astell associates

arboricultural, ecological & landscape consultants

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Tree Survey

Kirklands of Cluny, Sauchen

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Summary

It is proposed to convert the steading into a storage building and studio, as well as infilling the courtyard area.

20 trees have been surveyed. These are made up of 10 class B trees and 10 class C trees.
One tree is to be felled for woodland management.
No trees are to be removed to accommodate the proposed re-development.

Introduction

Scope of Survey

Astell Associates have been instructed by JAM studio Ltd on behalf of Gordon & Lesley Murray to advise on trees and the constraints on development at Kirklands of Cluny, Sauchen.

This report is intended to accompany the Planning Application as a document informing the application and demonstrating that the implications of the proposed development on the arboricultural, landscape and cultural (conservation) value of the trees on the site have been fully considered.

Study Aim

The aim is to identify any tree constraints to inform the proposed development of the site.

Study Objectives:

- Map the location and characteristics of the trees and tree groups within and adjacent to the site, which could be affected by the development proposals.
- Identify trees that would be removed as part of normal arboricultural management (i.e. dead/unviable trees)
- Assess trees for bat roosting potential.
- Identify any constraints or threats which may impact future management of the trees.
- Provide outline management recommendations to designed to retain trees and tree groups on or adjacent to the site.

Desk Study

A desk study has been carried out to ascertain any Tree Preservation Orders or other statutory designations for the area (e.g. Ancient Woodland or National Forest Inventory).
There are no Tree Preservation Orders or other statutory designation for this area.

Limitations

- This is a preliminary assessment from ground level and observations have been made solely from visual inspection for the purposes of assessment for planning and the proposed development.
- No invasive or other detailed internal decay detection instruments have been used in assessing trunk condition.
- No soil samples have been taken and no soil analysis carried out.
- The conclusions relate to conditions found at the time of inspection. The recommendations contained within this report (Tree Schedule) are valid for a period of one year only.
- Any significant alteration to the site that may affect the trees that are present (including level changes, hydrological changes, extreme climatic events or other site works) may necessitate a re-assessment of the trees and the site.
- It should be noted that this survey is not a tree safety inspection. It is carried out in order to inform the planning process.

Site Visit and Tree Assessment Methodology

- A site visit was undertaken on 27/10/2023 by James Bellis and Amelia Cardy.
- Trees have been surveyed from ground level with binoculars to survey features at height.
- The Visual Tree Assessment method (Mattheck and Breloer, 1994) has been used to assess the trees.
- Standards and methodology from BS5837:2012 – 'Trees in relation to design, demolition and construction – Recommendations' (BSI, 2012) and Arboricultural Association Guidance Note 7 'Tree Surveys: A Guide to Good Practice' have been used, along with the Aberdeen Local Development Plan Supplementary Guidance: 'Trees and Woodlands' (2017)
- A Hypsometer has been used to establish tree heights, with visual estimates being used for trees in close proximity.
- The site has had a tree survey done in the past, as a result many of the trees have tags remaining from this survey. All trees with a diameter of over 12cm, which did not have obviously visible metal tags on them, been re-numbered with plastic 'letratag' numbers, keeping numbers in sequence with the previous survey.
- Trees have been surveyed for tree species, height, number of stems, stem diameter, branch spread, tree category and suitability for retention.
- Trees have been surveyed from ground level for bat roosting potential to inform of any further survey work that may be required on trees affected by the proposals.
- Canopy spread has been estimated by pacing and dimensions given to N, S, E & W.
- The trees have been positioned by a previous survey carried out in 2012 and in a more recent topo survey provided by the architect.
- Details of surveyed trees are provided in The Tree Survey Schedule, Appendix A. Refer to drawing KCS-2310-AA, which is a plan showing the location of each tree and its arboricultural tree category.

Site Description & Proposed Development

Site Location

Figure 1. Site location circled in red. Postcode: AB51 7RS.

Site Description

The site consists of 20 trees to the south and southwest of a house and a steading, bordered by retaining walls and fences. It is surrounded by areas of agricultural fields and areas of woodlands containing mature broadleaved and deciduous trees.

Figure 2. Aerial photograph with site outlined in red.

Development Proposals

It is proposed to convert the steading into a storage space and a studio, as well as infilling the courtyard area.

Tree Preservation Orders / Conservation Areas or Woodland Designations

The site is not listed in the Ancient Woodland Inventory Scotland or the National Forest Inventory.

The site is not situated within a Conservation Area, and there are no Tree Preservation Orders at the site.

Tree Species in Survey Area

Common Name	Scientific name	No
Noble Fir	Abies procera	4
Silver Birch	Betula pendula	4
Holly	Ilex aquifolium	1
Beech	Fagus sylvatica	2
Lime	Tilia europaea	2

Common Name	Scientific name	No
Cherry	Prunus avium	2
Western Red Cedar	Thuja plicata	1
Poplar	Populus	3
Sweet Chestnut	Castanea sativa	1

Arboricultural Impact

General

The proposed development of the steading will not drastically alter the size of the building and will therefore not have much of an impact on many of the trees in the site. The trees of most interest are those located to the north of the northern part of the garden, south of the steading.

Trees 513, 514, 515, 516, 517, 518, 520, 521, 522, 523, and 524 are located along the southern part of the garden. All are category B trees with the exceptions of 515, 519, 522, and 524, which are category C trees. All their root protection areas fall outwith the location of the proposed development.

Trees 501, 504, 505, 507, 509, 510, 511, and 512 are located in the northern part of the garden. All of these are category C trees except trees 505 and 509, which are category B trees. The C class trees all have root protection areas which fall outwith the proposed development.

Root Protection Area

Trees 505 and 509 are both class B Noble Fir trees. Their root protection areas reach the southern part of the proposed car storage. However, this is a general measurement and, in all likeliness, the actual roots do not extend that far to the north as there is a retaining wall with a hardstanding area in between the trees and the building. There is also an existing hardstanding gravel area which lies in between the trees and the proposed development. The root protection areas only very minimally encroach on the proposed car storage area. Both trees are recommended to be retained.

Trees to be felled

Silver Birch 510 is recommended to be felled as it is so heavily suppressed by Noble Fir 509. There is not much room for growth and some rot has started to occur in a wound where a branch has snapped off in the past.

The tree schedule with details of each tree is given in Appendix A

Tree Protection

There is a retaining wall between the steading and the trees 505 and 509. This wall is around one metre tall and around three metres to the north of the closest trees, as a result of this, it will provide sufficient tree protection, so tree protection fencing will not need to be erected.

Underground Service Installation

Details of any proposed service runs associated with the proposed development have not been provided. However, any service runs in proximity to the retained trees must be excavated in accordance with National Joint Utilities Group (NJUG) Guidelines for installing and maintaining services close to trees (NJUG 10).

An electrical engineer will calculate the requirements of the existing electrical supply to determine if an upgrade of it is required. If a completely new supply will be required, it will be run from the transformer, which is located to the south of tree 522. It is recommended that the route it takes should go around the back of the existing house, outwith the root protection areas of the trees.

Bat Roost Potential

As part of the tree survey, all trees were surveyed from ground level for features which indicate that they could have bat roosting potential. This includes features such as holes and cavities, cracks & splits in major limbs and loose bark. Such features are more commonly found on mature or veteran trees.

Tree 501 has low bat roosting potential. It is not to be felled for the proposals or management and no further action is necessary.

Site Photos

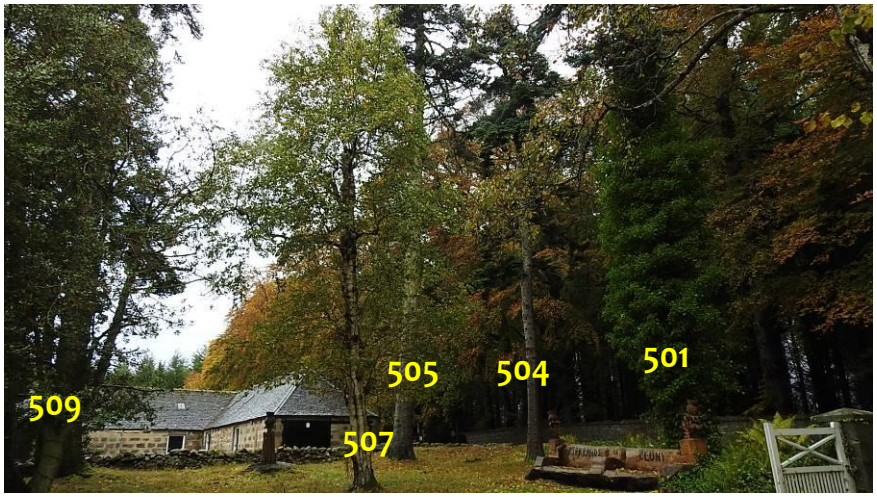

Photo 1:
View north of trees 501, 504, 505, 507 and 509. Tree 501 has extensive ivy growth from base to 18m. It is recommended that the ivy is cut at the base and allowed to die.

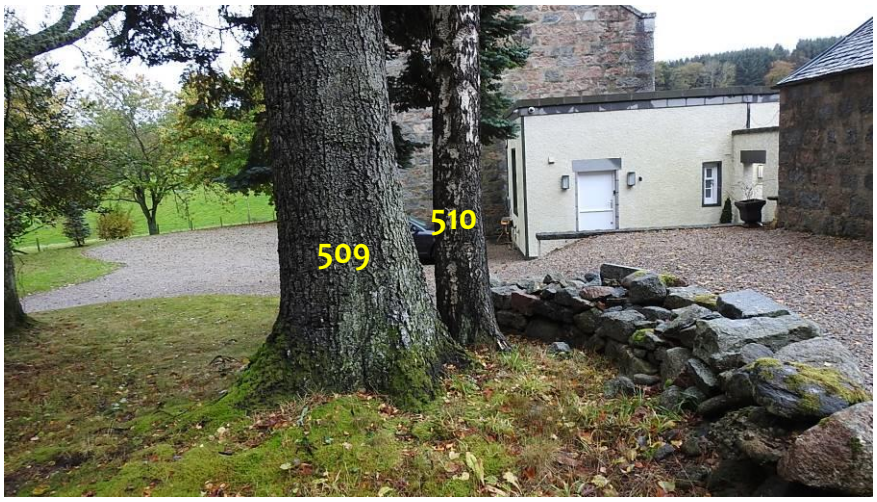

Photo 2:
Silver Birch 510 growing to the west of Noble Fir 509 to the south of the retaining wall. Tree 510 is heavily suppressed with a one-sided canopy to the west and is recommended to be felled for management.

Photo 3:
Tree 513 engulfing a fencepost to the south. The tree grows on a retaining wall to the east. It is recommended that the fencepost is removed.

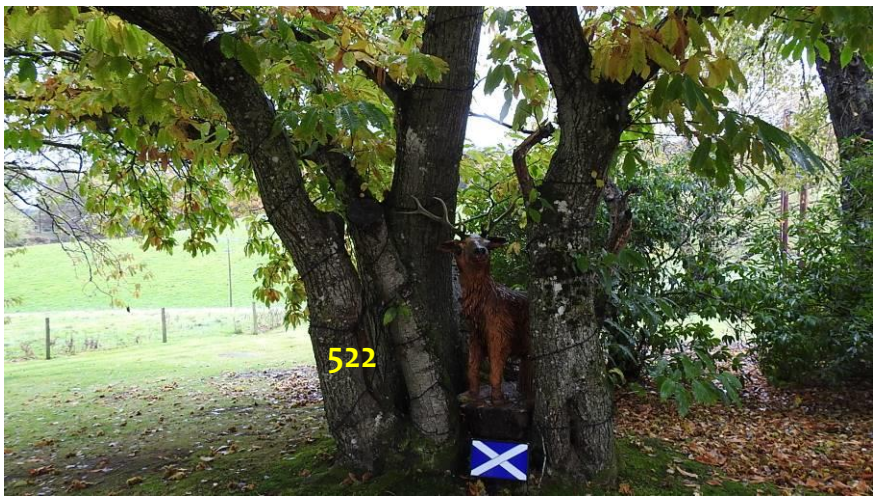

Photo 4:
Tree 522 with a deer sculpture on top of one of the stems which has been removed. Many of the trees in this area have lights wrapped around them with electricity sources attached to them.

Photo 5:
Pile of stones stacked over roots of tree 524, overburdening them. These stones should be removed if they were placed there within the last five years.

Photo 6:
Tree 515 with a large hollow on the south side, hollow with no bat roost potential. It is unclear how deep any of these cavities go. Tree is to be retained.

Arboricultural Method Statement

General

This is an Arboricultural Method Statement highlighting the sequence of operations that will be undertaken. This section sets out the basis for all proposed works in relation to the proposed development in proximity to trees located within the development site boundary and for those trees outside the development site boundary where they overhang the site or where their RPAs extend into the site.

Sequence of Operations

1. All tree works detailed on the tree schedule (Appendix A and Arboricultural Impact section) will be carried out to BS:3998.

General Precautions

2. No materials which are likely to have an adverse effect on tree health with be stored or discharged within 10m of the base of a tree which is to be retained. Further considerations will be given to storage of materials upslope of retained trees to minimise the risk of spillages leaching down-slope and contaminating the root protection area of a tree. Such materials include, but are not limited to:
   - Oil
   - Bitumen
   - Cement
3. No fires will be lit within 20m of the base of any tree which is to be retained.
4. Concrete mixing will not take place within 10m of the base of any tree which is to be retained.
5. Other than works detailed in this method statement, or approved by the local planning authority, no works (including the storage or dumping of materials, or the storage or operation of plant or machinery) shall take place within the construction exclusion zones set out by the tree protection fences.

Supervision and Monitoring

An Arboricultural Consultant will be responsible for monitoring of all operations relating to arboricultural issues and will confirm the completion of the following operations:

- All tree works.
- Any excavation of service tranches close to trees

Any operations within the Construction Exclusion Zones of retained trees will be overseen and supervised by the appointed arboricultural consultant.

Contingency Plans

In the event of unforeseen incidents occurring which may adversely affect or impact the welfare or security of trees, the site manager will inform the Arboricultural Consultant at the earliest opportunity, and not more than one working day following the incident.

The arboricultural consultant will visit the site to inspect and assess the conditions and make appropriate recommendations. The Local Planning Authority Tree Officer will be informed by the Arboricultural Consultant of such incidents and recommendations will be submitted for approval by the Local Planning Authority.

Incidents which merit such contingency plans include:

- Accidental/unauthorized damage to the limbs, roots, or trunk of trees
- The spillage of chemicals within or adjacent to a root protection area
- The discharge of toxic materials/waste within or adjacent to a root protection area
- The unscheduled or unsupervised breaching of the tree protection fence

Damage Limitation

Any operations within the Construction Exclusion Zones of retained trees including the dismantling and erection of tree protection fencing will be overseen and supervised by the appointed arboricultural consultant.

Where excavation is required within the Root Protection Area, this will be undertaken by hand, from within the footprint of the plot and should be overseen by the appointed arboricultural consultant.

Appendix A: Tree Schedule

No	Species	Dia at 1.5m (cm)	Canopy Radius (m)				Height (m)	RPA (m)	Age	Class	BRP	Description	Action
			N	S	E	W							
501	Noble Fir	76	3	4	3	3	25	9.1	M	C	Low	Mainly one-sided canopy to south, some deadwood and snags in canopy. Tree has ivy growing from base to 18m up stem.	Cut ivy at base and allow to die. Retain and inspect every 18 months.
504	Noble Fir	48	3	3	4	2	17	5.8	M	C	No	Growing 1m southwest of retaining boundary wall. Asymmetrical canopy. Suppressed by neighbouring tree to northwest. Deadwood and snags apparent throughout canopy with ivy starting to grow up west of stem.	Retain. and cut ivy at base and remove.
505	Noble Fir	72	4	4	4	3	27	8.6	M	B	No	Tree has an asymmetrical canopy growing at different levels, more dominant to south and southwest. Deadwood and snags at various levels in canopy. There are Fomes fungi growing around base. Tree appears healthy.	Retain.
507	Silver Birch	39	2	4	3	4	12	4.7	M	C	No	Tree has been topped in past. Various branches have been removed flush to stem but no signs of occlusion or rot. Tree significantly leans southwest. There is damage to the bark at 0.2m east. Deadwood and snags in canopy.	Retain.
509	Noble Fir	73	4	5	2	4	21	8.8	M	B	No	Silver birch growing to west at base of tree. Tree leans south. Deadwood and snags in canopy. Tree appears healthy.	Retain.
510	*Silver Birch*	39	4	0.5	0.5	6	12	4.7	M	*U*	No	*Growing west of noble fir. Suppressed by neighbouring tree to east with a one-sided canopy to west. Northwest branch has snapped leaving scar at 3m, not occluded and some signs of rot.*	*Fell for woodland management.*
511	Silver Birch	49	2	5	4	5	17	5.9	M	C	No	Birdbox at 2m on the southwest side. Damage to basal roots, not occluded and signs of rot apparent. Tree leans south, with mainly one-sided canopy to south. Snags and deadwood at various levels. Small hollow at 2m on the south side, with no bat roost potential or rot.	Retain and inspect every 18 months.

No	Species	Dia at 1.5m (cm)	Canopy Radius (m)				Height (m)	RPA (m)	Age	Class	BRP	Description	Action
			N	S	E	W							
512	Holly	52, 35	4	4	3	3	11	7.5	M	C	No	Tree has electricity source attached on southwest side at 0.2m. Twin stem from base. and south dominant stem forms most of the canopy. Northeast stem has significant bark damage around base to 0.2m, not occluded and signs of rot. Both limbs divide at 2m which forms canopy. Suppressed by neighbouring tree to west. Deadwood and snags apparent in canopy but tree appears healthy.	Retain and inspect every 18 months.
513	Beech	84	6	7	7	6	17	19.3	M	B	No	Five stems from 3m. Snags and deadwood apparent in canopy. Wide spreading canopy. Growing on / through retaining wall to north, to south a fencepost is being engulfed by tree.	Remove south fencepost. Retain and inspect every 18 months.
514	Lime	105	4	5	4	5	17	24.2	M	B	No	Twin stemmed from 1.75m, both make up canopy. Suppressed by neighbouring tree to northeast. Tree is mainly one-sided to south and has been topped in past, resulting in tall vertical branches forming canopy. There is adventitious growth at base. Snags and deadwood in canopy. Tree appears healthy.	Retain.
515	Silver Birch	28	5	1	3	3	15	6.4	M	C	No	Tree leans southwest, large hollow at 4m on south side, appears wet and is angled upwards thus no bat roost potential. Tree is missing top of its canopy, has been topped in past. Suppressed by neighbouring tree to south, mainly one-sided canopy to north and northwest. A sign is nailed to tree is on its north side at 1m.	Retain and inspect every 18 months.
516	Cherry	32	3	3	3	3	14	7.4	M	B	No	Twin-stemmed from 4m. Southwest stem is dominant. There is some damage to surface roots from lawn mower activity. Tree appears healthy.	Retain.
517	Western red cedar	74	4	4	4	4	18	17.0	M	B	No	Twin-stemmed from 3m. Power source box on south stem at 0.2m.	Retain.
518	Poplar	40	3	2	2	2	14	9.2	M	B	No	Twin stem from 4m with east stem dominant. Tree leans north. A branch has been removed at 4m on west side, wound has occluded with no signs of rot. Some deadwood but tree appears healthy.	Retain

No	Species	Dia at 1.5m (cm)	Canopy Radius (m)				Height (m)	RPA (m)	Age	Class	BRP	Description	Action
			N	S	E	W							
519	Poplar	44	3	5	3	5	14	10.1	M	C	No	Three stems from 3m which form canopy. Tree growing northwest of fence and growing into it at base. There is a superficial crack from base to 4m on the east side. Snags and deadwood apparent in canopy. Tree appears healthy.	Retain.
520	Poplar	51	5	5	3	4	14	11.7	M	B	No	Suppressed by neighbouring tree to east. Crack on west side from 1.5m to 2m. Flush cut branches at various levels in crown, all wounds occluding with no rot. Branch snapped off at 5m on northwest side with no rot apparent. Tree appears healthy.	Retain.
521	Cherry	52	4	4	3	4	10	12.0	M	B	No	Flowering cherry. 3 stems from 1.6m. Superficial bark damage on all sides from base to 1.6m but not deep. Branches have been removed in the past but have occluded with no rot. Deadwood and snags in canopy. Some shallow visible roots around base, signs of lawn mower/ digger damage. Tree appears healthy.	Retain.
522	Sweet Chestnut	53, 39, 37, 38, 16	5	6	6	4	10	9.7	M	C	No	Five stems from base, sixth stem has been removed and has deer carving placed onto stump. One limb is dead but remains, one limb dead and has been cut at 2m. Some signs of rot in bark wounds. Power source attached on north and east elevations. Deadwood and snags apparent but tree appears healthy.	Retain and inspect every 18 months.
523	Lime	83	5	5	6	4	16	10.0	M	B	No	Twin-stemmed from 4m. Cavity at divergence angle rotting but upwards-facing hollow thus no bat roost potential. There is adventitious growth at base. Some snags and deadwood in canopy but tree appears healthy. Rabbit burrows around base.	Retain.
524	Beech	150	8	7	8	7	15	18.0	M	C	No	Multi-stemmed from 1.75m. Large impressive wide spreading canopy, with some deadwood and snags. Many flush cut branches on east and southwest sides which are starting to occlude. A limb has snapped off on the southwest side at base, with rot apparent, northeastern roots are overburdened due to a boulder pile.	If the stones were placed there in the last 5 years, remove them. Otherwise, it may cause more damage. Retain and inspect every 18 months

Appendix B: Cascade Chart for Tree Quality Assessment - Adapted from BS: 5837 2012

Table 1: Cascade chart for tree quality assessment				
Category and definition	**Criteria (including subcategories where appropriate)**			**Identification on plan**
Category U Trees which cannot be retained long-term (for longer than 10 years)	• Trees that have a serious structural defect which puts them at risk of collapse, including those that will become unviable after removal of other trees • Trees that are dead or dying • Trees infected with pathogens which could affect the health and/or safety of nearby trees, or very low-quality trees which suppress trees of better quality *NOTE Category U trees can have existing or potential conservation value which might be desirable to preserve.*			**DARK RED**
TREES TO BE CONSIDERED FOR RETENTION				
	1 Mainly arboricultural values	**2 Mainly landscape values**	**3 Mainly cultural values, including conservation**	
Category A Trees of high quality and value: in good condition; able to persist for long (a minimum of 40 years).	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups (e.g. the dominant and/or principal trees within an avenue).	Trees, groups or woodlands of particular visual importance.	Trees, groups or woodlands of significant conservation, historical, or other value (e.g. veteran trees)	**LIGHT GREEN**
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees downgraded from category A because of impaired condition (e.g. presence of minor defects, including unsympathetic past management or storm damage).	Collections of trees (in groups or woodlands) with a higher rating than they would have as individuals.	Trees with some conservation or other cultural value	**MID BLUE**
Category C Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, without significantly greater collective landscape value; and/or trees offering low or only temporary landscape benefits	Trees with no conservation or other cultural value	**GREY**

Appendix C: Tree Life Stages from BS: 5837

Y	Young
SM	Semi-mature
EM	Early-mature
M	Mature
OM	Over-mature
V	Veteran

Appendix D: Drawings

KCS-2310-AA:	Arboricultural Assessment Plan showing existing site layout, positions of all trees, root protection areas, canopy spread and arboricultural assessment.
KCS-2310-TP:	Tree Management and Root Protection Areas Plan showing the proposed development, indicating trees to be felled or retained, root protection areas, canopy spread and tree protection fencing or other tree/root protection measures.

Appendix E: Legislation, Guidance and References

- BS5837:2012 - Trees in relation to design, demolition and construction – Recommendations (BSI, 2012),
- Arboricultural Association Guidance Note 7 Tree Surveys: A Guide to Good Practice Aberdeen Local
- Development Plan Supplementary Guidance: Trees and Woodlands (2017)
- Town and Country Planning (Scotland) Act 1997 (as amended)
- Health & Safety at Work Act 1974
- Construction (Design & Management) Regulations 2015
- Scottish Government Policy on the Control of Woodland Removal

Appendix F: Professional Qualifications

Nigel Astell has been involved in arboriculture for over 40 years. He holds degrees in Botany and Zoology and is a member of the Arboricultural Association and The Chartered Institute of Environmental and Ecological Management.

Amelia Cardy has a BSc in Physical Geography and a MSc in Ecology and Conservation, and is a member of the Chartered Institute of Environmental and Ecological Management (CIEEM). She has worked seasonally in ecology since 2017.

James Bellis has a BSc in Animal Biology from the University of Stirling and is an experienced bat surveyor. He also carries out tree surveys, and environmental walkover surveys. He has been working seasonally in ecology since 2017.

Appendix G: Contact Details

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Appendix H: Report Authorship

Version	Date	Content/Revisions	Report Author	Prepared by	Approved by
	02/11/23	Issued	JB	JB	EP