

Preliminary Ecological Assessment



Project: Penrhiwbengi Lane, Oakdale

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1. Introduction

The applicant is seeking permission to develop a parcel of land east of Penrhiwbengi Lane, Oakdale, South Wales. The site is located on the north-eastern outskirts of the settlement of Oakdale. Preliminary development plans are available at the time of writing, which highlight the construction of a large detached dwelling with associated trackway and garage building. The proposed footprint will result in the loss of areas of semi-improved neutral grassland.

This report will assess the potential of the land within the site boundary to support protected habitats and species and the implications that any future development proposals could have on them.

1.1 Site Description

The proposed development site comprises a parcel of land which is centred at NGR ST 18951 98829. The site is largely flat and roughly rectangular in shape, situated in a suburban context, with residential areas to the south and West, woodland to the north and grassland to the east. The Penrhiwbengi Marsh SINC is situated adjacent to the eastern boundary.

The wider landscape comprises areas of residential dwellings, business park factory buildings, agricultural fields and associated infrastructure. To the north are areas of deciduous woodland and scrub, with two springs found just north of the north-eastern boundary.

Habitats within the site include semi improved neutral grassland and a hedgerow.

1.2 Survey Constraints

The site visit was undertaken in January which is not within the optimum time period to undertake phase 1 habitat surveys. Although, the current survey was not deemed to be constrained significantly and a broad categorisation of habitat types was possible.

1.3 Surveyor Experience

Lewis is an ecologist with 3 years experience undertaking a wide range of flora and fauna surveys. All survey work is undertaken following JNCC Phase 1 Survey Guidelines, CIEEM Guidelines for Preliminary Ecological Appraisal (2013) and CIEEM Guidelines for Ecological Report Writing (2nd Ed 2017).

2. Desktop Study

A data search was undertaken via Aderyn (Reference DERF 0212-768) for the proposed development site and surrounding area. A 2km buffer zone was searched and records returned within 500m of site are noted below:

Bats: foraging Common Pipistrelle (230m), foraging Soprano Pipistrelle (230m) and commu. ng Noctule (240m)

Hedgehog (200m)

Birds: Song Thrush and Redwing

Records of note returned for the rest of the buffer zone are detailed below:



OQer

Slow-worm

2.1 Protected Sites

A data search for species records was undertaken for the proposed development site and surrounding area. The search also considered statutory and non-statutory protected sites.

Statutory Protected Sites

No statutorily protected sites lie within 2km of the site.

Non-Statutory Protected Sites

The Pen-Rhiw Bengi Marsh, Oakdale SINC is situated immediately adjacent to the east of the site. Eight other SINC's occur within 1km and include:

River Sirhowy; approximately 560m away.

Nant Philkins Fields, Oakdale SINC; approximately 570m away.

Nant-Gau and Darran Woodlands, North of Oakdale; approximately 620m away.

Penmaen Woodlands, Penmaen; approximately 640m away.

Blackwood Riverside Woodlands, North East of Blackwood; approximately 660m away.

Valentec Nature Reserve, North of Croespenmaen; approximately 840m away.

Coed Cwm Philkins, East of Penmaen; approximately 870m away.

Remploy Factory Grounds, Oakdale; approximately 930m away.

There are fifty one areas of Ancient Semi Natural Woodland within 2km of the site. These woodlands have been identified as Priority Areas by Natural Resources Wales (NRW) as they comprise mostly broadleaved native trees and shrubs believed to have been in existence for over 400 years. The nearest Ancient Semi Natural Woodland lies approximately 80m west away.

A Hedgerow bounds the proposed development as shown on the habitat map in Appendix 3. Hedgerows are a section 7 habitat under the Environment (Wales) Act 2016 and are a priority habitat for retention and creation.

2.2 Potential Impacts to Protected Sites

As the proposed dwelling lies only 30m away from the adjacent SINC it is considered possible that the site may be impacted if precautionary measures are not adopted. There is no physical boundary separating the site from the SINC. Aerial images indicate a tree line or hedgerow was present along the eastern boundary in recent years. Recent ground disturbance along the eastern boundary indicates that the tree line or hedgerow here may have been removed recently. The development proposals do not affect the hedgerow along the northern boundary.

3. Phase 1 Survey

3.1 Habitats

A walkover survey of the site was completed on the 20th January 2022. All areas of the site were accessible during the site visit. A species list can be found in Appendix 1, photographs of the site can be found in Appendix 2 and a map of the habitats found within the site is provided in Appendix 3.

The site is dominated by semi-improved neutral grassland. Sward height at the time of the survey ranged between approximately 15-30cm in height. Grass species in the sward include cock's foot, red fescue, crested dog's tail, perennial rye grass, bent grasses, sweet vernal grass and Yorkshire fog. Forb species observed include common knapweed, ribwort plantain, greater plantain, dandelion, lesser celandine, self heal, red clover, and creeping buttercup.

A single hedgerow (H) is found along the northern boundary, with a combination of woody species which include bramble, hazel, ivy and holly.

3.2 Great Crested Newts

Great crested newts (*Triturus cristatus*) are a European protected species and are protected under the Conservation of Habitats and Species Regulations 2017. In summary, they are protected from:

- Deliberate capture, killing and injuring,
- Deliberate disturbance of a breeding site or resting place,
- Deliberate taking or destroying of eggs,
- Damage or destruction of a breeding site or resting place.

Great crested newts (GCN) are listed on schedule 5 of The Wildlife & Countryside Act 1981 which protects them from intentional or reckless disturbance or obstruction when using a structure or place for shelter and / or protection. It is also an offence to sell, offer or expose for sale a great crested newt. Great crested newt and common toad are listed in section 7 of the Environment (Wales) Act 2016 which makes them key species to sustain and improve biodiversity.

There are no records of Great Crested Newt (GCN) within 2km of the site.

No ponds are present within the proposed development site and no ponds appear on OS maps within 500m of the site. The proposed development site consists mainly of semi-

improved neutral grassland, with limited sheltering habitat within the site. Given the lack of local records, lack of suitable breeding habitat within the local vicinity, it is considered unlikely that GCN are present within the site and no further recommendations will be made for this species.

3.3 Dormouse

The dormouse (*Muscardinus avellanarius*) is a European protected species and is protected under the Conservation of Habitats and Species Regulations 2017. In summary, they are protected from:

- Deliberate capture, killing and injuring,
- Deliberate disturbance of a breeding site or resting place,
- Damage or destruction of a breeding site or resting place.

Dormouse is listed on schedule 5 of The Wildlife & Countryside Act 1981 which protects them from intentional or reckless disturbance or obstruction when using a structure or place for shelter and / or protection. It is also an offence to sell, offer or expose for sale a native dormouse. Dormouse is listed in section 7 of the Environment (Wales) Act 2016 which makes them a key species to sustain and improve biodiversity.

No records for dormouse occur within 2km of the site.

The boundary hedgerow along the northern edge of the site has potential to be used by this species for nesting and foraging purposes. The hedgerow has connectivity to other suitable habitat occurring to the north of the site. A large expanse of woodland is present to the north and east of the site. There is some habitat fragmentation due to the presence of the B4251 road to the north, however it would not be a complete barrier to dormouse movement across the landscape.

Although there are a lack of dormouse records in the local area, it is considered likely that the hedgerow along the northern boundary and wider woodland to the north and east of site could be used by dormouse. The development proposals do not appear to affect any habitat suitable for use by dormouse and could deliver an overall enhancement for this species via soft landscaping. Therefore no further surveys are recommended for dormouse at this time, however if development proposals change, further consideration to dormouse and species specific surveys will be required.

3.4 Bats

All British bats are European protected species and are protected under the Conservation of Habitats and Species Regulations 2017. In summary, they are protected from:

- Deliberate capture, killing and injuring,
- Deliberate disturbance of a breeding site or resting place,
- Damage or destruction of a breeding site or resting place.

Schedule 5 of The Wildlife and Countryside Act (1981) also protects all species of British bat and their roosting locations. British bats are protected from intentional or reckless disturbance and obstruction of their roosting places. Barbastelle, beechmine, noctule, brown long eared, common pipistrelle, soprano pipistrelle, greater horseshoe and lesser horseshoe bats are also listed in section 7 of the Environment (Wales) Act 2016 which makes them a key species to sustain and improve biodiversity.

Bat roost records within 2km include common pipistrelle (330m), Lesser Horseshoe (820m), Soprano Pipistrelle (910m) and Noctule (1.8km). Other species recorded foraging and commuting within 2km include: Brown Long-eared Bat, Daubenton's Bat and Whiskered/Brandt's Bat.

Tree Assessment

Trees within the site boundary were subject to ground level assessment for the likely potential presence for bats during the habitat survey. Any trees felt to have potential for roosting bats would be subject to a further detailed survey following current BCT Guidelines (2016).

All trees within the site are considered unsuitable for use by bats for roosting purposes. No trees within the hedgerow of the site boundary had any visible gaps or cracks suitable for use by roosting bats. A lack of foliage on the trees allowed a clear visual assessment of all specimens on site.

It is considered likely the site is used by bats for foraging and commuting purposes as it has good connectivity to the nearby woodland and the wider landscape in the north. Recommendations will be made in regard to external lighting used within the proposed development site. Consideration has been given to the need for bat transect surveys. Given the proposed single dwelling within the site boundary, providing a wildlife friendly lighting scheme can be delivered the potential impacts of the scheme on bats should be limited. Therefore no further surveys are recommended at this point.

3.5 OOers

The common oQer (*Lutra lutra*) is a European protected species and is protected under the Conserva. on of Habitats and Species Regula. ons 2017. In summary, they are protected from:

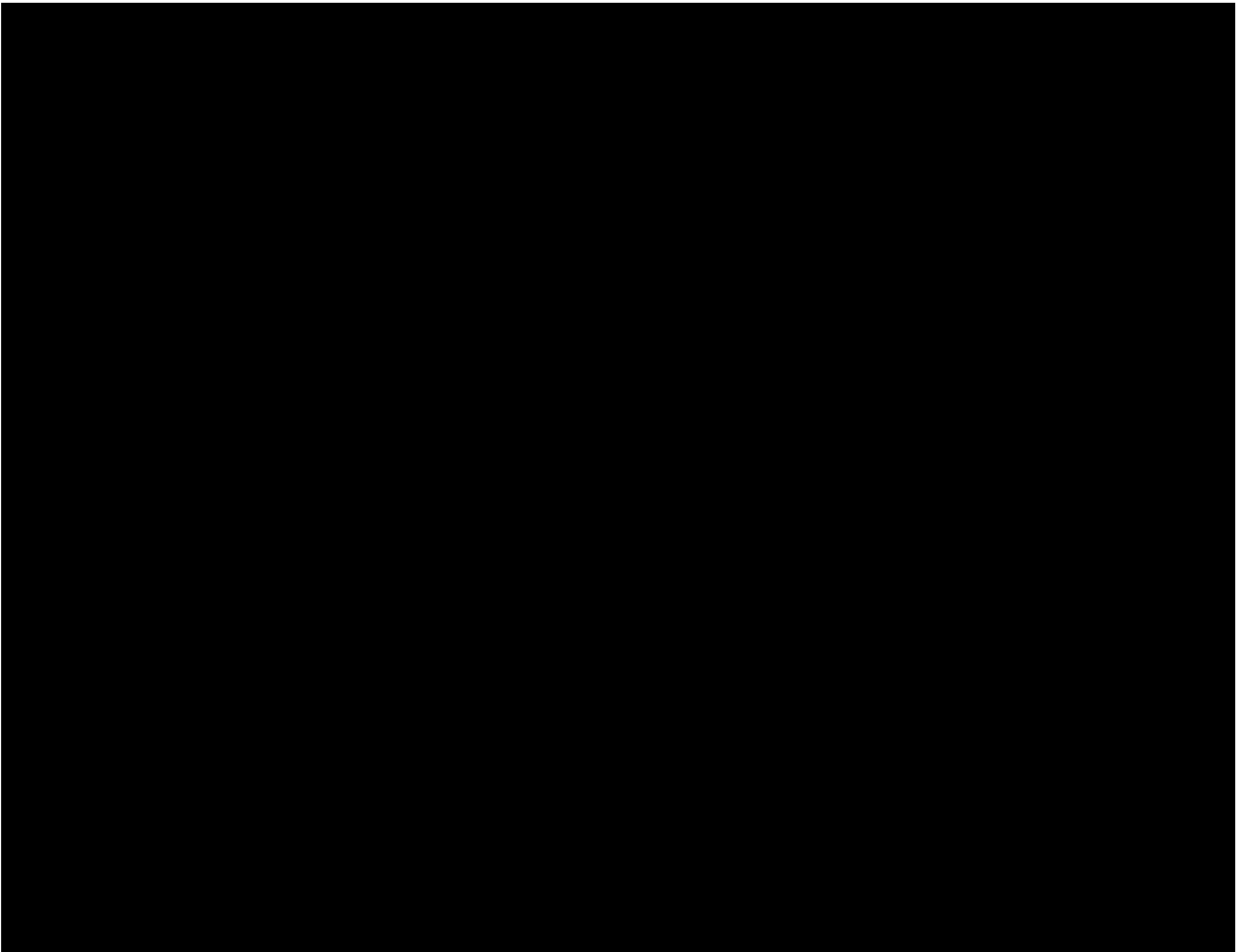
- Deliberate capture, killing and injuring,
- Deliberate disturbance of a breeding site or res. ng place,
- Damage or destruc. on of a breeding site or res. ng place.

OQer are listed on schedule 5 of The Wildlife & Countryside Act 1981 which protects them from inten. onal or reckless disturbance or obstruc. on when using a structure or place for shelter and / or protec. on. It is also an offence to sell, offer or expose for sale an oQer. OQer is listed in sec. on 7 of the Environment (Wales) Act 2016 which makes them a key species to sustain and improve biodiversity.

There are several records for oQer within 2km of the site, the nearest of which is situated approximately 670m away. All records seem to originate along the River Sirhowy to the west.

OQers tend to prefer secluded loca. ons for their holts to help prevent them being disturbed by other animals. It is accepted that oQers can travel long distances from river corridors to find acceptable holt sites.

The habitats within the site boundary are considered to be unsuitable for use by oQer. The poten. ally suitable vegetated habitats of the site, namely hedgerow, is small in extent and situated far away from any suitable watercourses, rendering the site unaQrac. ve to oQer. The site is considered unsuitable for use by oQer and no further recommenda. ons are made for this species.



3.7 Birds

All breeding birds are protected under schedule 1 of the Wildlife and Countryside Act (1981) as amended. Under this Act it is an offence to:

Intentionally take, damage or destroy the nest of any wild bird while it is in use or being built.

Intentionally take or destroy the egg of any wild bird.

Enhanced protection is afforded to species listed on Schedule 1 of the Act, this additional protection makes it an offence to:

Intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest building, or at a nest containing eggs or young, or disturb the dependent young of such a bird.

Species recorded during the site visit include great tit, blue tit, coal tit, robin and blackbird.

Nesting opportunities occur in the hedgerow within the site. Precautionary measures for nesting birds are detailed in the recommendations section of this report.

3.8 Rep. les and Amphibians

Rep. les such as the slow worm, common lizard, adder and grass snake are protected under the Wildlife and Countryside Act 1981(as amended). They are protected from killing, injuring and sale. They are also listed in sec. on 6 of The Environment (Wales) Act 2016. Our na. ve common na. ve amphibians are only protected from sale.

The four widespread species of amphibian i.e. the smooth and palmate newts, common frog and common toad, are protected under the Wildlife and Countryside Act 1981(as amended) by Sec. on 9(5) of the Wildlife and Countryside Act 1981. This sec. on prohibits sale of these species. Our common na. ve amphibians are only protected from sale.

There are records for slow worm within 2km, the nearest of which is situated approximately 800m away.

Rep. les prefer a mosaic of habitats with diverse vegeta. on structure crea. ng open areas and nearby cover to provide protec. on from predators and the elements. The grassland and hedgerows within the site provide suitable habitats for use by rep. les. The interface between the two habitats provides basking opportuni. es whilst the hedgerows provide cover for commu. ng and hiberna. on use. The nearby woodland also has poten. al for use for hiberna. on purposes.

The site is considered to have moderate-high poten. al for rep. le use. The hedgerow and grassland interface around the northern periphery, and the areas of long grassland of the site appear to have the most poten. al for use by such species. Given the likely small scale impacts of the crea. on of one new dwelling within the site boundary, the poten. al for impacts to rep. les using the site are considered low providing a rep. le mi. ga. on strategy can be put in place during construc. on works. No further surveys for rep. le species are recommended at present, however if the development proposals change further considera. on to the need for surveys will be required.

4. Recommendations and Mitigation

The applicant is seeking permission to develop a parcel of land east of Penrhiwbengi Lane, Oakdale. Preliminary development plans are available at the time of writing, which highlight the construction of a large detached dwelling with associated access track and garage building. The proposed footprint of the new development is anticipated to result in the loss of areas of semi-improved neutral grassland.

It is anticipated that a portion of semi-improved neutral grassland will be lost to the construction of the garage and main residential dwelling. All other vegetated habitats within the site are to be retained and will not be removed during the development. Broad recommendations are made below to help inform the design process. Further ecological work is required to fully inform the development proposals. Our general recommendations are below. Should the development proposals change additional survey work may be required:

The habitats within the site boundary have potential to support common reptile species. It should be possible to implement species deterrent measures as part of the construction works to naturally encourage reptiles away from the development footprint into retained areas of suitable vegetation within and around the site periphery. A reptile mitigation strategy will be required as part of the development proposals. The reptile mitigation strategy must include, but not be limited to:

- Temporary fencing of retained vegetation within the site boundary to ensure suitable habitat is retained during construction.
- A two stage vegetation cut of habitat with potential to be used by reptiles,
- Suitable enhancement measures for reptiles post development completion.

Any vegetation suitable for bird use i.e scrub must be completed outside of the bird nesting season of March to August inclusive. If this is not achievable an ecologist must inspect any trees or ground vegetation with the potential for birds to be present for active birds' nests prior to removal works beginning. If an active nest is identified a buffer zone of 5m around the nest must be observed until the chicks have fledged. Only then can the vegetation be removed. Greater buffer zones around nests may be required depending on the species and habitat the nest is within.

A root protection zone (RPZ) must be implemented around any retained hedgerow within the proposed development area as well as around any trees which lie adjacent to the site boundary in the north, British Standard BS 5837, Trees in relation to

design, demolition and construction - Recommendations will be followed. Measures will include clear marking of the RPZ to guarantee no machinery is used or digging carried out in that area. This will ensure that there is no detrimental impact to the trees and the wildlife it supports.

Careful consideration must be given to the use of lighting within the developed site, as this can adversely affect activity by a variety of fauna, particularly foraging bats, nesting birds and invertebrates. Light spillage into adjacent semi-natural habitats including the hedgerow to the north of the site must be avoided and brightness kept to the lowest permissible level in the areas adjacent to such habitats.

All lighting must meet recommendations in the BCT Guidance Note 08/18 Bats and artificial lighting in the UK document <https://theilp.org.uk/publication/guidance-note-8-bats-and-artificial-lighting/>

The Environment Act (Wales) 2016 places a duty on competent authorities such as Caerphilly County Borough Council to conserve and enhance biodiversity. The below bullet points are some simple measures that could be achieved to enhance the biodiversity of the site:

The provision of bird boxes of varying design in suitable locations within the development site. These could include integrated boxes built into the buildings as well as small and large holed boxes.

The use of native species within the soft landscaping works on the site. Suitable long term management of soft landscaping also helps ensure spaces are useful for wildlife.

Any fencing around the site will be hedgehog friendly in design. A friendly design is considered to allow passage of small animals across the site. It should provide either a continuous gap between the bottom of the fence and ground of approximately 13cm or 13cm by 13cm gaps cut every 3m along fencing.

Enhancement measures for the habitats within the adjacent SINC, providing it will not be directly impacted by any future development plans, would enhance the biodiversity of the area. Measures such as a sensitive grassland management plan to improve the diversity of the SINC would be welcomed.

Appendix 1 – Plant Species Recorded

Species	Common Name
Trees & Scrub	
<i>Corylus avellana</i>	Hazel
<i>Hedera helix</i>	Ivy
<i>Ilex aquifolium</i>	Holly
<i>Rubus fruticosus</i> agg	Bramble
Herbaceous Plants	
<i>Agrostis</i> sp.	Bent Grass
<i>Anthoxanthum odoratum</i>	Sweet Vernal Grass
<i>Centaurea nigra</i>	Common Knapweed
<i>Cynosurus cristatus</i>	Crested Dog's-tail
<i>Festuca rubra</i>	Red Fescue
<i>Ficaria verna</i>	Lesser Celandine
<i>Galium aparine</i>	Cleavers
<i>Holcus lanatus</i>	Yorkshire Fog
<i>Lolium perenne</i>	Perennial Rye Grass
<i>Plantago lanceolata</i>	Ribwort plantain
<i>Plantago major</i>	Greater plantain
<i>Prunella vulgaris</i>	Self-heal
<i>Ranunculus repens</i>	Creeping buttercup
<i>Taraxacum officinalis</i> agg.	Dandelion
<i>Trifolium pratense</i>	Red Clover

Appendix 2 – Site Photographs



Site entranceway in the north-west of the site - facing east.



Hedgerow 1 adjacent to semi-improved neutral grassland - facing east.



Overview of semi-improved neutral grassland - facing south-east.



Overview of adjacent Pen-Rhiw Bengi Marsh SINC - facing east.



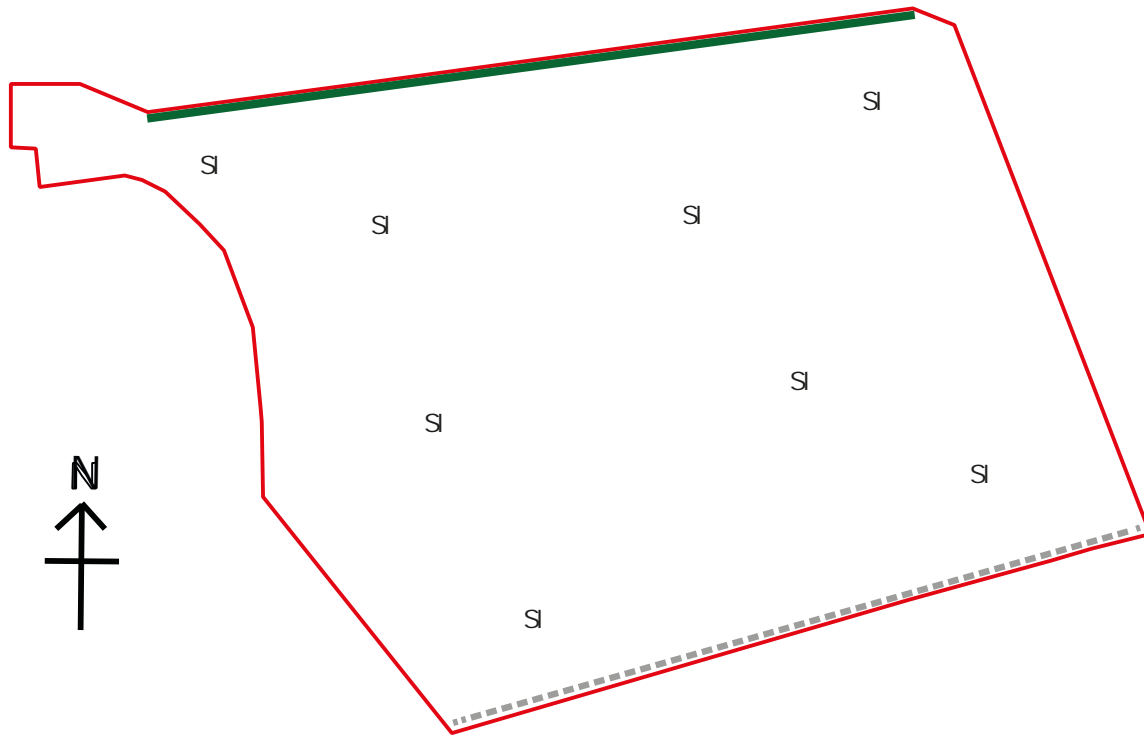
Overview of adjacent Pen-Rhiw Bengi Marsh SINC - facing north-east, which shows the recently removed hedgerow



Overview of adjacent Pen-Rhiw Bengi Marsh SINC - facing south-west.

Appendix 3– Site Habitat Map

PENRHIWBENGI LANE, OAKDALE
Habitat Map
January 2022



SI	Semi Improved Grassland
	Hedgerow
	Fence Line
	Site Boundary

Appendix 4 - Aerial View of Site Location

