

PROPOSED RESIDENTIAL DEVELOPMENT ON FORMER FOOD MANUFACTURING SITE, COOLOCK, DUBLIN

BAT FAUNA STUDY

Prepared for

Altemar Marine and Environmental Consultants

By

Conor Kelleher ACIEEM, PCQI

21 November 2016



Aardwolf Wildlife Surveys

Spring Lane, Carrigagulla, Ballinagree,
Macroom, Co. Cork.
Telephone: 087-2980297
Email: conorkelleher@eircom.net

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TERRESTRIAL FAUNA

1. RECEIVING ENVIRONMENT

1.1 Introduction

A residential apartment development is proposed within the grounds of the former Chiver's Preserves manufacturing facility in Coolock, Dublin. As part of the development proposals, the existing onsite buildings are to be removed. As the structures show potential to harbour bats which are protected animals, *Aardwolf Wildlife Surveys* was requested to undertake a specific bat assessment of the site by *Altamar Marine and Environmental Consultants*, to ensure that any onsite bat populations were safeguarded prior to and during the proposed works.

Development or removal of old buildings and existing vegetation may adversely affect bats through roost loss or injury or loss of traditional commuting features and it is essential therefore that a study of bat activity be undertaken to identify any conflict zones and hence to avoid or reduce impacts through mitigation to these protected animals.

This report details the results of an onsite bat survey and assessment undertaken in November 2016.

1.1.1 Site location and description

The proposed development area is situated off Coolock Drive, in a built-up area to the north of Dublin city and consists of a large, modern factory building which was formally used for food production (Plates 5 & 6). The grounds are mainly of amenity grassland which is unmanaged, paving, boundary treelines (Plates 1 & 2) and some landscaped areas with exotic plantings (Plate 9). A small, stone masonry bridge (Plate 3) is present over the onsite river and a culvert (Plate 4) runs beneath the main road at the site's boundary. Since closure, the site has been vandalised (Plate 7) and has become overgrown in places (Plate 8). Internally, some roofing has collapsed (Plate 10), walls have been vandalised and demolished (Plate 11) and fires have been deliberately set in several areas resulting in localised damage (Plate 12).

1.2 Bat survey

This report presents the results of a bat survey undertaken within the proposed development area on 3 November 2016 by Conor Kelleher. The bat fauna expected onsite is described and the likely impacts of the planned works on bat species discussed with recommendations for enhancement measures to encourage any animals currently using the site for foraging.

1.2.1 Survey methodology

All internal and external areas of the onsite structures were inspected for bats and/or their signs using a powerful torch (141 Lumens) – Petzl MYO RXP. The presence of bats is often shown by grease staining, droppings, corpses, feeding signs such as invertebrate prey remains and/or the presence of bat fly *Nycteribiidae* pupae, although direct observations are also occasionally made. The site survey was supplemented by a review of *Bat Conservation Ireland's* (BCIreland) National Bat Records Database.



1.2.2 Survey constraints

The survey was undertaken outside of the active bat period so a detector survey was not possible. Weather conditions during survey were good with daytime temperatures of 15°C. Winds were light and there was no rainfall.

2. BAT FAUNA – SURVEY RESULTS

2.1 Review of local bat records

The review of existing bat records within a 10km radius of the study site (sourced from BC Ireland’s National Bat Records Database) reveals that **eight of the nine known resident Irish species have been observed locally**. These include common *Pipistrellus pipistrellus*, soprano *P. pygmaeus* and Nathusius’ *P. nathusii* pipistrelle, Leisler’s *Nyctalus leisleri*, brown long-eared *Plecotus auritus*, Daubenton’s *Myotis daubentonii*, Natterer’s *M. nattereri* and whiskered *M. mystacinus* bats as shown in Table 1 below.

Table 1: Adjudged status of Irish bat species in the local area

Common name	Scientific name	Presence	Source
Common pipistrelle	<i>Pipistrellus pipistrellus</i>	Present	BCIreland
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	Present	BCIreland
Nathusius’ pipistrelle	<i>Pipistrellus nathusii</i>	Present	BCIreland
Leisler’s bat	<i>Nyctalus leisleri</i>	Present	BCIreland
Brown long-eared bat	<i>Plecotus auritus</i>	Present	BCIreland
Lesser horseshoe bat	<i>Rhinolophus hipposideros</i>	Absent	BCIreland
Daubenton’s bat	<i>Myotis daubentonii</i>	Present	BCIreland
Natterer’s bat	<i>Myotis nattereri</i>	Present	BCIreland
Whiskered bat	<i>Myotis mystacinus</i>	Present	BCIreland

The remaining resident Irish species, the lesser horseshoe bat *Rhinolophus hipposideros* has not been recorded in County Dublin as the species is confined to the west of Ireland. Further information on the Irish bat species is given in Appendix 1.

2.2 Structure survey

The main building onsite shows poor potential for use by bats being large and uninsulated, frequently disturbed and recently vandalised. Internal timber partitions have been demolished or burnt and these would have been the most favourable places for roosting bats. A full examination of the building yielded no evidence of past or current bat presence. No sign of bats was observed on external walls. All smooth-sided containers, cisterns, basins etc. were inspected for bat corpses but none was found.

The other structures in the grounds; the small bridge and culvert, were also fully inspected for bats or their signs and none were found.

2.3 Tree survey

The onsite trees were inspected for their potential to harbour bats and any evidence of the presence of a roost. The trees along the site boundaries have limited potential for roosting bats as they are mostly tall, thin specimens and, in some cases, multi-stemmed with no features such



as hollows or crevices that might be used by bats. Individual bats may occasionally rest behind ivy-cover but, in the absence of hollows within the tree beneath, large roosts would not be present.

3. LEGAL STATUS – BATS

All Irish bat species are protected under the Wildlife Act (1976) and Wildlife Amendment Act (2000). Also, the EC Directive on The Conservation of Natural habitats and of Wild Fauna and Flora (Habitats Directive 1992), seeks to protect rare species, including bats, and their habitats and requires that appropriate monitoring of populations be undertaken. Across Europe, they are further protected under the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention 1982), which, in relation to bats, exists to conserve all species and their habitats. The Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention 1979, enacted 1983) was instigated to protect migrant species across all European boundaries. The Irish government has ratified both these conventions.

All Irish bats are listed in Annex IV of the Habitats Directive and the lesser horseshoe bat is further listed under Annex II.

The current status and legal protection of the known bat species occurring in Ireland is given in Table 2 below.

Table 2: Legal status and protection of the Irish bat fauna

Common and scientific name	Wildlife Act 1976 & Wildlife (Amendment) Act 2000	Irish Red List status	Habitats Directive	Bern & Bonn Conventions
Common pipistrelle <i>Pipistrellus pipistrellus</i>	Yes	Least Concern	Annex IV	Appendix II
Soprano pipistrelle <i>P. pygmaeus</i>	Yes	Least Concern	Annex IV	Appendix II
Nathusius' pipistrelle <i>P. nathusii</i>	Yes	Not referenced	Annex IV	Appendix II
Leisler's bat <i>Nyctalus leisleri</i>	Yes	Near Threatened	Annex IV	Appendix II
Brown long-eared bat <i>Plecotus auritus</i>	Yes	Least Concern	Annex IV	Appendix II
Lesser horseshoe bat <i>Rhinolophus hipposideros</i>	Yes	Least Concern	Annex II Annex IV	Appendix II
Daubenton's bat <i>Myotis daubentonii</i>	Yes	Least Concern	Annex IV	Appendix II
Natterer's bat <i>M. nattereri</i>	Yes	Least Concern	Annex IV	Appendix II
Whiskered bat <i>M. mystacinus</i>	Yes	Least Concern	Annex IV	Appendix II
Brandt's bat <i>M. brandtii</i>	Yes	Data Deficient	Annex IV	Appendix II

NB: Destruction, alteration or evacuation of a known bat roost is a notifiable action under current legislation and a derogation licence **has to be obtained from the National Parks and Wildlife Service (NPWS) **before** works can commence.**



Also, it should be noted that any works interfering with bats and especially their roosts, including for instance, the installation of lighting in the vicinity of the latter, may only be carried out under a licence to derogate from Regulation 23 of the Habitats Regulations 1997, (which transposed the EU Habitats Directive into Irish law) issued by NPWS. The details with regards to appropriate assessments, the strict parameters within which derogation licences may be issued and the procedures by which and the order in relation to the planning and development regulations such licences should be obtained, are set out in Circular Letter NPWS 2/07 "*Guidance on Compliance with Regulation 23 of the Habitats Regulations 1997 - strict protection of certain species/applications for derogation licences*" issued on behalf of the Minister of the Environment, Heritage and Local Government on the 16th of May 2007- reproduced in Appendix 3.

Furthermore, on 21st September 2011, the Irish Government published the European Communities (Birds and Natural Habitats) Regulations 2011 which include the protection of the Irish bat fauna and further outline derogation licensing requirements re: European Protected Species.

4. ASSESSMENT OF SCIENTIFIC INTEREST OF THE PROPERTY

No evidence of past or current use by bats of any of the onsite structures or trees was found during the present survey. Due to the high boundary treelines and surrounding the site, the grounds are well vegetated and very sheltered and so are favourable for swarming insects which then attract bats and, during the summer months, one or two bats may be expected to hunt onsite occasionally.

5. POTENTIAL IMPACT OF PROPOSED DEVELOPMENT ON BATS

The removal of the existing buildings will have no negative impacts on bats as the structures are not in use by these animals.

6. MITIGATION AND ENHANCEMENT MEASURES

As bats are not present in any of the onsite buildings, no specific mitigation measures are required for their removal and a derogation licence is also not required for the demolition – *Bat Mitigation Guidelines for Ireland* (Legislation and Licensing) (Kelleher & Marnell, 2007) and NPWS Circular Letter 2/07 as reproduced in the Appendices.

6.1 Retention of vegetation and additional planting

Existing treelines at the site's boundaries should be retained where possible to continue to afford commuting routes and foraging areas for bats and other wildlife but also to screen the development. Where suitable, areas should be replanted with native tree and shrub species. Native species support a significantly greater diversity of insects than non-native species and are therefore better for wildlife in general and bats in particular. Where these linear features are retained or planted, they should link up with existing hedgerows both on and off-site to ensure connectivity of corridors for bat and other wildlife movement.

Night-scented plants could also be planted as part of landscaping of the proposed development to encourage night-flying insects onto the site to act as prey items for bats. A list of suggested plant species is given in Appendix 3. These can be chosen according to local soil conditions.



6.2 Lighting

In general, artificial light creates a barrier to commuting bats so lighting should be minimised along the site boundaries as it deters some bat species. Where lighting is required, directional lighting (i.e. lighting which only shines on access roads and built areas and not nearby countryside) should be used to prevent overspill. This can be achieved by the design of the luminaire and by using accessories such as hoods, cowls, louvres and shields to direct the light to the intended area only.

7. PREDICTED IMPACT OF PLANNED DEVELOPMENT ON BATS

The proposed development will change the local environment as new structures are to be erected in place of the existing buildings, new roads and parking areas constructed and some of the existing vegetation will be removed. The removal of the onsite buildings will not negatively impact bats as none are present. No bat roosts will be lost due to this development and the species expected to occur onsite should persist.



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9. APPENDICES

9.1 APPENDIX 1: Bat ecology

Introduction

The bat is the only mammal that is capable of true flight using modified hands and arms which are covered by a supple membrane of skin. This ability has allowed bats to exploit aerial insect prey and avoid predation. As the largest mammalian group after the rodents (to which they are not related), bats are very successful and have diversified into over 1,300 species worldwide, representing almost a quarter of all mammal species. Within such diversification, they have evolved a range of hunting strategies, means of reproduction, roosting behaviours and social interactions. They are found throughout the world and in every continent apart from Antarctica. Bats are classified within the Order Chiroptera (meaning 'Hand-wing') and this is further divided into two Superfamilies: the Megachiroptera and Microchiroptera. The former are mainly fruit-eaters while the latter are predominantly insectivorous. Of these, 54 bat species are currently known in Europe.

Irish bat species

In Ireland, nine species of bat are currently known to be resident with the residency of the tenth recorded species yet to be proven. These are classified into two Families: the Rhinolophidae (Horseshoe bats) and the Vespertilionidae (Common bats). The lesser horseshoe bat *Rhinolophus hipposideros* is the only representative of the former Family in Ireland. All the other Irish bat species are of the latter Family and these include three pipistrelle species: common *Pipistrellus pipistrellus*, soprano *P. pygmaeus* and Nathusius' *P. nathusii*, four *Myotis*: Natterer's *Myotis nattereri*, Daubenton's *M. daubentonii*, whiskered *M. mystacinus*, Brandt's *M. brandtii*, the brown long-eared *Plecotus auritus* and Leisler's *Nyctalus leisleri* bats.

Hunting with sound

The microbats are unique as they use a type of sonar, called echolocation, by which they hunt their prey. This is a stream of sound produced at high frequencies which allows the animal to build-up a complete 'sound picture' of their surroundings. These sounds are produced well beyond the range of human hearing. Using these sounds, the bats are able to detect the clutter of nearby leaves, hear an insect, know how fast it is travelling, how fast its wings are beating, whether it is hard or soft bodied etc. before closing in for the catch. Although bats use this method to find their way around, they also use their eyes to see in low light levels.

All the European bat species feed exclusively on insects and/or spiders and a pipistrelle, weighing only 4 to 8 grams, will eat up to 3,500 insects every night. This allows the bat to increase its body weight by 50% each night but this is immediately burned off through calorie consumption while flying. Such feeding ensures a build up of fat in the form of brown adipose tissue between the shoulder blades of the bat which acts as a winter fuel store to keep the animal alive while in hibernation.

Roosting behaviour

Bats naturally roost in caves and trees but some species have recently adapted to using man-made structures for roosting. Being social animals, these roosts can reach substantial numbers in the peak period of bat activity in mid-summer and especially if the roost has been selected as a maternity site. These nursery roosts are mainly composed of breeding females but often they include some non-breeding females and males that may be the previous season's young still with their mother. Males are more solitary and form smaller roosts apart from the females.

For summer roosts, bats seek warm temperatures but, for hibernation in winter, they require constant temperatures of only 5° or 6°C and humid surroundings to keep from dehydrating. In mild winters, bats will emerge from such sites to hunt should insects be on the wing.



Breeding and longevity

In autumn, male bats attract females by song flights and form harems with up to 20 females being defended by a male. After mating, the males take no further part in the rearing of the young. Irish bats can produce one young per year but, more usually, only one young is born in spring every two years (Boyd and Stebbings 1989). There is no fixed pregnancy period and gestation is governed by ambient temperature. The slow rate of reproduction by bats inhibits repopulation in areas of rapid decline. Although bats have been known to live for twenty or more years, this is rare as most die in their first and the average lifespan, in the wild, is four years. The survival of the young is closely linked to climate and poor weather in spring and summer can result in high infant mortality.

Threats


All bat species are in decline as they face many threats to their highly developed and specialised lifestyles. Many bats succumb to poisons used as woodworm treatments within their roosting sites (Racey and Swift 1986). Agricultural intensification, with the loss of hedgerows, treelines, woodlands and species-rich grasslands have impacted bat species also. Habitual roosting or hibernation sites in caves, mines, trees and disused buildings are also often lost to development. Summer roosts are prone to disturbance from vandals. Agricultural pesticides accumulate in their prey, reaching lethal doses (Jefferies 1972). Chemical treatments in cattle production sterilise dung thus ensuring that no insects can breed within it to be fed upon by bats. Likewise, river pollution, from agricultural runoff, reduces the abundance of aquatic insects. Road building, with the resultant loss of foraging and roosting sites is a significant cause in the reduction of bat populations across Europe.

Extinction

As recently as 1992, the greater mouse-eared bat *Myotis myotis* became the first mammal to become extinct in Britain since the wolf in the 18th century.



9.2 APPENDIX 2: NPWS Circular Letter 2/07


AN ROINN COMHSHAOIL, OIÐHREACHTA AGUS RIALTAIS AITIUIL
DEPARTMENT OF THE ENVIRONMENT, HERITAGE
AND LOCAL GOVERNMENT

Circular Letter NPWS 2/07

16 May, 2007

**Guidance on Compliance with Regulation 23
of the Habitats Regulations 1997
– strict protection of certain species/ applications for derogation licences.**

A chara,

I am directed by the Minister for the Environment, Heritage and Local Government to refer to the EU Habitats Directive, to the Habitats Regulations 1997-2005 which transpose that directive into Irish law,¹ and to Ireland's obligations under that Directive.

The Directive, and the implementing Regulations, require that certain species listed in Annex IV of the Habitats Directive are strictly protected. A list of these species is appended.


These species are not necessarily associated with areas subject to a specific nature designation: in the case of bat species and others they may be found anywhere throughout the country.

Under Regulation 23 of the Habitats Regulations 1997, any person who, in regard to the animal species listed in Annex IV of the Habitats Directive-

*“(a) deliberately captures or kills any specimen of these species in the wild,
(b) deliberately disturbs these species particularly during the period of breeding, rearing, hibernation and migration,
(c) deliberately takes or destroys the eggs from the wild, or
(d) damages or destroys a breeding site or resting place of such an animal,
shall be guilty of an offence.”*

¹ Council Directive 92/43/EEC of 21 May 1992, on the conservation of natural habitats and of wild flora and fauna, the European Communities (Natural Habitats) Regulations, 1997 (S.I. No. 94 of 1997), the European Communities (Natural Habitats) (Amendment) Regulations, 1998, (S.I. No. 233 of 1998), and the European Communities (Natural Habitats) (Amendment) Regulations, 2005, (S.I. No. 378 of 2005),

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Regulation 21 provides corresponding protection for Annex IV plant species.

The carrying out of any work that has the potential to disturb these species, and for which a derogation licence has not been granted, may constitute an offence under Regulation 21 or 23 of the Habitats Regulations.

It should be noted that in the case of Regulation 23 (d), it is not necessary that the action should be deliberate for an offence to occur. This places an onus of due diligence on anyone proposing to carry out an action or project that might result in such damage or destruction.

A particular concern arises regarding works carried out by or on behalf of local authorities themselves, including works of maintenance or repair.

Examples of cases that are likely to require assessment are the removal of trees and other habitat during the construction of roads or other infrastructure, the modification of the courses of rivers, drainage and discharge of water, and even the re-pointing or replacement of masonry in bridges, walls and other structures where bats are likely to roost, etc.

Procedure to be followed

Local authorities must ensure that they, their staff and their agents comply fully with the requirements of the Directive and the Regulations as follows:

1. In advance of any works, an appropriate initial assessment should be carried out by a person competent to identify where a risk of damage or disturbance to an Annex IV species may exist (e.g. by an appropriately qualified ecologist). The fact that such an assessment has been carried out should be recorded and kept with the papers associated with the project.
2. Projects where a risk is identified should be subject to an appropriate scientific assessment. It will be necessary to identify alternatives or modifications that will avoid that risk.
3. Where it is not possible to identify a means of avoiding the risk completely, the question of seeking a derogation licence from the Minister under Regulation 23 of the Habitats Regulations should be considered if it is desired, notwithstanding, to proceed with the action or project.
4. The Minister is empowered, within strict parameters, to grant a license for derogation from complying with the requirements of the provisions of section 21 of the Wildlife Act 1976 and Regulations 23 and 24 of the Habitats Regulations. The scope of the Minister's powers to grant derogation licences is set out in Regulation 23, as follows:

Where there is no satisfactory alternative and the derogation is not detrimental to the maintenance of the populations of the species to which the Habitats Directive relates at a favourable conservation status in their natural range, the Minister may, in respect of those species, grant a licence to one or more persons permitting a



derogation from complying with the requirements of the provisions of section 21 of the Principal Act and Regulations 23 and 24 where it is—

(a) in the interests of protecting wild fauna and flora and conserving natural habitats, or

(b) to prevent serious damage, in particular to crops, livestock, forests, fisheries and water and other types of property, or

(c) in the interests of public health and public safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment, or

(d) for the purpose of research and education, of repopulating and re-introducing these species and for the breeding operations necessary for these purposes, including the artificial propagation of plants,

(e) to allow, under strictly supervised conditions, on a selective basis and to a limited extent, the taking or keeping of certain specimens of the species to the extent (if any) specified therein, which are set out in the First Schedule.

6. Any application for a derogation licence (to be submitted to Mr Jamie Mulleady of this Department at: Species and Regulations Unit, National Parks and Wildlife Service, 7 Ely Place, Dublin 2 email: Jamie.mulleady@environ.ie) should address the criteria referred to in the above paragraph as well as proposed scientifically-based mitigation measures to address any potential impact on the identified Annex IV species. A decision on an application will be made on the basis of the information and proposals submitted and best scientific knowledge.

7. An application for such a derogation licence should be made in advance of seeking approval under Part 8 or 10 of the Planning and Development Regulations, 2001, as amended, or seeking planning permission for works. This will ensure that full consideration can be given to the impacts of the proposed project on the species and to avoid the possibility of delay to the proposed project or of a refusal of a derogation licence which would prevent the works being carried out as planned.

8. The obligation to obtain a derogation licence is additional to the requirement to notify the Minister of a proposed development which may have an impact on nature conservation to the Minister under article 82(3)(n) and others of the Planning and Development Regulations, 2001 (as amended). Local authorities should notify the Minister (Development Applications Unit) in any case where it appears that a proposed development may pose a risk to Annex IV species.

9. Should a problem be identified regarding Annex IV species in the course of works, this should be reported immediately to the National Parks and Wildlife Service. No further work that might impact on such species should take place unless a derogation licence has been obtained.



Applications for planning permission

Issues concerning damage or disturbance to Annex IV species also arise in the context of applications for planning permission for proposed development, e.g. proposals to renovate older houses. The responsibility of avoiding disturbance or damage to Annex IV species, or of obtaining an appropriate derogation licence, rests with the developer.

However, planning authorities should note that in any case where it appears that a proposal may pose a risk to Annex IV species, the planning application should be referred to the Minister under article 27(1)(n) of the Planning and Development Regulations 2001 (as amended). This referral should be done in the appropriate manner for applications having impacts on nature conservation sites. Planning authorities could also take the opportunity afforded by any pre-application discussions to alert prospective applicants to the requirements in relation to Annex IV species.

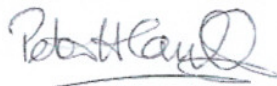
Further information

Species Action Plans, which set out specific measures for the monitoring and protection of these species, have been or are being prepared. They are published on www.npsw.ie or can be obtained from Species Unit (Tel: 01 888 3212). Guidelines in regard to bats are available at www.npsw.ie.

General questions in relation to the protection of Annex IV species or require any further information on an application for a derogation licence should be referred to Species Unit (01 8883214). Specific queries regarding a proposed project, location or species should be referred to the appropriate National Parks and Wildlife Service Divisional Ecologist or to the Regional Manager (contact details <http://www.npws.ie/media/Media.4976.en.pdf>).

If you have any questions in relation to the referral of a planning application, please contact Development Applications Unit (Tel: 01 8883181)

Is mise le meas,



Peter Carvill,
Assistant Principal Officer.

To: all County and City Managers, Directors of Services for Planning, Town Clerks



9.3 APPENDIX 3: List of night-scented plant species

The following selection of native and non-native garden plant species produce their scent at night and so attract night-flying invertebrates as a food source for bats.

Bedding plants

Nottingham catchfly	<i>Silene nutans</i>
Night-scented catchfly	<i>S. noctiflora</i>
Bladder campion	<i>S. vulgaris</i>
Night-scented stock	<i>Matthiola bicornis</i>
Sweet rocket	<i>Hesperis matronalis</i>
Evening primrose	<i>Oenothera biennis</i>
Tobacco plant	<i>Nicotiana affinis</i>
Cherry pie	<i>Petasites hybridus</i>
Soapwort	<i>Saponaria officinalis</i>

Scented herbs

Chives	<i>Allium</i> spp
Borage	<i>Borage officinalis</i>
Lemon balm	<i>Melissa officinalis</i>
Marjoram	<i>Origanum vulgare</i>
Mint	<i>Mentha</i> spp

Climbers

European honeysuckle	<i>Lonicera caprifolium</i>
Italian honeysuckle	<i>L. etrusca superba</i>
Japanese honeysuckle	<i>L. japonica halliana</i>
Native honeysuckle	<i>L. periclymenum</i>
White jasmine	<i>Jasminium officinale</i>
Dogrose	<i>Rosa canina</i>
Sweetbriar	<i>R. rubiginosa</i>
Field rose	<i>R. arvensis</i>
Ivy	<i>Hedera helix</i>
Bramble	<i>Rubus</i> spp



9.4 APPENDIX 4: Photographic record



Plate 1: Young poplar trees along the site's boundary



Plate 2: Tall treeline bounding the site





Plate 3: Onsite stone masonry bridge



Plate 4: Culvert beneath main road on the site's boundary





Plate 5: The main building is a modern structure



Plate 6: The main onsite structure





Plate 7: Broken windows



Plate 8: Exterior showing signs of vandalism and growth of invasive plants





Plate 9: Exotic plantings within the grounds



Plate 10: Interior view of the main building





Plate 11: Vandalised interior walls



Plate 12: The interior has been damaged by fire in several places

