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Nocturnal Bat Survey Report

Shiermonnikoog, Makeney Road, DE56 0RS

Mr and Mrs Jones





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Document Control

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1 Introduction

Background

1.1 Elton Ecology Ltd was commissioned by Mr and Mrs Jones in July 2021 to conduct nocturnal bat surveys in support of a planning application for the construction of a replacement residential building at Shiermonnikoog, Makeney Road.

1.2 The present assessment has been informed by the following documents:

- Preliminary Bat Roost Assessment – The Bat Surveyor, April 2021

Site description

1.3 The site is approximately 0.06ha in size and is located at Shiermonnikoog, Makeney Road, Makeney, Derbyshire, DE56 0RS (Central OS grid reference: SK 35253 44419).

1.4 The site includes the currently disused residential building, set within an area of hardstanding, with stone wall and hedgerow boundaries. Immediately beyond this are several more residential buildings to the north, east and south. the site can be accessed via Makeney Road from the south.

1.5 The surrounding landscape includes the residential village of Makeney immediately north of the site, and the larger residential areas of Duffield and Holbrook, approximately 800m west and 100m east respectively. Areas of pasture grassland linked by tree lines and woodland are present throughout the surrounding area. The River Derwent lies approximately 300m west of the site, and the A6 Derby Road and Duffield rail line are beyond this at approximately 700m west and 800m west of the site, respectively (Appendix 1: Site Location Plan).

Development Proposals

1.6 The development proposals include the demolition of the current disused bungalow, and the construction of a two-storey residential building.

Report Purpose and Scope

1.7 With reference to the Development Proposals, the scope of the present report is to:

- Establish the presence/ likely absence of roosting bats at the site.
- Identify any mitigation measures likely to be required in accordance with the mitigation hierarchy.

Planning Policy and Legislation

1.8 A summary of biodiversity planning policies and wildlife legislation relevant to the site is provided in Appendix 2: Planning Policy and Legislation Summary. The relevant planning policy and legislation includes:

- National Planning Policy Framework 2019;
- Government Circular ODPM 06/05 Biodiversity and Geological Conservation;
- The Conservation of Habitats and Species Regulations 2017 (as amended);
- Wildlife and Countryside Act 1981 (as amended);
- Natural Environment and Rural Communities (NERC) Act 2006 – Habitats and species of principal importance; and
- The Wild Mammals (Protection) Act 1996 (as amended).

2 Methodology

Personnel

2.1 The nocturnal surveys were carried out by Tim Elton BSc (Hons) MCIEEM. Tim has professional experience in ecological consultancy since early 2013, including Protected Species Survey, Extended Phase 1 Habitat Survey and report writing. Tim is trained in a wide variety of protected species survey, including holding Natural England class licences for bats (level 2 reference number: 2018-33647-CLS-CLS), barn owl *Tyto alba*, great crested newt *Triturus cristatus* (level 1), and dormice *Muscardinus avellanarius* (level 1). Tim is trained in botanical species identification and holds a Level 3 Botanical Society of Britain and Ireland (BSBI) Field Identification Skills Certificate.

2.2 The surveys were assisted by Assistant Ecologist Petrina Harris BSc (Hons), MSc. Petrina is a Qualifying member of CIEEM and is experienced in assisting and undertaking ecology surveys, GIS mapping, and report writing. Petrina holds a class 1 bat license (reference number: 2021-54491-CLS-CLS).

Nocturnal Dusk Emergence Survey

2.1 The surveys were carried out with reference to best practice guidelines (Collins, 2016). The surveyors were positioned to view the potential bat exit/ entry points on the building, with an objective to identify any bats emerging from/ re-entering the building.

2.2 The nocturnal surveys were aided by a Canon XA40 4K UHD and/or XA11 Full HD professional video cameras in Infrared Mode, supplemented by external Infra-Red lighting including Nightfox XB5 850nm infrared LED flashlight and Nightfox XB5 850nm infrared LED flashlight as required. Video footage was recorded to an SD card, which was later subject to desktop analysis as required.

2.3 Surveyors noted bats seen and/or echolocation heard recording the time, location, number of bats, behaviour, flight path, and species (where possible). Each surveyor was assisted with a Titley Scientific Anabat Walkabout Active Bat Detector, recording bat echolocation calls which were later subject to desktop analysis via the Anabat Insight analysis software.

2.4 One dusk and one dawn survey were carried out, on the 4th August 2021 (dusk) and 20th August 2021 (dawn), respectively.

4th August 2021 Dusk Survey

2.5 The survey was carried out in suitable conditions whereby air temperature at sunset on the 4th of August was 19ºC, 100% cloud cover, no wind, no rain and clear visibility. The survey commenced at 20:39, 15 minutes prior to sunset (20:54), and continued until 2 hours after sunset (22:54).

20th August 2021 Dawn Survey

2.6 The survey was carried out in suitable conditions whereby air temperature at the start of the survey was 15ºC, with 100% cloud cover, no wind, no rain and clear visibility. The survey commenced at 04:15, 1 hour 41 minutes prior to sunrise (05:56), and continued until 15 minutes after sunrise finishing at 06:11.

Limitations

2.7 All dimensions and distances provided are approximate.

3 Results

Nocturnal Emergence/Re-entry Survey

3.1 During the dusk and dawn nocturnal surveys, one surveyor was positioned at SK 35248 44410 viewing the south and west elevations, and a second surveyor was positioned at SK 35259 44432 viewing the north and east elevations. Each surveyor location was aided by an infra-red camera (Appendix 3: Photographs 1 & 2).

4th August 2021 Dusk Survey

3.2 No bats emerged from or re-entered the bungalow building during the survey.

3.3 The first bat recorded was a noctule *Nyctalus noctule* at 20:44, ten minutes prior to sunset, with one individual foraging above the residential buildings between 20:44 and 20:46. Intermittent registrations of noctule were recorded thereafter for the duration of the survey.

3.4 Other bat activity was included regular passes of commuting and foraging common pipistrelle *Pipistrellus pipistrellus* over the garden areas from 21:00, 6 minutes after sunset, and occasional passes of *Myotis sp* and soprano pipistrelle *Pipistrellus pygmaeus.*

20th August 2021 Dawn Survey

3.5 No bats emerged from or re-entered the bungalow building during the survey.

3.6 Bat species recorded were limited to common pipistrelle, soprano pipistrelle, noctule, and *Myotis sp*. The last bat recorded was a common pipistrelle at 05:37, 19 minutes prior to sunrise, commuting through the site from south to north, along the east elevation and then exited the site over the stone wall at the north site boundary.

4 Discussion & Recommendations

Bats

4.1 Bats are fully protected as a European Protected Species (EPS) under The Conservation of Habitats and Species Regulations 2017 and the Wildlife and Countryside Act 1981 (as amended).

4.2 Due to the presence of commuting and foraging bats at the site recorded during the nocturnal emergence/re-entry surveys, the impacts from external artificial lighting at the site on adjacent habitats should be avoided. Where lighting is required, this should be sympathetic to wildlife through the design of lighting observing the principles set out in guidelines from the Bat Conservation Trust (BCT) & Institution of Lighting Professionals (BCT & ILP, 2018).

4.3 The existing Preliminary Bat Roost Assessment assessed the bungalow as having moderate bat roosting suitability. With reference to best practice survey guidelines (Collins, 2016), two nocturnal emergence/ re-entry surveys were carried out, comprising one dusk emergence survey and one dawn re-entry survey during which no emerging/re-entering bats were recorded. Therefore, with reference to best practice survey guidelines (Collins, 2016), the likely absence of roosting bats at the site can be assumed.

4.4 In the unlikely event that a bat is encountered during works, works should cease immediately and the advice of a suitably experienced ecologist sought.

Enhancements

4.5 In accordance with the National Planning Policy Framework (NPPF, 2019), the development at the site should identify and pursue opportunity for net gains in biodiversity.

4.6 Enhancements for the site have been set out in the third party ecologist Preliminary Bat Roost Assessment report (The Bat Surveyor, 2021).

5 References

Bat Conservation Trust (BCT) & Institution of Lighting Professionals (ILP), (2018). *Bats and artificial lighting in the UK.* Bats and the Built Environment series. Guidance Note 08/18.

Barn Owl Trust (2012). *Barn Owl Conservation Handbook*. Pelagic Publishing.

British Standards Institute (BSI)SI (2013). *BS 42020:2013 Biodiversity. Code of practice for planning and development*. British Standards Institute, London.

CIEEM (2017) *Guidelines on Ecological Report Writing*. Chartered Institute of Ecology and Environmental Management, Winchester.

Collins, J (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn). The Bat Conservation Trust, London.

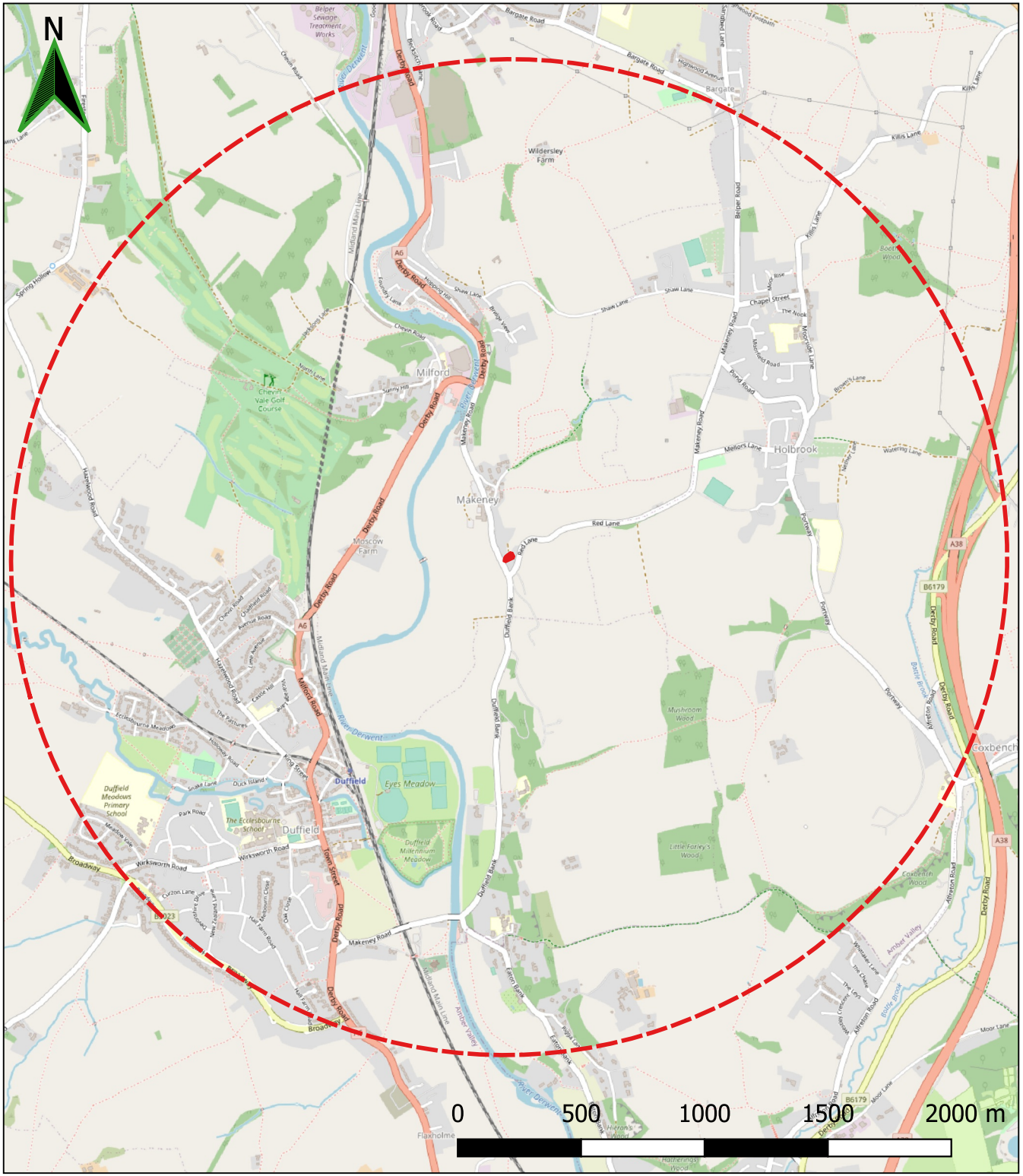
JNCC (2010). *Handbook for Phase 1 habitat survey - a technique for environmental audit*. Joint Nature Conservation Committee, Peterborough.

Maddock, A. (ed) (2011). *UK Biodiversity Action Plan Priority Habitat Descriptions (updated Dec. 2011).* Joint Nature Conservation Committee, Peterborough.

The Bat Surveyor (2021) *Preliminary Roost Assessment: Schiermonnikoog, Makeney, Milford, Derbyshire, DE56 0RS.* Project number 055. Version 1. April 2021.

Appendix 1: Site Location Plan

(Overleaf)



Legend

- Site Boundary
- 2km Site Buffer

Project:

Shiermonnikoog, Makeney Road

Drawing:

Apendix 1: Site Location Plan

Date: 02-09-2021 Version: FINAL

Author: PH Job No: P2135

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Appendix 2: Planning Policy and Legislation Summary

5.1 This appendix serves as a summary of relevant policy and legislation. It is not intended to supersede the policy or legislation documents to which it refers, and the relevant full documents should always be consulted prior to decision making.

National Planning Policy Framework 2019

5.2 Biodiversity is a material consideration under the National Planning Policy Framework (2019). Relevant text to biodiversity from the NPPF is described below.

5.3 In Section 2 of the NPPF 'Achieving sustainable development', paragraph 8(c), the NPPF sets an environmental objective:

5.4 "To contribute to protecting and enhancing our natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy."

5.5 In Section 15 'Conserving and enhancing the natural environment', the NPPF states that:

5.6 "170. Planning policies and decisions should contribute to and enhance the natural and local environment by:

- Protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
- Recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland; […]
- Minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.
- Preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. […]"

5.7 The NPPF, in paragraph 174. sets out that to protect and enhance biodiversity, plans should:

- "Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and
- promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity."

5.8 In determining planning applications, the NPPF sets guidance that local planning authorities should apply the following principles:

- If significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;

- Development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted […];

- Development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and

- Development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity."

5.9 Paragraph 176 states that the following sites should be given the same protection as habitats sites:

- "Potential Special Protection Areas and possible Special Areas of Conservation;

- listed or proposed Ramsar sites; and

- sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites."

5.10 Paragraph 177 states that "The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or projects will not adversely affect the integrity of the habitats site."

5.11 Paragraph 180 states that planning policies and decisions should ensure new development is appropriate to its location and take into account likely effects of pollution on the natural environment, and in doing so:

- "Mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development; […]

- limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation."

Government Circular ODPM 06/05 Biodiversity and Geological Conservation

5.12 The government circular provides administrative guidance on the application of statutory obligation and legislation relating to planning and nature conservation in England. It complements the National Planning Policy Framework. The document includes guidance on designated sites (international and national), habitats, and protected species.

5.13 Relating to protected species and the requirement for their consideration in planning applications, the government circular, in paragraph 98 details that:

5.14 "The presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat. Local authorities should consult English Nature [now Natural England] before granting planning permission. They should consider attaching appropriate

planning conditions or entering into planning obligations under which the developer would take steps to secure the long-term protection of the species. They should also advise developers that they must comply with any statutory species' protection provisions affecting the site concerned."

5.15 Paragraph 99, relating to the requirement and timing of protected species survey and mitigation, the government circular states that:

5.16 "It is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is granted, otherwise all relevant material considerations may not have been addressed in making the decision. The need to ensure ecological surveys are carried out should therefore only be left to coverage under planning conditions in exceptional circumstances, with the result that the surveys are carried out after planning permission has been granted. However, bearing in mind the delay and cost that may be involved, developers should not be required to undertake surveys for protected species unless there is a reasonable likelihood of the species being present and affected by the development. Where this is the case, the survey should be completed and any necessary measures to protect the species should be in place, through conditions and/or planning obligations, before the permission is granted. In appropriate circumstances the permission may also impose a condition preventing the development from proceeding without the prior acquisition of a [Natural England] licence."

The Conservation of Habitats and Species Regulations 2017 (as amended)

5.17 The term 'European Protected Species' (EPS) is used to describe species listed on Schedule 2 of the The Conservation of Habitats and Species Regulations 2017 (as amended). Regarding these species, Regulation 43 of the Regulations make guilty of an offence a person who:

- "Deliberately captures, injures or kills any wild animal of a European protected species;
- Deliberately disturbs wild animals of any such species;
- Deliberately takes or destroys the eggs of such an animal, or;
- Damages or destroys a breeding site or resting place of such an animal […]"

5.18 Regulation 43 defines that the disturbance of animals includes any disturbance which is likely to:

- Impair their ability:
    - to survive, to breed or reproduce, or to rear or nurture their young; or
    - in the case of animals of a hibernating or migratory species, to hibernate or migrate; or
    - to affect significantly the local distribution or abundance of the species to which they belong.

5.19 A person guilty of an offence under Regulation 43 is liable on summary conviction to imprisonment for a term not exceeding six months or to a fine, or to both.

Wildlife and Countryside Act 1981 (As Amended)

5.20 The Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000) lists species on Schedule 5 for which the Act make it an offence to:

- Intentionally kill, injure or take;
- Recklessly or intentionally damage or destroy, or obstruct access to any structure or place which any wild animal included uses for shelter or protection;
- Recklessly or intentionally disturb any such animal while it is occupying a structure or place which it uses for shelter or protection.

5.21 Some species receive partial protection under the Act, which limits their protection under the Act to intentional killing or injury.

5.22 All wild nesting birds are protected under the Act, making it an offence to:

- Intentionally kill, injure or take any wild bird; and
- Take, damage or destroy the nest (whilst being built or in use) or eggs of any wild bird.

5.23 Some bird species are afforded special protection via their inclusion in Schedule 1 of the Act, which makes an offence to intentionally or recklessly disturb any schedule 1 bird building a nest or which is in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird, or whilst such a bird 'leks' (i.e. congregates for community courtship behaviour).

5.24 Schedule 9 of the Act makes it an offence to cause any plant listed to grown in the wild, unless all reasonable steps were taken to prevent an offence and due diligence was exercised.

5.25 The Act sets out provisions to protect Sites of Special Scientific Interest (SSSI).

Natural Environment and Rural Communities Act 2006

5.26 Section 40 of the Act places a legal duty on public authorities (including planning authorities) to have regard to biodiversity conservation in their normal functions (including planning applications).

5.27 Under Section 41 of the Act, lists of Habitats of Principal Importance (HPI) and Species of Principal Importance (SPI), of principal importance for the purpose of conserving biodiversity, are produced which serve to guide public authorities in carrying out their functions with consideration for biodiversity conservation.

5.28 Wild Mammals (Protection) Act 1996 (as amended)

5.29 The Act protects wild mammals against certain cruel acts, including intentional crushing, downing or asphyxiation.

Appendix 3: Photographs



Photo 1: The north and east aspects of the building as seen through the IR camera on the 4th August 2021.



Photo 2: The south and west aspects of the building as seen through the IR camera on the 4th August 2021.

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