



Ecological Impact Assessment
The Dutch Barn, Cowfold Road, Coolham, RH13 8QJ
May 2026
On behalf of H. Woodage

Quality Assurance		
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1. Executive Summary

Imprint Ecology was commissioned by H. Woodage to undertake a Preliminary Ecological Appraisal, which has been produced for planning purposes as an Ecological Impact Assessment report, at The Dutch Barn, Cowfold Road, Coolham, RH13 8QJ. The proposals involve a part conversion and extension of an existing agricultural barn, with existing access from Cowfold Road.

The site comprises hardstanding and a modern timber-clad barn. The barn is assessed as having negligible suitability for roosting bats due to its tight modern construction and well-sealed weatherboarding. The site likely falls within an Amber or Red GCN Impact Risk Zone and six ponds are present within 500m. However, there is no suitable terrestrial habitat for GCN within the works area and the proposals do not affect any waterbodies or potential dispersal routes. Aquatic or terrestrial GCN surveys are not considered necessary and nor is a NatureSpace district licensing approach while following the mitigation provided in this report. No other protected species or evidence of protected species were recorded during the survey.

Subject to the implementation of the mitigation set out in [Section 7](#), no further ecological surveys are required to support this planning application.

The development qualifies as exempt from quantitative Biodiversity Net Gain under the de minimis exemption. Notwithstanding this, ecological enhancements including bat and bird boxes are proposed in [Section 8](#) in accordance with Horsham Local Planning Policy 25.

2. Introduction

2.1 Background and Proposed Development

Imprint Ecology was commissioned by H. Woodage to undertake a Preliminary Bat Roost Assessment (PBRA) at The Dutch Barn, Cowfold Road, Coolham, RH13 8QJ (central grid reference: TQ12232290), hereafter referred to as 'the site'. See Figure 2.1 and 2.2 for an aerial view of the site, Figure 2.3 for the proposed elevations and Figure 2.4 for the site plan. The proposals involve a part conversion and extension of an existing agricultural barn, with existing access from Cowfold Road.

2.2 Personnel

This assessment was undertaken by experienced ecologist Aidan Bird, ACIEEM, who holds a Natural England Level 2 Class Licence for Bats. This report has been written by Emily Luck BSc (Hons), MCIEEM, MRSB, Director of Imprint Ecology. Emily holds a Natural England Level 2 Class Licence for Bats and has extensive experience of designing surveys and mitigation for bats across southern England. She also sits on the committee of Sussex Bat Group.

2.3 Purpose of the Report

This report presents the findings of an ecological assessment of ecological features within the site and within the likely zone of influence. The aim of this report is to identify and present any potential ecological constraints the proposals may pose to bats or other protected species. It also provides recommendations for further surveys, impact avoidance, mitigation, and biodiversity enhancements, where necessary.

Under the National Planning Policy Framework (NPPF) and the Conservation of Habitats and Species Regulations 2017 (as amended), Local Planning Authorities (LPAs) have a legal obligation to consider the potential presence of protected species, such as bats, prior to determining planning applications. Where works may impact bats or their roosts, sufficient survey effort must be undertaken to demonstrate presence or likely absence, and where necessary, an appropriate mitigation strategy must be proposed to ensure no offences will occur. This report satisfies that requirement and provides the necessary ecological information to enable the LPA to make an informed decision.

2.4 Justification for Surveys

Protected species and habitat surveys are required to ensure that developments of any scale do not contribute to the progressive loss of biodiversity. The UK supports many legally protected species which include bats, amphibians, birds, and invertebrates, many of which are of high conservation concern due to historic and continuing declines associated with habitat loss, fragmentation, and changes in land use. A variety of environments - including buildings, gardens, farmland, rivers, and urban green spaces - provide important habitat for these species, yet their presence is not always apparent without targeted assessment. Many species show strong fidelity to sites or have specific habitat requirements, meaning that disturbance or the loss of key habitats can have significant long-term impacts on local populations. Undertaking surveys in advance of development is therefore essential to identify ecological constraints and inform appropriate mitigation and enhancement measures.

2.5 Validity

This report may be relied upon for planning purposes for up to 24 months from the date of issue. However, bat survey data is typically valid for one year and may need updating if works extend beyond another survey season, regardless of planning approval.

2.6 Site Location

The site is located in the village of Coolham. It is surrounded by pastoral and arable fields, residential housing and hedgerows. Refer to Figures 2.1 and 2.2 for the site location and aerial view.

Figure 2.1 – Site location. © Google Earth, Google 2026.

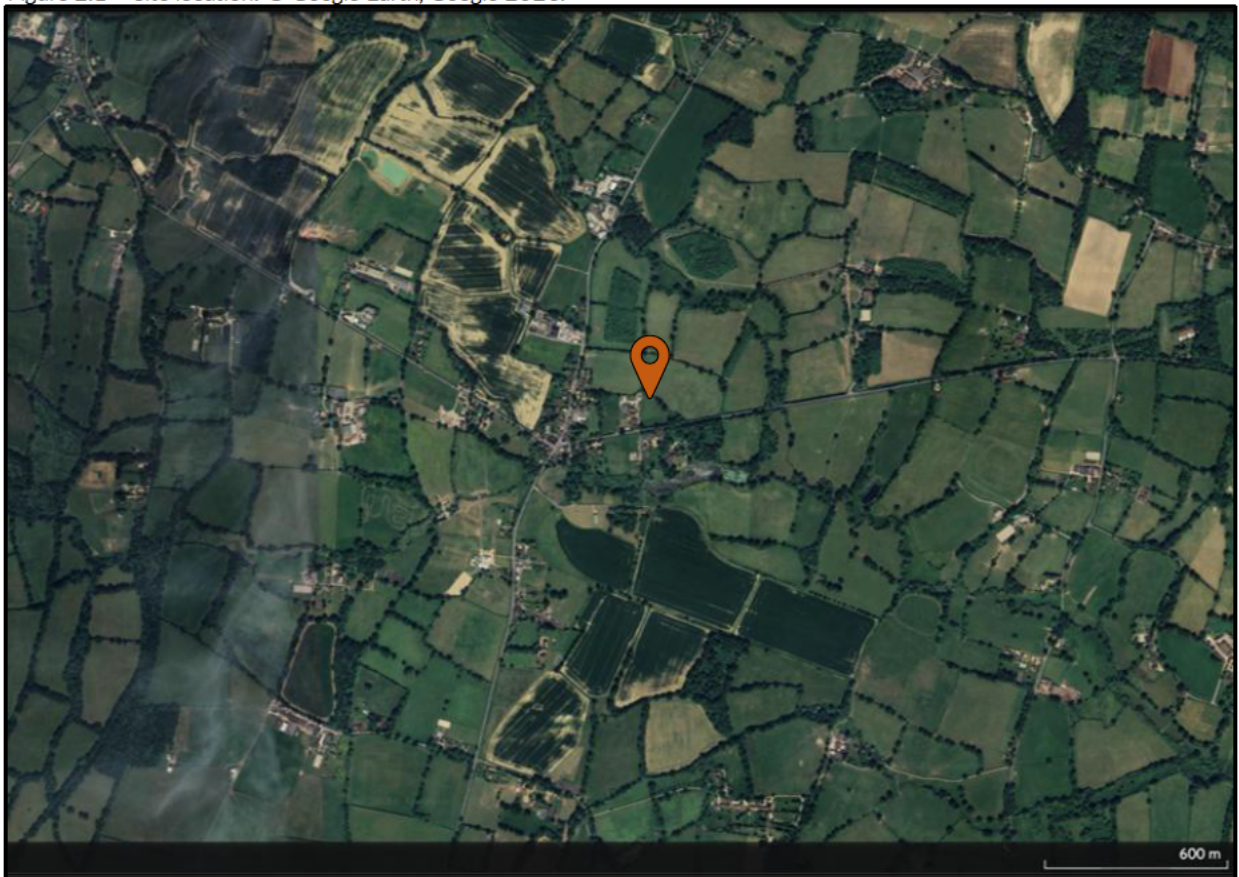


Figure 2.2 – Aerial view of the site. ©Google Earth, Google 2026.



Figure 2.3 – Proposed elevations.

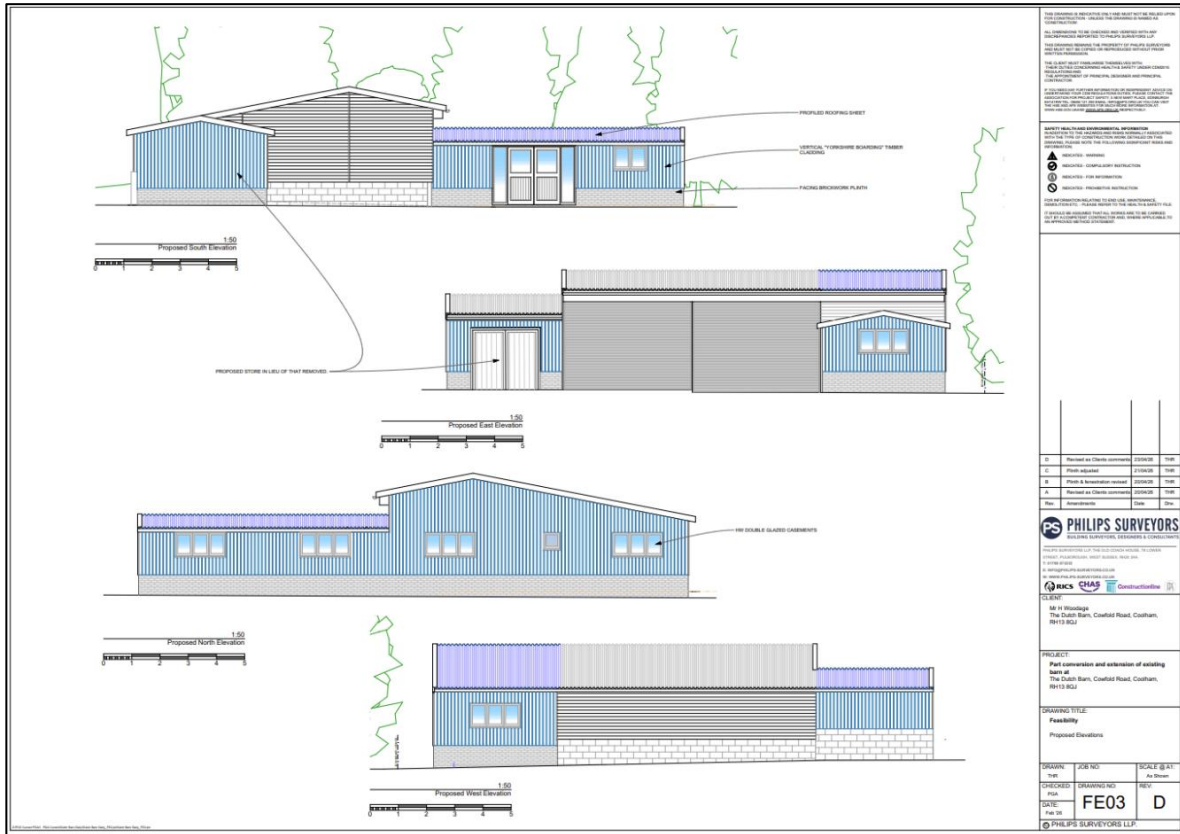
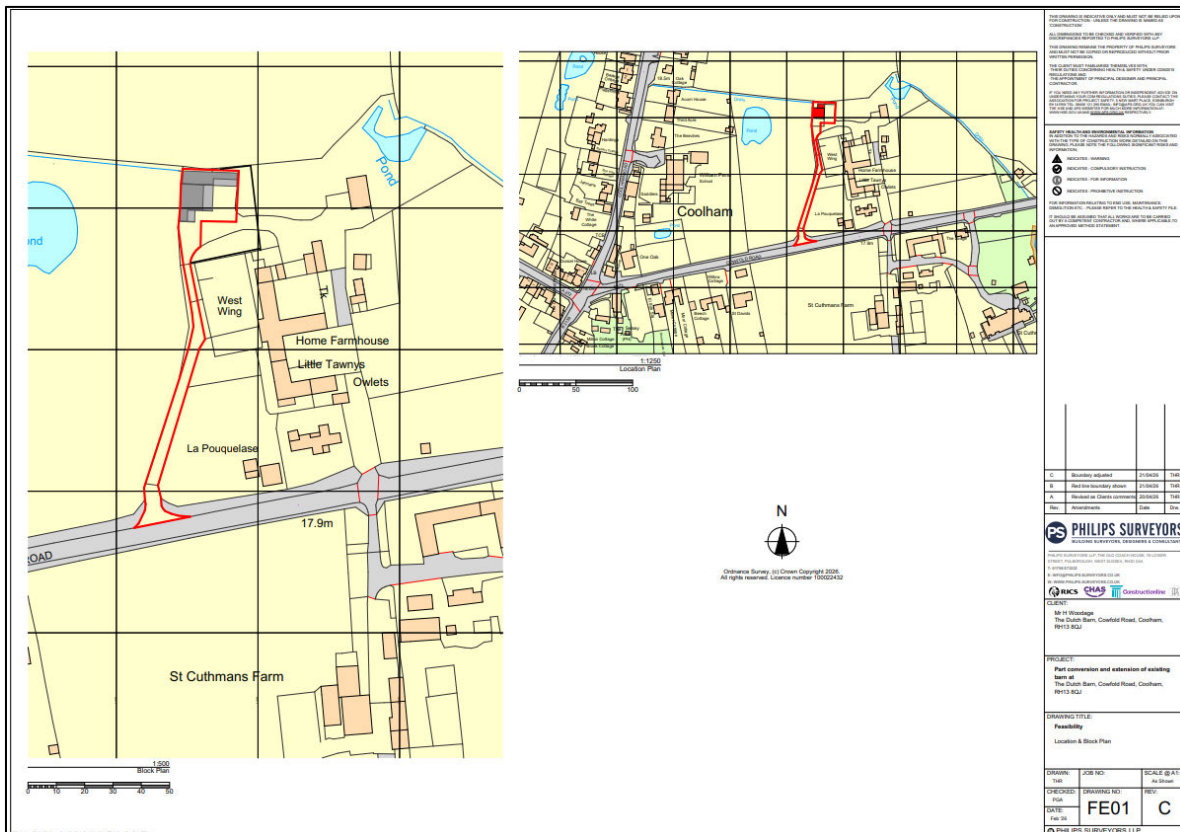


Figure 2.4 – Site plan.



3. Legislation and Planning Policies

3.1 National Planning Policy

Table 3.1 summarises the current national planning policy and legislative framework relevant to biodiversity and ecology.

Table 3.1: Relevant national planning policies.

Policy/Framework	Summary and relevance
National Planning Policy Framework (NPPF, 2024)	The NPPF (December 2024) requires planning decisions to contribute to and enhance biodiversity and the natural environment. Paragraph 187 sets out requirements to protect and enhance designated sites, valued landscapes, soils, and priority habitats and species, minimise impacts on biodiversity, deliver biodiversity net gain, establish resilient ecological networks, and prevent pollution or land instability. Paragraph 193 requires local planning authorities to avoid significant harm to biodiversity, refuse development where impacts cannot be adequately mitigated or compensated, protect Sites of Special Scientific Interest (SSSIs) unless benefits clearly outweigh harm, safeguard irreplaceable habitats such as ancient woodland and veteran trees, and support development that delivers measurable biodiversity enhancements and improved access to nature.
Circular 06/2005: Biodiversity and Geological Conservation	Circular 06/2005 provides statutory guidance on biodiversity within the planning system. It confirms that the presence or absence of protected species must be established prior to the determination of planning applications. The Circular clarifies legal obligations under the Wildlife and Countryside Act 1981 and the Conservation of Habitats and Species Regulations 2017, emphasising the need for ecological surveys, application of the mitigation hierarchy (avoidance, mitigation, compensation), and the requirement for protected species licences where development affects legally protected species.

3.2 Local Planning Policy

Table 3.2 summarises the relevant local planning policies relating to biodiversity and ecology. These set out the requirements that development proposals must meet to avoid adverse ecological effects at a local scale.

Table 3.2: Relevant local planning policies.

Local planning authority	Summary of relevant policies
Horsham District Council	The Horsham District Planning Framework (2015) includes Policy 25 (The Natural Environment and Landscape Character), which requires development to protect, conserve and enhance biodiversity, landscape character, and designated sites, including SPAs, SACs and SSSIs. Proposals must avoid inappropriate development that would harm ecological features and must maintain and enhance green

	infrastructure networks and ecological connectivity. Policy 31 (Green Infrastructure and Biodiversity) requires development to maintain and enhance biodiversity, avoid the loss of green infrastructure, and apply the mitigation hierarchy where impacts cannot be avoided. Development affecting designated sites must demonstrate that impacts are avoided or adequately mitigated, with compensation only considered where justified. Where development may affect Arun Valley SPA or Mens SAC, a Habitats Regulations Assessment (HRA) is required, and development must comply with any identified mitigation measures.
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3.3 Conservation Legislation

Legislation for UK protected and non-native invasive species that have been considered as part of this assessment is outlined in Table 3.3.

Table 3.3: Legislation of UK Protected/Priority species.

Species	Legislation
	[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]
Bats	British bats are fully protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (as amended), which classifies them as European Protected Species (EPS). Additional protection is provided by the Countryside and Rights of Way (CROW) Act 2000, the Bonn Convention (Agreement on Bats in Europe), and the Bern Convention. Seven bat species are also listed under Section 41 of the NERC Act 2006 as priority species for biodiversity. It is a criminal offence to kill, injure, capture, or disturb bats, damage or destroy a roost, or obstruct access to roosting sites. Bat roosts are protected regardless of whether bats are present at the time, as bats often return to the same roost annually. If a proposed development risks disturbing bats or their roosts, a European Protected Species Mitigation Licence (EPSML) must be obtained from Natural England. This licence permits works subject to approved mitigation measures to safeguard bats. The Natural Environment and Rural Communities (NERC) Act 2006 requires due consideration of biodiversity and enhancement opportunities during development planning.
Dormice	Hazel dormice are fully protected under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 (as amended). This protection makes it an offence to intentionally kill, injure, or capture dormice, as well as to disturb them in their places of rest or damage, obstruct or destroy their breeding or resting sites. Due to their reliance on diverse, connected habitats such as woodland, hedgerows, and scrub, dormice are a

	priority species under Section 41 of the NERC Act 2006, meaning they must be considered in the planning process.
Great crested newts	Great crested newts (GCN) are strictly protected under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 (as amended). It is an offence to capture, injure, kill, or disturb GCNs, as well as to damage or destroy their breeding or resting places. Licences from Natural England are required for activities affecting GCN or their habitats.
Hedgehogs	Hedgehogs are listed as a priority species under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. Hedgehogs are particularly vulnerable during the winter months when they are in hibernation, and during spring when building and sheltering in nests with dependent young.
Invasive Non-Native Species (INNS)	Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) prohibits the planting, release, or causing the spread of invasive non-native species such as Japanese knotweed, Himalayan balsam, and giant hogweed. Landowners have a duty to manage these species to prevent their spread, and strict controls apply to their disposal.
Invertebrates	Development must comply with legal protections for invertebrates, including those listed as European Protected Species (EPS) under the Conservation of Habitats and Species Regulations 2017 (as amended), such as large blue butterflies, Fisher's estuarine moths, and little ramshorn whirlpool snails. It is illegal to kill, injure, disturb, or destroy their breeding or resting sites, even when unoccupied. These species are also protected under the Wildlife and Countryside Act 1981 (as amended), making it an offence to recklessly disturb or obstruct access to their shelters. Many other invertebrates are protected under Schedule 5 of the Act, while Section 41 of the NERC Act 2006 highlights rare species requiring conservation consideration during planning.
Nesting birds	Nesting birds are protected under several key pieces of legislation to prevent their disturbance or harm, particularly during the breeding season. The Wildlife and Countryside Act 1981 (as amended) make it a criminal offence to intentionally kill, injure, or take any wild bird, and to damage or destroy the nest of any wild bird while it is in use or being built. Barn owls are listed under Schedule 1 of the Act and therefore receive an even higher level of protection. This makes it an offence not only to disturb them at an active nest, but also to disturb dependent young, or the adults while they are building a nest, incubating eggs, or caring for chicks. For barn owls in particular, interference with eggs, chicks, or even the adults during nesting can cause stress, nest abandonment, or the loss of a brood. Given their low productivity and high juvenile mortality in the wild, any breeding failure can have a disproportionately negative impact on local populations. Additional protection is also afforded to birds under the Conservation of Habitats and Species Regulations 2017 (as amended), which safeguards bird species of European importance and underpins the designation of Special Protection Areas (SPAs). While barn owls are not themselves a qualifying feature of SPAs, they remain a species of conservation concern in the UK and are particularly vulnerable to disturbance during the breeding season.

	The term “nesting” encompasses all stages from the construction of a nest or gathering of nest materials through to egg laying, incubation, and chick rearing until the point of fledging. For most species, works that could affect nests should be avoided between March and August inclusive. However, precaution is also required in February, as some species may begin nesting earlier during mild weather.
Other mammals	The Wild Mammals (Protection) Act 1996 protects all wild mammals, including ubiquitous species like mice, voles, as well as foxes, and rabbits, from intentional harm or preventable distress and suffering.
Otters	Otters are fully protected under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 (as amended). It is illegal to deliberately capture, kill, or disturb otters, or to damage or destroy their holts or resting places.
Reptiles	Widespread reptiles, such as slow worms and common lizards, are protected under the Wildlife and Countryside Act 1981 (as amended). This legislation makes it an offence to intentionally kill, injure, or take these reptiles. Additionally, they are listed as priority species under Section 41 of the NERC Act 2006, requiring public bodies to consider their conservation. While these reptiles are not protected from habitat disturbance, developers must take reasonable steps to avoid direct harm during activities such as site clearance.
Water voles	Water voles are protected under the Wildlife and Countryside Act 1981 (as amended), making it illegal to intentionally kill, injure, or take water voles, or to damage, destroy, or obstruct access to their burrows.

4. Methods

4.1 Desk Study

4.1.1 Biological database searches

The Horsham District Council Planning Portal and the Multi-Agency Geographic Information for the Countryside (MAGIC) online resource were accessed on 21st May 2026 to search for the following:

- Habitats of Principal Importance listed under the NERC Act within 1km
- Sites of Special Scientific Interest (SSSIs)
- Local Nature Reserves (LNRs)
- Special Protection Areas (SPAs) & Special Areas of Conservation (SACs)
- Priority Habitats
- Biodiversity Opportunity Areas
- Conservation Areas and Green Infrastructure Networks
- Granted EPSMLs within a 2km radius

4.2 Ecological Impact Assessment

4.2.1 UKHab Habitat Assessment

The habitats within the site were assessed on 21st May 2026 by Aidan Bird (qualifications in Section 2.2) in accordance with the UK Habitat Classification (UKHab) system (Version 2.0). The survey comprised a systematic walkover to identify, classify and record all habitats present within the site. Pre-survey preparation included a review of existing ecological records, aerial imagery and designated site information to establish a baseline and inform the survey strategy. Given the small scale of the site and the predominance of hardstanding and built structures, formal habitat mapping was not considered necessary as habitat boundaries are clearly discernible from aerial imagery. For readability, species are referred to by standard UK common names only, with Latin names available on request if required.

4.2.2 [REDACTED]

[REDACTED] scrub, and hedgerow habitats within the site were searched for signs of [REDACTED] activity, including setts, pathways, foraging pits, latrines, and hairs snagged on fences or vegetation. Particular attention was given to banks and scrub edges.

4.2.3 Bats

A comprehensive survey of buildings, trees and surrounding habitats was undertaken across the site to evaluate the presence of suitable features for roosting, foraging and commuting bats. Equipment used included a 20,000-lumen LED torch, 8x42 binoculars and a camera. Potential Roost Features (PRFs) - specific features within trees or other structures that could provide shelter or access for bats - were recorded. A PRF can essentially take the form of any crevice or cavity in a building, tree or other structure that offers space, protection and appropriate conditions for bat roosting. Evidence of bat presence, such as droppings, feeding remains (e.g. moth wings), urine stains, grease marks, lack of cobwebbing, or bats themselves, was also recorded. Each building, tree and the site were assigned a category of bat roost suitability between none, negligible, low, moderate or high, in accordance with the Bat Conservation Trust Bat Surveys for Professional Ecologists: Good Practice Guidelines (2023). These categories reflect the quality and number of PRFs present and the suitability of the surrounding habitat, and determine the level of further survey effort required, if any. Surrounding habitats were assessed for their suitability to support commuting and foraging bats, focusing on the presence of features such as hedgerows, treelines, watercourses and woodland edges.

4.2.4 Dormice

Suitable habitat e.g. hedgerows and scrub were inspected for their potential to support dormice. Particular focus was given to any dense, species-rich hedgerows and areas with abundant food sources such as hazel, bramble, and honeysuckle. Any signs of dormouse activity, including characteristic gnawed hazelnuts (nuts with clean, smooth inner surfaces with a neat circular opening) or woven dormouse nests, were recorded.

4.2.5 Great Crested Newts (GCN)

Terrestrial habitats such as grassland, scrub, and woodpiles were examined for sheltering and foraging potential. Signs of GCN such as GCN eggs, efts, live or dead specimens were recorded. There were no ponds on-site, and no aquatic surveys were undertaken for GCN.

4.2.6 Hedgehogs

Scrub, hedgerows, and grassland within the site were searched for hedgehog tracks, droppings, and nests. Habitat connectivity and the availability of hibernation-sites, such as piles of logs or leaves, were also recorded.

4.2.7 Invasive Non-Native Species (INNS)

The site was surveyed for invasive non-native species listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), including Japanese knotweed, Himalayan balsam, and giant hogweed.

4.2.8 Nesting Birds

Habitats such as trees, hedgerows, scrub, grassland, and buildings were inspected for evidence of nesting birds, including nests, droppings, eggshells, or feathers. Suitability for breeding, foraging, and overwintering birds was assessed, and particular attention was paid to features likely to support species of conservation concern, such as holes in trees or buildings and dense scrub.

4.2.9 Otters

No habitats suitable for otter were present on-site.

4.2.10 Reptiles

Habitats within the site, including grassland, scrub, hedgerow bases and sheltered, sunny spots were assessed for their suitability to support widespread reptile species by providing basking, breeding, foraging, and hibernation opportunities. Any materials resting on the ground, such as wood, corrugated iron, or other debris (referred to as refugia), were lifted to check for sheltering reptiles.

4.2.11 Water Voles

No habitats suitable for water vole were present on-site.

4.3 Survey Constraints and Potential Limitations

No survey constraints were encountered.

5. Survey Results

5.1 Desk Study

5.1.1 Designated Sites

Designated sites within 1km of the site are shown in Table 5.1.

Table 5.1 - Statutory designated sites within 1km of the site.

Site	Designations	Proximity to site	Reasons for designations
None.			

5.1.2 Habitats

The following protected/priority habitats lie within 1km, but are not within or adjacent to, the site:

- Ancient & Semi-Natural Woodland
- Deciduous Woodland

5.1.3 European Protected Species Mitigation Licences (EPSMLs)

Table 5.2 shows the EPSMLs that have been granted within 2km of the site.

Table 5.2: EPSMLs within 2km of the site.

Licence ref.	Species	Start date	End date	Damage to breeding site?	Damage to resting place?	Destruction of breeding site?	Destruction of resting site?
EPSM2013-6269	C-PIP; BLE	03/12/2013	30/09/2015	N	N	N	Y

Abbreviations: Brown long-eared: BLE; common pipistrelle: C-PIP.

5.2 Field Survey – Habitats

Habitats assessed using UKHab methodology are presented in Table 5.3 and in the Appendices. Habitat management practices and key features of relevance to protected species are identified here and expanded upon in Section 5.3 where appropriate.

Table 5.3: UKHab summary of the site's habitats.

UKHab	Habitat name	Secondary codes	Description
u1b	Developed land sealed surface		The site is predominantly hardstanding surrounding the building. Modified grassland, hedgerows and trees are present in the wider surroundings but fall outside the red line boundary.

u1b5	Buildings		The barn building.
h2a	Native hedgerow		A short, clipped hawthorn hedgerow is present on-site boundary to the south, ~1m high and wide.

Summary: the works will take place entirely on existing hardstanding and to the barn building itself. The grassland and hedgerows on the northern and western boundaries are outside the red line boundary and will not be directly impacted by the proposals. A wall forms part of the site boundary in places which may restrict some animal movement, though gaps in the boundary will maintain connectivity to wider habitats.

5.3 Field Survey – Protected Species

This section presents the results of the field survey and considers whether certain species are likely to be affected by the proposals. The likelihood of a species occurring on site varies depending on their habitat requirements, with some species requiring specific habitats and others being more generalist.

5.3.1

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

5.3.2 Bats

The site is located within an agricultural and pastoral setting in the village of Coolham. There are hedgerows and mature trees present along the site boundary and to the west elevation which provide foraging and commuting habitat of moderate value for bats in the wider landscape. The building itself is unlikely to function as a significant foraging resource, although bats may commute along the boundary hedgerows and tree line adjacent to the west elevation outside the impact zone.

The building is a modern timber-clad agricultural barn of single-storey construction with a pitched metal roof. All elevations are clad in tight horizontal timber weatherboarding, which is in good condition throughout, with no warping, lifting, or separation of boards present. The weatherboarding is well-sealed at all junctions with the roof and at the corners, with no gaps that would provide potential roost access for bats.

The metal fascia boards are well-sealed to the building with no crevices beneath that bats could use. The west elevation is situated tight to the boundary tree line and the cladding in this location is well-sealed, offering no roost opportunities or routes of access.

The roof structure comprises a metal-sheet roof supported on steel purlins and a steel frame. The underside of the roof is exposed with no voids, gaps, or cavities present between the sheets and the outer roof structure that could provide roosting opportunity for bats. Wall-to-roof junctions are sealed internally, with no accessible spaces at the eaves or ridge.

The interior is in active use as a garage and workshop with the walls lined with board and shelving. The interior is well-lit and regularly disturbed which are conditions that are generally unsuitable for roosting bats.

No bat droppings, staining, or other field signs indicative of bat use are present internally in the barn.

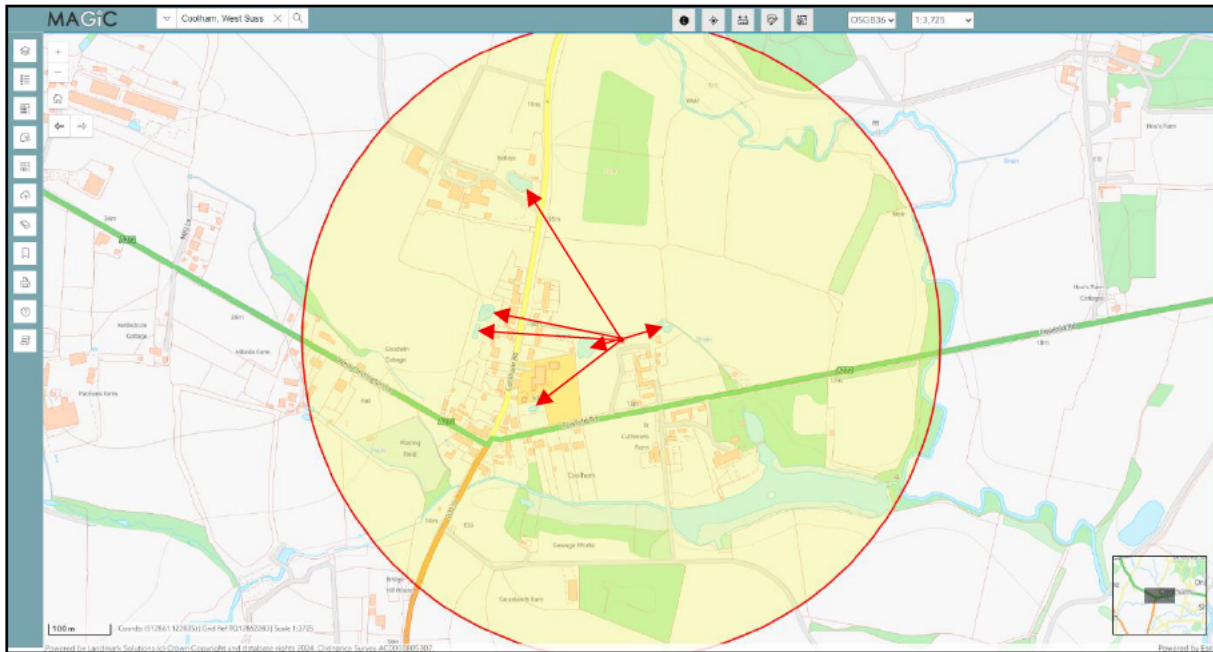
5.3.3 GCN

There are no EPSMLs for GCN within 1km of the site and no ponds or other waterbodies on site or directly adjacent. Six ponds are present within 500m, as shown in Figure 5.1, which are located on the north side of the A-road. This road represents a significant dispersal barrier for newts moving south towards the site.

Consultation with NatureSpace's Horsham District Council Impact Risk Zone map indicates the site falls within either an Amber or Red GCN risk zone, meaning there is some potential for GCN presence in the wider area. However, the proposed works to extend the barn are impacting only hardstanding and buildings, and the modified grassland (outside the red line boundary) is likely to experience temporary disturbance during the construction phase.

The proposals will not result in the loss or degradation of any ponds, nor will they affect terrestrial dispersal routes between the ponds and the wider landscape. Given the nature of the proposals, it is not considered that the works will impact GCN habitat to a level that necessitates aquatic surveys, terrestrial surveys or a district licensing approach. Precautionary mitigation measures are recommended to protect any transient individuals.

Figure 5.1: Ponds within 500m radius of the site.



5.3.4 Hazel Dormice

The boundary hedgerow contains hazel and bramble which are species associated with dormice habitat. However, the hedgerow is relatively isolated within a farmstead setting and connectivity to wider woodland is limited. No evidence of dormice was recorded during the survey and their presence on site is considered unlikely. The boundary vegetation will not be affected by the proposals, and no further surveys are recommended.

5.3.5 Hedgehogs

The hardstanding within the site offers no suitable habitat for hedgehogs. However, the nearby grassland and boundary vegetation provide some commuting and foraging opportunities. Connectivity to the surrounding woodland, farmland and gardens is limited though hedgehogs may still cross the site opportunistically. Precautionary mitigation measures will be in place during construction to protect any individuals encountered.

5.3.6 INNS

No invasive non-native plant species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) were recorded on site during the survey.

5.3.7 Invertebrates

The site is generally of negligible to low value to invertebrates due to its limited plant species diversity, frequent management, and lack of key structural features such as deadwood, bare ground, or varied sward height.

5.3.8 Nesting birds

The boundary hedgerows and trees surrounding the site provide suitable nesting habitat for a range of common bird species and will be retained in their entirety. The small, clipped hawthorn hedgerow along the front driveway is currently of limited suitability due to its early stage of establishment but will develop into suitable nesting habitat as it matures. These features will not be directly affected by the proposed works, and precautionary mitigation measures will be in place during the construction phase to prevent disturbance to nesting birds.

5.3.9 Other mammals

The site offers suitable habitat for common mammal species typical of pastoral and suburban-rural edge habitats. Red fox and small mammals including field vole may occasionally pass through the site. These species are not legally protected against general disturbance, and no specific mitigation is required though some measures recommended in Section 7 will also reduce the risk of harm to other mammals during construction.

5.3.10 Otters

No significant riparian habitats suitable to support otters are present within the site or in proximity to the proposed works area. Otters are considered unlikely to be present, and the proposed development is not anticipated to result in impacts to them.

5.3.11 Reptiles

The hardstanding within the site is not considered suitable for reptiles. The boundary hedgerow bases and nearby grassland margins offer limited opportunities for common reptile species. These boundary habitats will not be affected by the proposals, and precautionary working methods will be in place to protect any individuals encountered during the works.

5.3.12 Water voles

No significant riparian habitats suitable to support water voles are present within the site or in proximity to the proposed works area. Water voles are considered unlikely to be present, and the proposed development is not anticipated to result in impacts to them.

6. Impact Assessment

Table 6.1 identifies the potential impacts of the proposed development on the relevant ecological receptors before mitigation. These potential impacts drive the mitigation requirements set out in Section 7.

Table 6.1: Potential impacts before mitigation.

No risk	Negligible risk	Low risk	Moderate risk	High risk
Receptor	Potential impacts (before mitigation)			
Designated Sites	None anticipated.			
Protected/Priority Habitats	None present within the site.			
Habitats on-site	Permanent loss of modified grassland within the development footprint. Indirect impacts to boundary hedgerows and trees through compaction, disturbance, accidental damage and contamination during works.			
	Very low risk of harm to individuals during construction. Potential for entrapment in open excavations or pipework overnight.			
Bats	Potential disruption to commuting and foraging bats through increased artificial lighting along boundary hedgerows and treelines. No buildings or trees with roost potential are proposed for removal.			
GCN/Amphibians	Negligible to low risk of entrapment of wandering terrestrial individuals in open excavations, trenches or pipework during works.			
Hazel dormouse	None anticipated.			
Hedgehogs	Risk of accidental injury during construction or entrapment in excavations.			
Invasive non-native species	None recorded on site.			
Invertebrates	None anticipated.			
Nesting birds	Risk of destruction of active nests, eggs or dependent young if vegetation management is undertaken during the breeding season (March to August inclusive).			
Other mammals	Risk of accidental injury during construction or entrapment in excavations.			
Otter	No suitable habitat present. None anticipated.			
Reptiles	Risk of accidental injury during construction or entrapment in excavations.			
Water vole	No suitable habitat present. None anticipated.			

7. Mitigation

This section presents the mitigation measures required to address the potential impacts identified in Section 6. The mitigation has been developed in accordance with the CIEEM Mitigation Hierarchy (2024), prioritising avoidance, followed by reduction, and finally compensation where residual impacts cannot be avoided. The measures cover all relevant phases of the development including construction, operation, and any future maintenance, with the significance of residual effects considered for each receptor.

7.1 Habitats

- All construction works will be undertaken in accordance with best practice guidance to minimise impacts from dust, noise, vibration, and emissions.
- No trees within the red line boundary are proposed for removal, and the fruit trees will be protected throughout the works.
- The hedgerows will also be protected with a 2m buffer from works – this includes the hornbeam hedge to the south and the species-rich hedgerow along the western and northern boundaries. This buffer will exclude all vehicles, plant, material storage, digging and operative access.
- Dust suppression measures, such as damping down exposed surfaces and stockpiles during dry or windy conditions, will be implemented as required.
- Noise and vibration will be minimised through the use of well-maintained plant, avoidance of excessive idling, and timing of noisier works to reduce disturbance.
- Contractor vehicles will remain on existing areas of hardstanding or gravel wherever possible. Where access across grassland or softer ground is unavoidable, temporary trackways or ground protection mats will be used to reduce compaction and habitat damage.
- Materials, fuels and chemicals will be stored securely away from drains and watercourses, with appropriate containment measures in place (e.g. bunded containers).
- A spill response kit will be kept on site at all times, and operatives will be briefed on emergency procedures in the event of a spill or pollution incident.

Significance of residual effects

With mitigation measures in place, there will be no residual effects on habitats.

[REDACTED]

[REDACTED] [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Significance of residual effects

[REDACTED]

7.2.2 Bats

- Unnecessary illumination will be avoided wherever possible. Artificial Light At Night (ALAN) has significant negative effects on bats, invertebrates, and other nocturnal wildlife by disrupting natural foraging and commuting patterns. In some cases, installing ALAN near to bat habitat or a bat roost can cause bats to abandon their roosts which may constitute a breach of legislation.

If lighting cannot be avoided, it will be kept to an absolute minimum and designed to follow a sensitive lighting scheme in line with the Institution of Lighting Professionals (ILP) Guidance Note 08/23 (2023).

To minimise the impacts of ALAN on bats and other wildlife, the following measures will be implemented:

- Motion-activated lighting will be used instead of continuous illumination, with short timers to reduce use. Timers will be set for a 1–2-minute delay after the last detected movement, following ILP recommendations.
- Low-intensity lighting will be used, with lamps limited to 500 lumens or less. A warm white light source (2700 Kelvin or lower) will be adopted to reduce blue light, which is particularly disruptive to bats.
- Red spectrum lighting will be considered instead of white light, as bats are less sensitive to red wavelengths. This reduces disturbance to bats and invertebrates while maintaining necessary illumination for human use.
- LED luminaires will be installed due to their sharp cut-off, lower intensity, and dimming capabilities. All luminaires will be UV-free, and metal halide or compact

fluorescent sources will not be used. LEDs allow for better control of light direction and intensity, further reducing wildlife impacts.

- o Directional lighting will ensure all external lighting is angled downwards and fitted with shields or cowls to prevent upward and horizontal light spill especially onto vegetated boundaries.

Significance of residual effects

With mitigation measures in place, there will be no residual effects on bats.

7.2.3 Reptiles

- The nearby grass sward will be maintained short until the main works commence.
- Retained hedgerows on the outside boundaries will be cordoned off prior to works commencing, preventing access to the bases where reptiles are most likely to shelter.
- Excavations and trenches will be covered overnight or fitted with multiple escape ramps in the form of soil slopes or roughened timber planks at a maximum 45° angle.
- Open pipework will be checked at the start and end of each workday and left sealed overnight.
- Piles of soil, rubble, pallets and other materials will be stored on hardstanding where possible. Where this is not possible, piles will be removed carefully by hand under ecological supervision before being moved off site.
- No vegetation or other materials will be burned on site at any phase of the work.

If a hedgehog is found, works in the immediate area will cease. The animal will be given space to move away freely, and the project ecologist will be contacted and advise on how and when to proceed with the remainder of works that day.

Significance of residual effects

With mitigation measures in place, there will be no residual effects on reptiles.

7.2.4 GCN/Amphibians

- The reptile mitigation measures set out in Section 7.2.3 will run concurrently and will also serve to protect any GCN or other amphibians that may wander onto the site during the works.

If a great crested newt is found, works in the immediate area will cease and the animal will not be handled by site operatives. The site manager will contact the project ecologist, who will advise on next steps. If a licence from Natural England is required to proceed, works in the affected area will not resume until that licence is in place.

Significance of residual effects

With mitigation measures in place, there will be no residual effects on great crested newt.

7.2.5 Hedgehogs (and other small mammals)

- The precautionary measures set out in Section 7.2.3 will also protect hedgehogs and other small mammals during the works.
- Post-construction, any new boundary fencing within the development will incorporate hedgehog highways measuring 13x13cm at ground level at intervals of no more than 10m, to maintain permeability of the site for hedgehogs.

If a hedgehog is found, works in the immediate area will cease. The animal will be given space to move away freely, and the project ecologist will be contacted and advise on how and when to proceed with the remainder of works that day.

Significance of residual effects

With mitigation measures in place, there will be no residual effects on hedgehogs.

7.2.6 Nesting Birds

- All boundary hedgerows are to be retained as part of the proposals. Where minor management of retained vegetation is necessary during the works, this will be timed to fall outside the bird nesting season (March to August inclusive) to avoid disturbance to active nests and to prevent delays to the construction programme.
- If vegetation management within the nesting season cannot be avoided, a pre-clearance nesting bird check will be undertaken by a suitably qualified ecologist no more than 48 hours in advance of the works. Any active nests identified will be left undisturbed with an appropriate stand-off (typically a minimum 5m buffer, increased for more sensitive species) until the young have fledged and the nest is confirmed inactive.

If nesting birds are found within boundary hedgerows immediately adjacent to parts of the barn due to be worked on, all activity in the immediate vicinity will cease. A minimum 5m buffer will

be established around the nest and no works will take place within this buffer until the young have fledged and the nest is confirmed inactive. Where possible, demolition on of parts of the barn structure should be avoided during the nesting season (March to August inclusive) to reduce the risk of disturbing nesting birds. The project ecologist will be contacted for advice if an active nest is encountered.

Significance of residual effects

With mitigation measures in place, there will be no residual effects on nesting birds.

8. Ecological Enhancements

The applicants at The Dutch Barn will adhere to Horsham Local Planning Policy 25 by incorporating ecological enhancements into their project. Paragraph 192(b) of the NPPF also requires plans to promote the conservation, restoration and enhancement of priority habitats and species, and to identify and pursue opportunities for securing measurable net gains for biodiversity. The enhancements in Table 7.1 are recommended to meet this requirement and to contribute positively to local wildlife.

Table 7.1: Recommended enhancements for the development.

Species	On-site Enhancements	Examples
Bats	At least one bat box will be installed. The box may be fixed to the external wall of the building or to a suitable mature tree within the garden curtilage. Specifications are as follows: • Durable box such as Vivara Pro's "WoodStone Beaumaris Midi" or equivalent. • 3-5m above ground level. • Facing between southeast to southwest, receiving several hours of sunlight, • Position the box away from any external artificial lighting or windows that could spill light onto the box. Keep the box entrance clear and free of climbing vegetation or overhanging foliage that would prevent bats having a clear flight path in.	• WoodStone Beaumaris Midi 
Nesting Birds	At least one bird box will be installed. The box may be fixed to the external wall of the building or to a suitable mature tree within the garden curtilage. Specifications are as follows: • Durable box, such as Vivara Pro's WoodStone Seville 28mm, or equivalent. • 2-4m above ground level. • Facing between north and east to avoid direct sunlight and prevailing wind and rain. Site box close to boundary vegetation to provide foraging resources and cover, but not directly adjacent to large windows, glazed doors or reflective surfaces that could increase the risk of bird collisions.	• WoodStone Seville 28mm 

9. Conclusion

This Ecological Impact Assessment has identified the ecological features present at The Dutch Barn and assessed the potential impacts of the proposed part conversion and extension, with existing access.

The barn is of modern timber-clad construction and is assessed as offering negligible suitability for roosting bats. No evidence of protected species was recorded during the survey. The proposals primarily affect existing hardstanding and building with no significant loss of ecological habitat within the red line boundary.

The development falls below the de minimis threshold for mandatory Biodiversity Net Gain, meaning a quantitative net gain assessment is not required. This exemption applies where a development results in the loss of no more than 25m² of on-site habitat.

Notwithstanding this exemption, ecological enhancements have been proposed in accordance with Horsham Local Planning Policy 25. Subject to the implementation of the mitigation and enhancement measures set out in this report, the proposed development is considered to align with the relevant national and local planning policy and with the legal protections afforded to protected species.

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Appendix 1: Site Photographs

Photo 1: South elevation.



Photo 2: South elevation.



Photo 3: South elevation,



Photo 4: South elevation and west boundary.



Photo 5: Northwest corner.



Photo 6: Tight weatherboarding and roof joins – northern boundary.



Photo 7: Tight weatherboarding with no warping.



Photo 8: West elevation tight to trees.



Photo 9: Northwest corner.



Photo 10: North elevation.

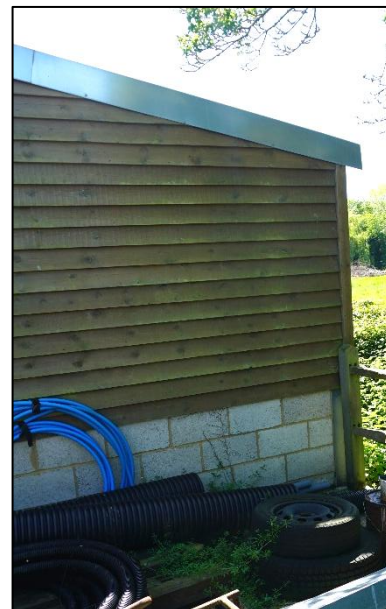


Photo 11: Entrance and hawthorn hedgerow.



Photo 12: Surrounding habitat/hardstanding to east.



Photo 13: Interior roof structure.

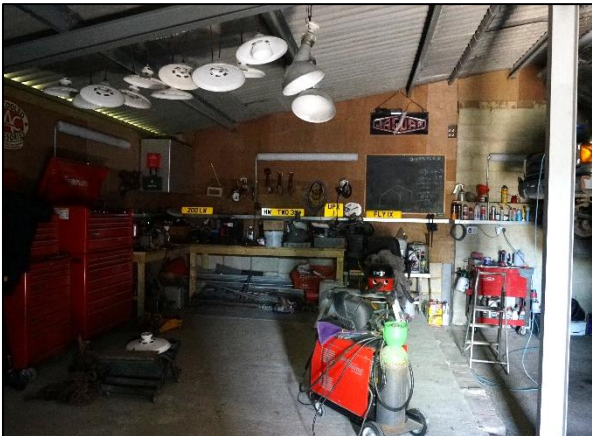


Photo 14: Interior roof structure.

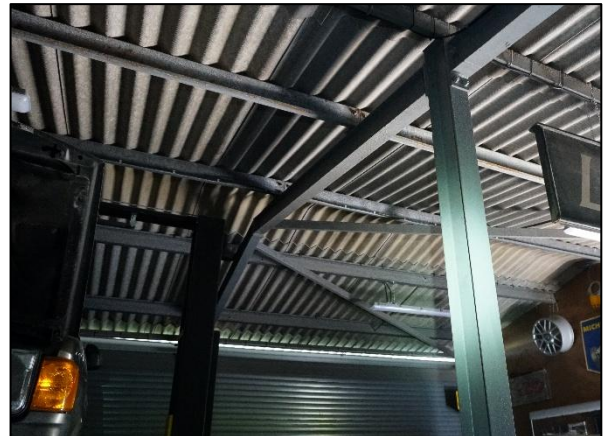


Photo 15: Interior roof structure.

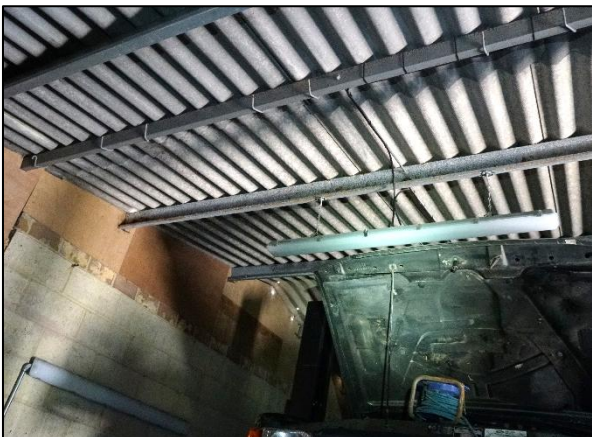


Photo 16: Interior roof structure.

