



ARBOR VITAE

ECOLOGY • FORESTRY • LAND USE



PRELIMINARY ECOLOGICAL APPRAISAL

LAND AT MAESTEG

Project name: Land at Maesteg, Llanfair Caereinion

Grid Reference: SJ106070

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1 INTRODUCTION

1.1 BACKGROUND TO DEVELOPMENT

Planning permission will be sought for the construction of a drive-thru restaurant, EV charging station and all associated works.

Arbor Vitae were commissioned by Roger Parry and Partners to undertake a Preliminary Ecological Appraisal in order to assess the impact of the development on habitats and protected species.

1.2 SCOPE OF SURVEY

The survey is primarily designed to:

- Identify and record habitats and important ecological features on site;
- Evaluate the potential of the proposed development site to provide opportunities for protected species;
- Determine any likely impact which the development and landscape proposals may have on these.
- Identify opportunities for the enhancement of habitats and biodiversity features on site.

1.3 KEY PRINCIPLES

All ecological surveys conducted by Arbor Vitae Environment Ltd are underpinned by the following key principles, as outlined by CIEEM (2018):

Avoidance - Seek options that avoid harm to ecological features (for example, by locating on an alternative site).

Mitigation - Adverse effects should be avoided or minimized through mitigation measures, either through the design of the project or subsequent measures that can be guaranteed – for example, through a condition or planning obligation.

Compensation - Where there are significant residual adverse ecological effects despite the mitigation proposed, these should be offset by appropriate compensatory measures.

Enhancements - Seek to provide net benefits for biodiversity over and above requirements for avoidance, mitigation or compensation.

2 SITE DESCRIPTION

2.1 LOCATION, LANDSCAPE, AND BACKGROUND

The proposed construction site is located on one grass field adjacent to the A458 main road on the outskirts of the village of Llanfair Caereinion (See Figure 1 Location plan). The site will occupy the flat, lower section of the field.

The land lies at approximately 117 metres AOD. There is no running water on the site, the nearest being the Afon Banwy neu Einion which, at its nearest point, lies approximately 25 metres distant on the other side of the main road.

The landscape character of the surrounding area is demonstrated by the aerial photograph in Figure 2. There is an existing access point in place from the A458.

3 SURVEY METHODOLOGY

3.1 DESK STUDY

An initial desk study was composed to gain background information regarding any protected species or designations within the area. The main sources of information were MagicMap, Data Map Wales, and NBN Atlas.

3.2 SITE SURVEY

A site visit was made on 15/02/2024. The survey was carried out in accordance with CIEEM (2017) best practice guidelines. The objective of the survey was to find and record any signs of use by protected species and to note the habitat features present.

An assessment of the available habitats both on and adjacent to the site led to consideration of the potential of the site for the following protected species:

- Badger
- Bats
- Breeding birds
- Great Crested Newt
- Otters

The survey methodology was tailored to evaluate the area for these species in the following ways:

Badger

An area within 50 metres of the site was closely searched for the following signs of badger activity:

- Setts,
- Tracks and footprints,
- Latrines,
- Snuffle holes.

Bats

The site was assessed in terms of its suitability to support bat species. Hedgerow habitat and nearby potential habitat were assessed and recorded and potential impacts from the proposals considered.

Breeding birds

The site was assessed in terms of its suitability to support breeding bird populations. Hedgerow habitat and nearby potential habitat were assessed and recorded.

Great crested newt

A desk study and a ground search were conducted to search for any areas of open water within 250 metres. Waterbodies were then assessed based on the Habitat Suitability Index for great crested newts (Oldham et al., 2000 and ARG UK, 2010).

Otter

Any water courses within the area and appropriate terrestrial land were searched for the following field signs:

- Spraint,
- Footprints,
- Feeding remains.

3.3 PERSONNEL

The survey was carried out by Phillipa Stirling MSc ACIEEM: Ecologist. Natural Resources Wales bat licence number: S091037-1 and GCN licence number: S089109-1.

3.4 CONSTRAINTS

Breeding birds would not have been present at the time of the survey but previous nesting and appropriate nesting sites would have been apparent.

4 SURVEY RESULTS

4.1 DESK STUDY

The desk study found that there are no statutorily designated site within 1km of the site. The search included Ramsar, SSSI, SAC, SPA, LWS, NNR and LNR. ¹ There are a number of ancient woodland sites present 500m or more from the site boundary, none of which will be effected by the proposals.

Results from the desk study revealed that within a 1km radius of the proposed development site the following protected species have been recorded:

Species	Distance	Protection
Mammals		
Otter	0.8km	European Protected Species, Wildlife and Countryside Act 1981.
Badger	0.5km	Protection of Badgers Act 1992, Wildlife and Countryside Act 1981.
Common pipistrelle	0.3km	European Protected Species, Wildlife and Countryside Act 1981.
Birds		
Kingfisher Kestrel Brambling	0.3-1km	Wildlife and Countryside Act 1981.
Reptiles		
Grass snake	0.8km	Wildlife and Countryside Act 1981.
Slow worm	0.5km	Wildlife and Countryside Act 1981.
Amphibians		
Great crested newt	0.7km	European Protected Species, Wildlife and Countryside Act 1981.

4.2 HABITATS ON SITE

All habitats are classified using JNCC's Phase 1 Habitat Survey Handbook (JNCC, 2010).

Improved grassland

¹ SSSI: Site of Special Scientific Interest, SAC: Special Area of Conservation, SPA: Special Protection Area, LWS: Local Wildlife Site NNR: National Nature Reserve, LNR: Local Nature Reserve.

The land in question lies on a steep slope, with the east side of the site providing a flatter surface. The lower slopes of the field consist of improved grassland, including species such as: perennial ryegrass, Yorkshire fog, creeping bent, white clover, creeping buttercup, common sorrel, dandelion, and chickweed and spear thistle.

Hedgerow

A mature hedge runs along the east boundary of the site, adjacent to the main road. Woody species in the hedge are dominated by hawthorn, with occasional other species such as: hazel, blackthorn, ash, elder, field elm, dog rose, and honeysuckle. The ground flora consists of: lesser celandine, arum, dog's mercury, cow parsley, cleavers, foxglove, ground ivy, false wood brome and cuckoopint.

4.3 ADJACENT HABITATS

Tree line

The western field boundary is made up of many mature and semi-mature trees, dominated by hazel, with oak, ash, hawthorn and elder. The tree line is 4-5m wide in parts and joins a small woodland parcel at the northern end.

4.4 PROTECTED SPECIES

Badgers

There are no historical records of badger at the site and no field signs were found within 50 metres of the site.

Bats

Some of the trees in the tree line at the west boundary contain features which provide potential roosting sites for bat species, including broken stumps, natural holes and loose bark. The tree line and connected woodland may be used by commuting/foraging bats.

Breeding birds

There are limited opportunities for breeding birds at the site, other than in the peripheral hedge and tree lines. Species recorded whilst on site include: blue tit, blackbird, Wren, robin, Mistle thrush, magpie and woodpigeon.

Great Crested Newt

No ponds were identified within 250m of the proposed development site and therefore no further survey work is required with regard to this species.

Otter

The site contains no areas of suitable terrestrial habitat which otter could use for lying up/resting. The site is very close to the river, but the main A road separates the two features. No evidence of otter was found on the site during the survey.

5 POTENTIAL ECOLOGICAL IMPACT

5.1 HABITAT ASSESSMENT

The main habitat associated with this site is improved grassland. This is of negligible ecological interest and has little potential to support protected species.

The site is almost entirely bounded by mixed, native hedgerows which are a BAP habitat. They have intrinsic interest in the wildlife they support and provide important corridors along which insects, small mammals and birds can migrate. All hedgerows will remain intact as a result of the planned development and there will be little or no ecological impact on these features, assuming that normal stand-offs are respected.

Mature and semi-mature trees along the western edge of the site provide probable nesting sites for birds and foraging sites for bats. They may also provide roosting sites for bats. These features will remain unchanged as a result of the proposals.

5.2 PROTECTED SPECIES ASSESSMENT

Badger

No active setts, foraging signs or field signs of badger were recorded on the site or up to 50m distance from the site. The proposals will have no impact upon badger.

Bats

No trees with roosting opportunities for bats will be affected. It is likely that bats use the edge of the tree canopy along which to forage. Any increased illumination of the site may disrupt flight lines but this can be minimised by appropriate exterior lighting systems.

Breeding birds

The lengths of hedgerow provide nesting habitat for breeding birds. There may be some temporary disturbance to breeding birds if construction work takes place when birds are breeding but this is likely to be negligible.

Great crested newt

It is highly unlikely that GCN are present at the site given that there are no ponds present within 250m.

Studies have demonstrated that 95% of all summer refuges of GCN fall within 63m of their summer breeding pond (Jehle, 2000). Subsequent studies also found that capture rates of GCN were at their highest within 50m of a breeding site with a significant reduction in capture rates beyond 100m (Cresswell and Whitworth, 2004).

The proposals will have no impact upon GCN, or other amphibians.

Otter

The proposals will have no impact upon otter, or terrestrial habitat which is likely to be used by otter.

6 AVOIDANCE, MITIGATION AND ENHANCEMENT

6.1 HABITAT MITIGATION

The proposals will impact a relatively small area of agriculturally improved grassland. Plans for the site will include a native landscaping scheme which will include the planting of broadleaved trees and shrubs around the periphery of the site. See Section 6.3 for more detail.

6.2 PROTECTED SPECIES MITIGATION

Bats

The following measures will be included within plans for the site:

- Hedgerows and key habitat features including mature trees on the site will not be illuminated in order to retain dark movement corridors for nocturnal wildlife.
- Any exterior security or decorative lights to be installed on the development site will be less than 3 m from the ground and fitted with hoods to direct the light below the horizontal plane, at an angle of less than seventy degrees from vertical, and shall not be fixed to, or directed at, bat boxes or gables or eaves.
- Security lighting will be set on motion sensors with short timers (<1 minute) and will be LED with a passive infrared trigger.
- External lights will be hooded and directed toward the ground to reduce upward light spill.
- A warm white spectrum will be adopted throughout the scheme to reduce blue light component (<2700Kelvin).

Breeding birds

All hedgerow along the east boundary of the site will be protected during works. Robust fencing such as Heras barrier fencing will be installed approximately 1m from the spread of the hedge to protect the root protection area of the hedge.

General Avoidance Measures

The following measures should be implemented to decrease the likelihood of killing/injuring small animals such as amphibians and hedgehogs:

- The grassland areas should be kept short prior to and during construction to avoid creating attractive habitats for wildlife.
- All building materials, rubble, bricks and soil must be stored on raised platform (e.g. wooden pallets) to prevent their use as refuges by wildlife.
- Where possible, trenches should be opened and closed in the same day to prevent any wildlife becoming trapped. If it is necessary to leave a trench open overnight then it should be provided with a means of escape in the form of a shallow ramp.
- Any open pipework should be capped overnight. All open trenches and pipework should be inspected at the start of each working day to ensure no animal is trapped.
- Any common reptiles or amphibians discovered should be allowed to naturally disperse. Advice should be sought from an appropriately qualified and experienced ecologist if large numbers of common reptiles or amphibians are present.

6.3 ECOLOGICAL ENHANCEMENT

Plans for the site should include hedgerow planting around the edges of the site. The planting should include: hawthorn, hazel, holly, field maple, dog rose, wild privet and guelder rose. Ideally, the scheme will incorporate a mixture of these plants.

Native tree and shrub planting will be carried out around the site, as indicated on the proposed site plan. Species will be native, and of local provenance. Species will include: Rowan, field maple, hazel, Guelder rose, spindle, dogwood, and elder.

In order to provide opportunities for a variety of wildlife, we recommend that a nest box scheme is adopted as follows:

- Three Woodcrete general purpose bat boxes, suitable for crevice-dwelling species should be installed into mature trees within the boundary hedgerows. No lighting

should be installed in the vicinity of the boxes. They should be at least 3m from the ground and face south or south west.

- Two Woodcrete cavity nesting bird boxes with 28mm or 32mm access holes. These should be positioned within mature trees on the boundary of the site and the access should face away from the prevailing wind.

7 SUMMARY

Planning permission will be sought for the construction of a drive-thru restaurant, EV charging station and all associated works. Arbor Vitae were commissioned by Roger Parry and Partners to undertake a Preliminary Ecological Appraisal in order to assess the impact of the development on habitats and protected species.

The main habitat associated with this site is improved grassland. This is of negligible ecological interest and has little potential to support protected species.

The site is almost entirely bounded by mixed, native hedgerows which are a BAP habitat. They have intrinsic interest in the wildlife they support and provide important corridors along which insects, small mammals and birds can migrate. All hedgerows will remain intact as a result of the planned development and there will be little or no ecological impact on these features, assuming that normal stand-offs are respected.

No active setts, foraging signs or field signs of badger were recorded on the site or up to 50m distance from the site. The proposals will have no impact upon badger.

No trees with roosting opportunities for bats will be affected. It is likely that bats use the edge of the tree canopy along which to forage. Any increased illumination of the site may disrupt flight lines but this can be minimised by appropriate exterior lighting systems.

The lengths of hedgerow provide nesting habitat for breeding birds. There may be some temporary disturbance to breeding birds if construction work takes place when birds are breeding but this is likely to be negligible.

It is highly unlikely that GCN are present at the site given that there are no ponds present within 250m. The proposals will have no impact upon GCN, or other amphibians.

The proposals will have no impact upon otter, or terrestrial habitat which is likely to be used by otter.

Ecological enhancement measures at the site will include: native hedgerow planting, native tree and shrub planting, and the installation of woodcrete wildlife features (bat and bird boxes).

8 REFERENCES

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FIGURE 1 LOCATION

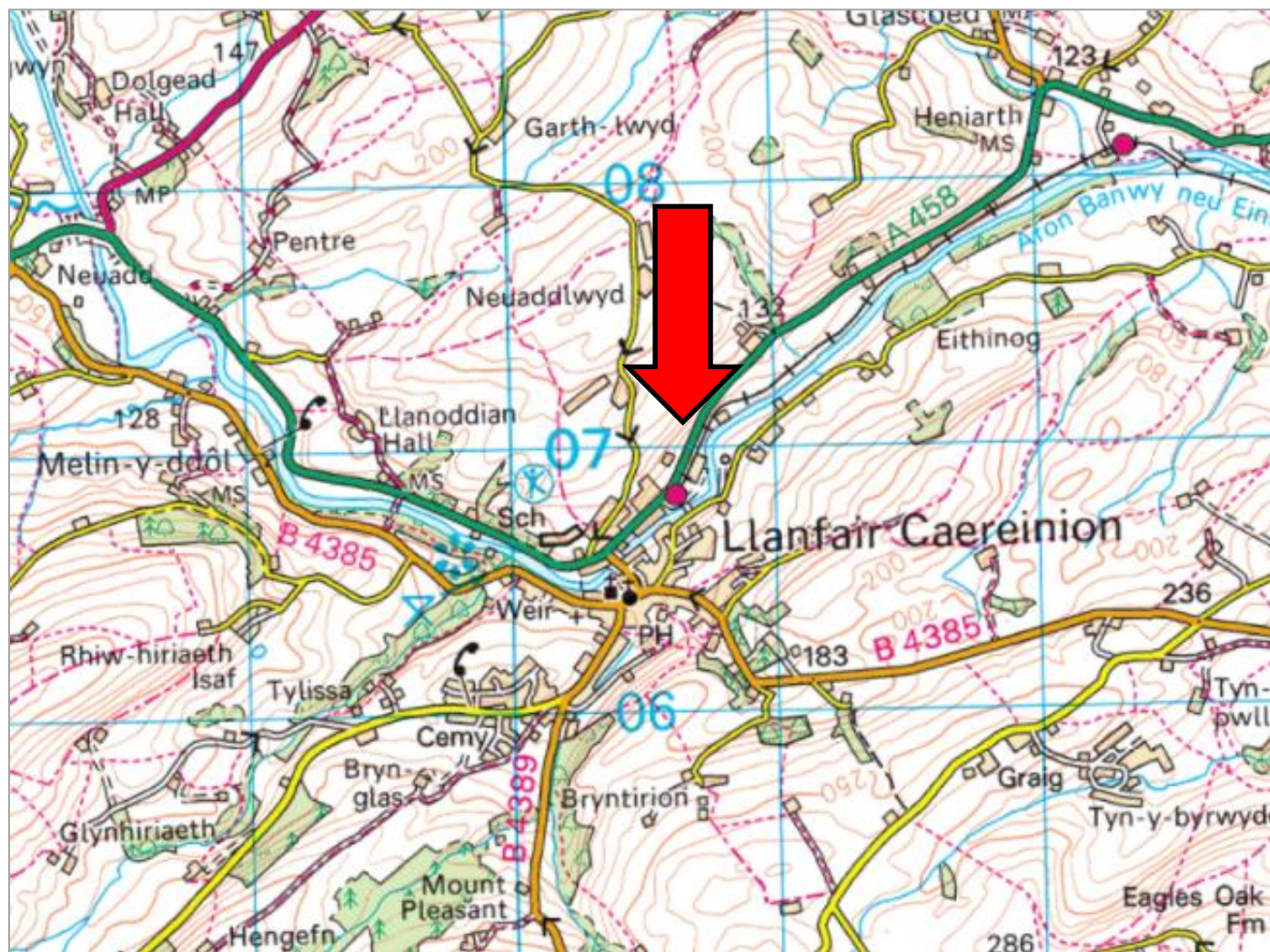
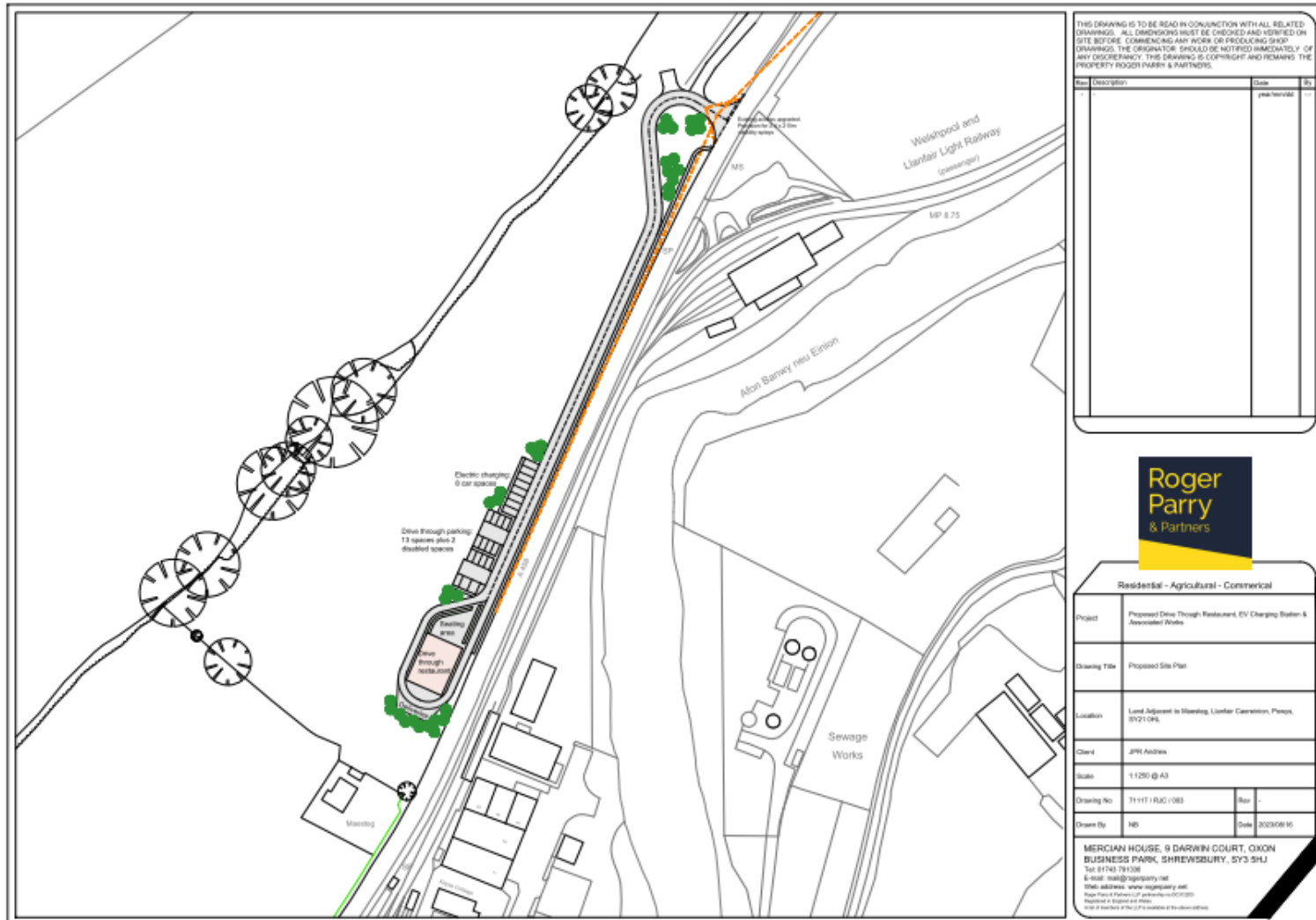


FIGURE 2 AERIAL PHOTOGRAPH



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FIGURE 3 PROPOSED SITE PLAN



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APPENDIX 1 PHOTOGRAPHS



Existing access point



Route for track



The field site



Hedge along the east boundary



View of the site looking east



Tree line along the west boundary



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