

**Collective Architecture**

# **Kildonan Street Bat Activity Surveys**

**Draft final report**  
Prepared by LUC  
October 2021



**Collective Architecture**

**Kildonan Street  
Bat Activity Surveys**

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# Chapter 1

## Executive Summary

**1.1** LUC was commissioned by Collective Architecture, on behalf of their client, to conduct bat re-entry and emergence surveys to inform a 'Planning Permission in Principle' application for the retention, conversion and demolition of the municipal buildings located at Kildonan Street, Coatbridge, North Lanarkshire.

**1.2** Two activity surveys; one emergence and one re-entry survey, were undertaken at Kildonan Street between August and September 2021.

**1.3** No bat roosts were identified during either of the two surveys. Only a low level of bat activity was recorded, primarily foraging and commuting behaviour.

**1.4** Re-development or demolition of the surveyed buildings, and any subsequent works, are unlikely to have any significant impact on local bat populations, subject to appropriate mitigation methods being employed.

**1.5** This report follows on from the results of a Preliminary Ecological Appraisal (PEA)<sup>1</sup> undertaken by LUC in May 2021. As such, the following report should be read in conjunction with LUC's PEA report.

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<sup>1</sup> LUC (2021). Kildonan Street Preliminary Ecological Appraisal.

## Chapter 2

### Introduction

#### Scope of Works

- 2.1** LUC was commissioned in June 2021 to provide ecological support, specifically bat re-entry and emergence surveys, of the municipal buildings at Kildonan Street, Coatbridge (hereafter referred to as ‘the Site’).
- 2.2** It is proposed that the Site is to be converted into housing, with the retention of some office space for North Lanarkshire Council, and a small number of new build residential properties. The existing Police Station is currently proposed for demolition.
- 2.3** This report follows on from the Preliminary Ecological Appraisal (PEA) conducted by LUC in May 2021.
- 2.4** Based on the PEA, the Site was determined to have moderate Bat Roost Potential (BRP).
- 2.5** As such, two surveys were carried out by LUC; one emergence and one re-entry survey. All surveys were conducted in accordance with current best practice guidelines<sup>2</sup>.
- 2.6** This report provides an account of the methods adopted, the results of the surveys, potential impacts on bats from the proposed development of the Site and mitigation recommendations.

#### Legislation

- 2.7** Owing to their rapid decline in recent decades, all species of bat native to Scotland are classed as European Protected Species (EPS) and receive full legal protection under the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended in Scotland), often referred to as the ‘Habitats Regulations’. There is no change to the protection of European Protected Species as a result of the United Kingdom’s exit from the European Union.
- 2.8** Under this legislation, all bat species are fully protected from killing, taking or disturbance whilst in their places of shelter. Their resting/breeding sites are also protected from obstruction, damage or destruction, even if these features are not in current use. While the legislation protects against the actions described above, a licensing system, overseen by

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<sup>2</sup>Collins, J. (2016). Bat Surveys for Professionals – Good Practice Guidelines (3<sup>rd</sup> edn). The Bat Conservation Trust, London.

**Chapter 2**  
Introduction

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NatureScot (NS) exists, effectively allowing development projects to destroy bat roosts in certain circumstances and under specific conditions.

## Chapter 3

### Methods

#### Survey Aims and Objectives

- 3.1** The surveys aimed to determine if bats were roosting within the Site and provide an accurate understanding of how the structures are used.
- 3.2** The aim was delivered via the following objectives:
- A review of the desk study, as carried out by LUC during the initial PEA survey.
  - Execution of field surveys which employ current good practice methods.
  - Interpretation of survey results using current understanding of local and national bat populations and in line with understanding of bat ecology.

#### Survey Methods

##### Desk Study

**3.3** A desk study was undertaken prior to the activity surveys, as part of the initial PEA. The aim of the desk study was to identify any historical use of the Site, and surroundings, by bats. Data was drawn from existing national surveys and incidental records identified through publicly available records within 1km of the Site<sup>3</sup>.

##### Bat Roost Potential (BRP) – Roost Assessments

**3.4** LUC carried out a PEA assessment on the 27<sup>th</sup> May 2021. The Site was considered to have **moderate BRP**, when considered against the criteria established in **Table 3.1**.

**3.5** The BRP features identified during the PEA, and associated photographs, can be found within Appendix A and B of the PEA report<sup>1</sup>.

##### Commuting and Foraging Habitat Features

**3.6** The habitats on Site and surrounding wider area were surveyed during the PEA to ascertain the foraging and commuting potential it provides for bats using **Table 3.1**, below.

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<sup>3</sup> NBN Atlas (2021). Available online at : <https://scotland-spatial.nbnatlas.org/#> [Accessed October 2021].

Table 3.1: Bat Roost Potential Categories

BRP Category	Roosting and Habitat Features	Commuting and Foraging Habitat Features	Survey Requirement
Negligible	Negligible habitat features likely to support roosting, commuting or foraging bats.		No surveys required.
Low	Structures in this category offer one or more potential roost Sites for individual, opportunistically roosting bats. These Sites do not offer the space, shelter or appropriate conditions to support large numbers of bats or maternity roosts.  Trees in this category include those of sufficient size and age to support suitable roosting features, but none are visible from the ground.	Habitat on and around the Site could be used by a small number of commuting bats. This category includes densely urbanised landscapes or linear vegetation features poorly connected to the wider landscape (e.g., gappy hedges in an agricultural context).	One dusk or dawn survey required for structures.  No surveys required for trees.
Moderate	Structures and trees in this category offer one or more roost Site that, due to their space, shelter or conditions, offer roosting potential for a range of species. Roosts may be more permanent, rather than opportunistic. Small maternity roosts of common species may form in one of these roost Sites	Habitat on and around the Site is well-connected to wider continuous habitat and offers commuting and foraging habitat to a larger number of bats across a number of species. (e.g. tree lines or linked gardens in the urban context, or continuous hedge/ tree lines and watercourses in an agricultural setting).	One dusk and one dawn survey required for both structures and trees.  Tree-climbing may be an appropriate alternative to dusk and dawn surveys.
High	Structures and trees in this category have one or more potential roost Sites that are suitable for large number of bats. Roosts are likely to be permanent and include maternity roosts. Potential roost Sites exist for a wide range of species or species of particular conservation interest.	Habitat on and around the Site is diverse, continuous and linked to extensive suitable habitat. This category includes well-vegetated rivers, streams, hedgerows and woodland edge.  Habitat is sufficiently diverse to offer opportunities to a wide range of species or those of particular conservation interest	Three surveys, including both dusk and dawn elements.  Tree-climbing may be an appropriate alternative to dusk and dawn surveys.

## Re-entry / Emergence Survey

**3.7** The Site was assessed as having **moderate BRP**. As such, one emergence and one re-entry survey was undertaken.

**3.8** The survey method involved six surveyors per survey, strategically positioned around the building to ensure full visual coverage of each elevation and aspect. Surveyor positions are shown in **Figure 1, Appendix A**.

**3.9** Each surveyor was equipped with a heterodyne detector to allow real time identification of the species, which are determined through species-specific frequency. Anabat express recorders were also deployed to record calls

throughout the survey, with data then analysed to give a full picture of bat activity in and around the Site.

**3.10** When a surveyor witnessed a bat during surveys, a note was made of time, species, number of individuals and the behaviour of the bat(s) e.g. foraging, commuting etc. Standardised recording forms were used to ensure consistency of approach across the survey team.

**3.11** The same methods were employed for both the emergence and re-entry surveys.

**3.12** Re-entry and emergence surveys were conducted in August and September 2021. Re-entry surveys commenced 90 minutes prior to sunrise until 15 minutes after sunrise, where conditions were appropriate. Emergence surveys commenced 15 minutes prior to sunset and continued for 90



minutes after. All surveys were undertaken within the accepted survey season (April – September inclusive) and conducted in appropriate weather conditions. **Table 3.2** below details survey timings and weather experienced.

**Table 3.2: Kildonan Street, Re-Entry and Emergence Survey Timings and Weather**

Date	Survey Type	Sunrise/Sunset	Start/End Times	Weather Conditions
23/08/2021	Emergence	20:34	Start: 20:19 End: 22:04	Dry and clear night with a light breeze. Temperature ranged from 18 to 19°C. Visibility was good.
07/09/2021	Re-entry	06:30	Start: 05:00 End: 06:30	Dry and clear morning. No wind. Temperature ranged from 15 to 16°C. Visibility was excellent.

## Survey Constraints

**3.13** The timeframe in which a survey is undertaken provides a snapshot of activity on the Site and will not necessarily detect all evidence of use by a species. Ecological surveys are limited by a variety of factors which affect the presence of flora and fauna such as season, migration patterns and species behaviour. Evidence of species is not always discovered during the survey. This does not mean that a species is absent. Most bat species are transient and may use roosts for a short time only. It is therefore not possible to confirm that all roosts that may have existed have been identified and described in this report.

**3.14** Due to the ongoing Covid-19 pandemic, internal access to the buildings on Site was not permitted. As such, the surveys were only completed on external features.

**3.15** The re-entry survey conducted on the 7<sup>th</sup> September 2021, finished 15 minutes earlier than good practice suggests. This decision was determined by a highly experienced ecologist, who judged the weather conditions i.e. light levels, presence of gulls etc. unsuitable for continued surveying.

## Chapter 4

### Results

#### Desk Study

**4.1** A desk study was undertaken as part of the initial PEA<sup>1</sup> of the Site.

**4.2** Results from the desk study identified no historical records of bats within the Site or surrounding 1km buffer.

#### Bat Roost Potential (BRP)

**4.3** The Site was surveyed prior to the emergence and re-entry surveys during the initial PEA<sup>1</sup>.

**4.4** The Site was deemed to have moderate bat roosting potential, as there were several BRP features on every section of the municipal building, including slate roofs, gaps by wooden fascia, and lifted flashing.

#### Commuting and Foraging Habitat Features

**4.5** The Site is located within a densely urbanised landscape. There is one hedgerow to the east of building, separating the Site from Coatbridge High School, and a small line of broadleaved trees to the south and west. Because of this, the Site is considered to provide poor foraging and commuting habitat, as well as poor connectivity to the wider area.

**4.6** The Site is illuminated by streetlights on all sides, but is particularly bright on the northern and western elevations.

#### Re-entry/Emergence Surveys

**4.7** A total of two surveys were conducted on the 23<sup>rd</sup> August and 7<sup>th</sup> September 2021. A low number of Common pipistrelles (*Pipistrellus pipistrellus*) and Soprano pipistrelles (*Pipistrellus pygmaeus*) were recorded, with activity primarily limited to commuting, however foraging behaviour was recorded on occasion.

**4.8** During the emergence survey, bat activity was recorded throughout the first 60 minutes of the survey while, during the re-entry survey, all activity was recorded near the beginning of the survey.

**4.9** The most notable activity was recorded during the emergence survey, when an individual bat appeared very early in the survey and, having identified that gulls were still active, restricted its activity to a dark, enclosed area to the

## Chapter 4

### Results

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east of the building. The bat subsequently left the area as it became darker and the gulls roosted.

**4.10** It was also common for no bat activity to be recorded in several surveyor positions, across both surveys.

**4.11** There was no evidence of roosting behaviour during either survey, however the appearance of bats near the beginning of the emergence survey suggests a roost may be located relatively nearby.

## Chapter 5

### Discussion

#### BRP and Habitat Suitability

**5.1** The Site has limited foraging and commuting potential, due to the absence of well-connected hedgerows, tree lines and woodland areas.

**5.2** The area immediately surrounding the Site is urbanised with high noise and light pollution. However, the wider area possesses more foraging and commuting opportunities. Drumpellier Country Park is located within 2km to the west, and to the north lies pasture, arable land, and small areas of woodland. This surrounding habitat will not be impacted by development and will continue to provide foraging and commuting opportunities.

**5.3** When categorising the BRP of a structure, the commuting and foraging habitat features must be considered. The criteria for high roost potential are stated in **Table 3.1**, “habitat surrounding a Site is diverse, continuous and linked to extensive suitable habitat”. As addressed in **5.1**, the Site is not deemed to fit these criteria.

**5.4** The municipal building, which is split into three distinct sections was assessed as having moderate BRP overall, during the initial PEA survey<sup>1</sup>.

**5.5** Based on the desk study and local knowledge it is likely that any bats roosting in the building would be common and widespread species.

#### Re-entry/Emergence Surveys

**5.6** The emergence and re-entry surveys recorded no roosting bats on Site.

**5.7** Based on the results, the Site is not considered to play a role in breeding or the rearing of juvenile bats. The subsequent development of the Site is therefore unlikely to have a negative effect on the conservation status of local bat populations.

## Chapter 6

# Mitigation and Recommendations

**6.1** As there are no confirmed bat roosts within the Site, it will not be necessary to submit a licence application to NS before any work can commence.

**6.2** It is considered that the scheduled demolition/re-development of the surveyed building within the Site will not pose any significant negative impacts on local bat populations.

**6.3** There were no confirmed roosts on Site. Furthermore, foraging and commuting opportunities in the wider area will be maintained during and post development of scheduled buildings. However, the following mitigation recommendations should be adopted in the emerging design, and included in a full planning application:

- Avoid having light shining directly onto bat foraging habitats such as tree line areas, woodland or wetlands areas where applicable.
- If at any time bats are identified during any of the works, the works should stop **immediately** within the immediate area and a licenced bat worker should be contacted to remove them.
- In the event of any unexpected findings e.g. a large number of bats found, then works will cease and NS will be contacted **immediately**.

**6.4** Given the discussed mitigation above, the risk of injury or death to bats is very low. The risk of disturbance is also low and is an acceptable risk in the circumstances.

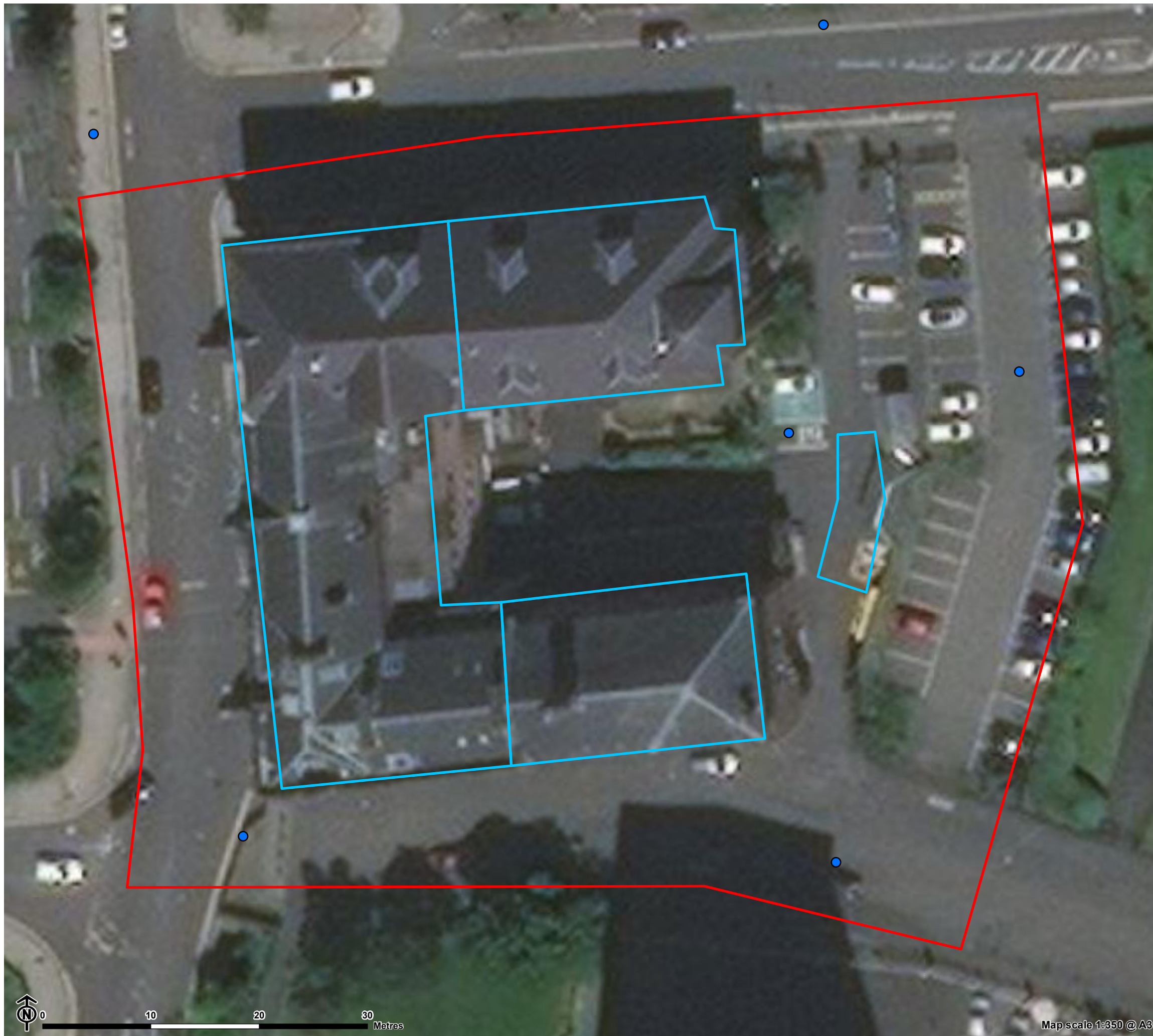
**6.5** If the demolition/re-development works do not commence within 18 months of these surveys being completed, it will be necessary to update the surveys.

# Appendix A

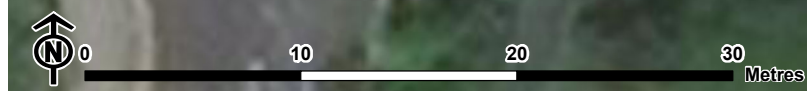
## Figures

Figure 1: Surveyor Positions

Figure 1: Kildonan Street Surveyor Positions



- Site boundary
- Buildings within project scope
- Surveyor position



Map scale 1:350 @ A3