assessments. No surveyors were visually constrained during the survey, other than that of low light conditions, and all potential roosting features were observed throughout the survey time period.
- 2.3.2. Myotis Alcathoe (*Myotis alcathoe*), Brandt's (*Myotis brandtii*), Daubenton's bat (*Myotis daubentonii*) and whiskered (*Myotis mystacinus*) bat are often difficult to distinguish between by handheld detectors and sound analysis. As such, the species have been recorded as *Myotis* sp. throughout the report.
- 2.3.3. The maternity status of roosts could not be determined during the surveys. This is due to maternity season for common and soprano pipistrelles typically from May-July and maternity colonies range from 20-1000 bats (Collins, 2023).
- 2.3.4. As surveys were completed prior to the release of the 2023 UK Bat Mitigation Guidelines, surveys were completed following the 3rd edition (Collins, 2016).

3 SURVEY RESULTS

3.1. DUSK SURVEY (24/08/23)

3.1.1. Bat activity was recorded throughout the survey by all vantage points with species identified within the local area including common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*) brown long-eared bat (*Plecotus auritus*) myotis species (*Myotis sp.*) and noctule (*Nyctalus noctula*). Common pipistrelles were recorded more frequently than other species. Behaviour recorded mainly related to foraging bats in relation to the surrounding grasslands on site and commuting and foraging along the edges of the broadleaved woodland and river to the east.

3.1.2. No bats were observed emerging or re-entering by VP1 and VP3.

3.1.3. The following emergence locations (e.g. E1, E2) were recorded by VP2 with associated times and references:

- Three common pipistrelle bats emerging from the first-floor barn entrance. The first at 20:30 and the following two at 20:51 (E1).
- One common pipistrelle emerging from a crevice in the external wall on the eastern aspect at 20:30 (E2).
- One common pipistrelle emerging from a gap in the ground floor door at 20:39 (E3).
- Two common pipistrelles emerging from underneath the overhanging roof tiles on the eastern corner of the southern aspect at 20:45 (E4).

3.1.4. Please refer to table 3.1 for emergence locations

Table 3.1 – Emergence locations

Reference	Location
VP2 E1 – Red E2 – Orange E3 – Green E4 - Blue	

3.2. DUSK SURVEY (07/09/23)

3.2.1. Bat activity was recorded throughout the survey by all vantage points but in higher frequencies than the previous dusk survey. Species recorded included common pipistrelle, brown long-eared bat and myotis sp. Similar behaviour as the first survey was recorded.

3.2.2. The following emergence locations were recorded with associated times and references:

- VP1 recorded one common pipistrelle emerging from under the roof tiles of the southern corner of the western aspect at 20:00 (E5).
- VP1 recorded one common pipistrelle emerging from the central arrow hole on the northern aspect at 20:10 (E6)
- VP2 recorded one common pipistrelle emerging from a crevice in the wall on the western aspect of the barn at 20:12 (E7).
- VP3 recorded three common pipistrelles emerging from underneath the overhanging roof tiles on the eastern corner of the southern aspect at 19:59, 20:04 and 20:18 (E4).

- VP3 recorded four common pipistrelles emerging from the emerging from the first-floor barn entrance at 20:08 and 20:12 (E1).

3.2.3. Please refer to table 3.2 for emergence locations

Table 3.2 – Emergence locations

Reference	Location	
VP1 E5 – Red E6 – Orange		
VP2 E1 – Red E4 – Blue		
VP3 E7		

3.3. ASSESSMENT

- 3.3.1. Bat activity was recorded consistently throughout each nocturnal bat survey conducted at the site with a range of species identified. Species included: common pipistrelle, soprano pipistrelle, brown long-eared bat, noctule bat and unidentified myotis. Common pipistrelles were the most identified bats whilst other species were only recorded occasionally.
- 3.3.2. The building comprised of a two-storey stone-built barn with a pitched roof. Emergence points related to both the roof structure and crevices within the stonework. Emergence points relate to multiple roosts, with low numbers of common pipistrelle throughout the roof structure and gaps in stonework.
- 3.3.3. Please find the following summarising the roosts:
- Roost 1** – emerged from open first floor barn entrance (**E1**), gap in ground floor barn door (**E3**) on the eastern aspect and arrow hole (**E6**) on the northern aspect. These emergence points connect to the interior of the barn on the upper floor. The roost is deemed to be located within internal crevices relating to stone brick work and/or supporting timbers (exact roost location unknown). A peak count of 4 common pipistrelle, recorded on both surveys – **Assessed as a day, non-breeding roost**.
 - Roost 2** – emerged from crevice in stonework on eastern aspect. A count of 1 common pipistrelle (E2) recorded

on the 1st survey only – **Assessed as a day, non-breeding roost.**

- **Roost 3** – emerged from underneath the overhanging tiles on the east corner of the south aspect. Roost located between external tiles and internal roofing felt. A peak count of 3 bats (E4) recorded on both surveys – **Assessed as a day, non-breeding roost.**
- **Roost 4** – emerged from crevice in stonework on western aspect. A count of 1 common pipistrelle (E7) recorded on the 2nd survey only – **Assessed as a day, non-breeding roost.**
- **Roost 5** – emerged from the lifted roof tiles on the southern corner of the western aspect. Roost located between external tiles and internal roofing felt. A count of one common pipistrelle (E5) recorded on the 2nd survey only – **Assessed as a day, non-breeding roost.**
- **Roost 6** - emerged from gap in ground floor barn door (E3) on the eastern aspect. The emergence points connect to the interior of the barn on the ground floor. The roost is deemed to be located within internal crevices relating to stone brick work and/or timbers (exact roost location unknown). A peak count of 1 common pipistrelle, recorded on both surveys – **Assessed as a day, non-breeding roost.**

4 RECOMMENDATIONS AND MITIGATION

4.1. IMPACT ASSESSMENT

4.1.1. The following section provides an overview of what mitigation will be required. Based on survey effort, a European Protected Species Licence (EPSL) will be required to allow the proposed development to proceed in a lawful manner. **No works should be undertaken on this building until the licences are in place - doing so could be a breach of wildlife legislation.**

4.1.2. The following works have been proposed for the building at Springwood:

- Renovation of roof structure.
- Conversion of barn into ancillary accommodation.
- Extension to barn on southern aspect.

4.1.3. Please note these are accurate at the time of writing and are subject to change.

4.2. EUROPEAN PROTECTED SPECIES LICENCE

4.2.1. Due European Protected Species Licence (EPSL) will be required to allow the lawful destruction of the roosts and minimise risk of killing/injuring individual bats prior/during the proposed works. The licence application comprises of five elements:

- Application Form
- Method Statement
- Work Schedule
- Associated Figures
- Reasoned Statement

4.2.2. A Method Statement is to be produced to outline the required mitigation and compensation for roost and habitat loss for the relevant planning application. The licence can be submitted to Natural England once full planning permission and all wildlife conditions have been discharged. It is yet to be determined whether separate planning applications are to be completed per building, or if the site will be covered under a phased licence. It is possible to obtain a licence with more than one planning approval, though consideration of timescales will need to be determined.

4.2.3. A minimum of one further survey may be required for the data to be deemed sufficient to inform the submission of an EPSL and subsequent mitigation/compensation. To determine the presence of a maternity roost surveys are to be carried out in the months of May to August (Reason, P.F. and Wray, S., 2023).

4.3. COMPENSATION AND ALTERNATE ROOST PROVISION

4.3.1. Development must not result in overall loss of bat roost sites therefore replacement roost site will be required for each species and roost affected at a ratio of 1:1. Full details of the mitigation will be provided within the EPSL documentation. An outline of the mitigation, compensation and enhancements is included below:

4.3.2. **It is advised that roosting locations relating to external crevices in the stonework walls (Roost 2, Roost 4) are retained during works.** If possible, there will be the risk of temporary disturbance during the construction phase. If not possible to retain, compensatory measures will be required for the roosts (as detailed below).

4.3.3. **Interim Bat Boxes (prior and during construction):** Based on the evidence gained during the nocturnal bat surveys, there are 6 non-breeding roosts of common pipistrelle. However, a bat box per roost to be impacted will be required as part of the EPSL mitigation. A minimum of 6 boxes are required as a minimum.

4.3.4. Suitable bat boxes such as Vincent Pro Bat Box, greenwood “small hollow” and Schwegler 1FR bat box (or similar as available) which have all been recorded in use by common pipistrelle, should be used. The boxes are also suitable for a range of myotis species which are known to be present within the local area. These boxes

will be installed immediately prior to the proposed works per roost, on retained mature trees. No boxes are to be placed on the building until all works have been completed due to the risk of disturbance.

- 4.3.5. The locations of the boxes will be determined by a licensed bat ecologist to ensure the likelihood of uptake is increased. The boxes will be located retained mature broadleaved trees to the boundaries of the site and/or façade of the building, sheltered from strong winds but will be exposed to sun for parts of the day. They will be situated at a height of between 4-10m, preferably on sheltered, southern, un-cluttered aspects with good connectivity to linear features such as other mature trees and hedgerows or river. The boxes must be installed prior to the building works and remain on site in perpetuity. This will ensure that roosting opportunities are always available on site during and post-development and will be used as release sites for bats encountered during works by the licensed ecologist.
- 4.3.6. **Permanent Bat Boxes** - The UK Bat Mitigation Guidelines (Reason, P.F. and Wray, S., 2023) detail the efficacy of bat boxes mounted on different surfaces and found that wall mounted boxes are most frequently occupied by roosting bats and would be the most ideal option. The boxes should be of the same specification as detailed in 4.3.4 and 4.3.5 with a minimum of 2 bat boxes.
- 4.3.7. **Access Tiles:** Integrated bat features are most ideal. Consideration of the installation of new tiles to provide a bat access gap should be included within the designs of refurbishment. As stated within the UK Bat Mitigation Guidelines (Reason, P.F. and Wray, S., 2023), access can be created by using specific bat access tiles which can be integrated into the slate roofing. The roofing felt can be cut to allow access into the roof void at these points also. See Figure 4.1 for example of bat access slate installation extracted from the guidelines (2023).

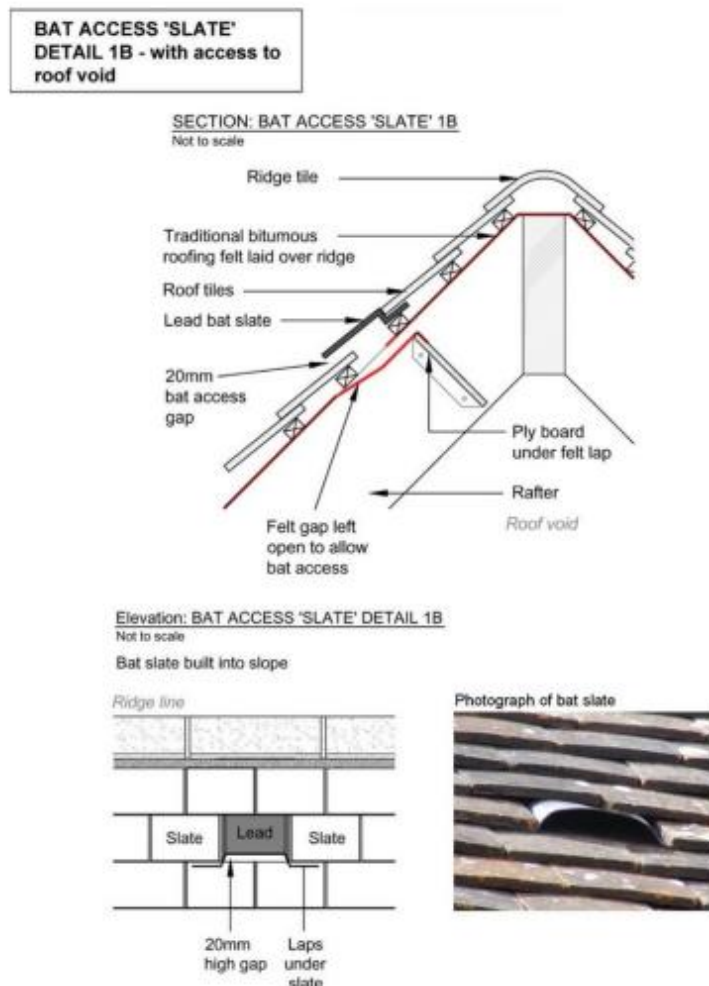


Figure 4.1 – Case study 14, example of bat access 'slate' (Reason, P.F. and Wray, S., 2023).

- 4.3.8. In addition, access points could be created within the new slates. The roof tile bat accesses can be created through the DIY construction of the 'Morris' bat-slate, as detailed under Case Study 15 of the UK Bat Mitigation Guidelines (Reason, P.F. and Wray, S., 2023).
- 4.3.9. If external crevices are to be maintained post-development, the refurbishment of the building will not result in

the overall loss of roosts R2 and R4. However due to the risk of disturbance a bat roost provision is necessary to ensure an alternative roosting option is on-site.

- 4.3.10. The roof construction should comprise reused slate tiling. Bitumen Felt can be used, as this is safe for roosting bats. If a non-bitumen coated roofing membrane (NBCRM) is preferred, it must have passed a 'snagging propensity test' valid in England. If using such a NBCRM, the certificate that proves the roofing membrane selected has passed a 'snagging propensity test' must be included with the licence application. Note that a certificate will not automatically guarantee that a licence application will be accepted, as every case is different.

4.4. METHOD STATEMENT

- 4.4.1. **Toolbox Talk:** Before commencing any work on site, all contractors will be given a toolbox talk by a licensed bat ecologist or their accredited agent to ensure that they are aware of the presence of bat roosts and any other protected species, to ensure working practices on site follow legal requirements. The toolbox talk will also include information on how to proceed if a bat is discovered during the work. Further topics to be covered will include safe working practices to minimise the chances of bats being present during the works and how to proceed if a bat is discovered during the work.
- 4.4.2. **Ecological Supervision:** Following the toolbox talk and immediately before to the commencement of works, the bat licenced ecologist will undertake an internal and external inspection of the building to confirm no Potential Roosting Features have formed since the survey date, as well as to confirm the absence of bats within the works area and immediate surrounds. Any bats recorded will be moved to a suitable alternative roosting location e.g., bat box. **No works to the building is to be conducted without the supervision of suitably qualified ecologist unless agreed in advance.** Please keep your ecologist informed of the progress of your planning application to apply for the bat licence.
- 4.4.3. The features which are known to support bats will be removed under supervision of the licensed bat ecologist. Features with bat roosting potential will be removed by hand under direct supervision of a bat licensed ecologist services may need to be accessed via scaffolding, cherry picker, or alternative lifting platform. Please note that works proceed safer and quicker with the use of scaffolding and is the preferred option in most instances.
- 4.4.4. Once the most likely areas for bats have been cleared, it is at the ecologist's discretion if further supervision is required.
- 4.4.5. Contractors are forbidden to handle bats discovered during the development process, unless the bat appears to be in immediate danger (i.e., falling debris).

4.5. TIMING OF WORKS

- 4.5.1. In principle, the optimum time for works of all types is likely to lie outside the maternity and hibernation seasons. Spring and autumn therefore represent the periods when bats are least vulnerable to disturbance (Reason, P.F. and Wray, S., 2023). The roosts identified are non-breeding summer roosts, however the building does have the potential to support hibernating roosts. As demonstrated in Figure 4.2 (extracted Table 6.1 of Reason, P.F. and Wray, S., 2023), the optimum period to carry out works is **April to end of October**, as no restrictions are outlined for non-breeding summer roosts.

Table 6.1: Optimum season for works in different types of roosts

The period of works may be extended if the way in which the bats use the site is well understood.

Roost type	Months to avoid	Optimum period for carrying out works (some variation between species and weather-dependent) ^a
Maternity	May-August (potentially September)	September to end April
Hibernation (not used for swarming)	November to March	April to end October [see also 6.2.14 et seq]
Hibernation and swarming site	August to March (key); potentially July until April	April to July (potentially later, depending on site and nature of works)
Mating/swarming: not used for hibernation	August to October (key); potentially July until mid-November Also April-early May in at least some species ^b	Mid-November – end March (potentially later, maybe species-specific) Broader restrictions if site also used for hibernation: see above
Non-breeding summer roost	None	No restrictions – assuming bats can be excluded if present in small numbers or otherwise safely managed

Figure 4.2 – Table 6.1 (reason, P.F. and Wray, S., 2023)

4.6. LIGHTING MITIGATION

4.3.1. All bats have some degree of sensitivity to artificial, night-time lighting. Introducing artificial lighting to areas that are not currently illuminated may sever important bat flight lines and discourage bats from using roost provisions. It is recommended external lighting is not to be provided on the building to ensure roosting bats are not impacted by introduced lighting.

4.3.2. It is advised that a light mitigation plan is produced to assess the pre- and post-development changes in lighting and to advise on an appropriately sensitive lighting scheme as part of the development.

4.3.3. The following measures will be implemented in the final proposed lighting strategy, following guidance outlined in the Institute for Lighting Engineers document “Guidance for the Reduction of Obtrusive Lighting” (2005) and BCT’s “Bats and Artificial Lighting in the UK” (2023):

- Keep site lighting to minimum levels.
- LED lighting with a warm white light to be used over cool white light (<2700Kelvin).
- Lighting feature peak wavelengths greater than 550nm.
- Light placement to be downward facing to prevent excess horizontal or vertical light spill.
- Avoid illuminating habitats of value.
- Use of time security lights should be set on motion-sensors and using short, 1-minute timers, to minimise light use.

4.7. SUMMARY

4.7.1. The proposed works involve the renovation of the existing barn, this will involve the destruction of roosts of common pipistrelle and breach of legislation under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 (as amended) should no mitigation be applied. **As a result, the works require a EPSL Licence to be undertaken lawfully and minimise the risk of impacting roosting bats.**

4.7.2. Appropriate mitigation has been recommended to ensure that the proposed development does not result in an overall loss of bat roosts with multiple options outlined that will be dependent on practicability of renovation and conversion works required.

4.7.3. All works will commence under an EPSL which will be applied for with data from the most recent bat survey season.

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