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ARBORICULTURAL IMPACT ASSESSMENT:

THE FERNS, BECK BANK, QUADRING BANK, SPALDING

FINAL

SEPTEMBER 2024

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ISSUED TO:

Ian Trevor
The Ferns
Beck Bank
Quadring Bank
Spalding
PE11 4QY

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1 Tree Protection Plan.

EXECUTIVE SUMMARY

ESL (Ecological Services) Limited has been commissioned to undertake an Arboricultural Impact Assessment on behalf of Mr Ian Trevor with regard to a proposed re-development of The Ferns, Beck Bank, Quadring Bank, Spalding.

Tree Preservation Orders and Conservation Areas.

- South Holland District Council's website was used to confirm there are no Tree Preservation Orders or Conservation Areas on or adjacent to the site.

Summary of potential impacts:

- The proposed works are in proximity to mature trees. There is the potential to impact the soil, roots, stems and canopies.
- The site is neglected and has been unmanaged for some time. While the larger trees along the western boundary will be retained, site clearance would result in the bulk of the woody vegetation being removed.

Summary of proposed mitigation:

- There is scope for mitigation planting to the boundaries of the site as part of any landscaping plans.
- Protective measures will be implemented to avoid any additional impacts.

Summary of Impact Assessment:

- The bulk of the woody vegetation on site is suffering from overcrowding, poor management and neglect; as a consequence, it is generally in a poor condition. While mass removal may seem harsh, it does give the opportunity to re-plant the site with species appropriate to the conditions, resulting in an overall improvement in the site's public amenity value.

ARBORICULTURAL IMPACT ASSESSMENT: THE FERNS, BECK BANK, QUADRING BANK, SPALDING

1 INTRODUCTION

1.1 SCOPE OF WORK

1.1.1 ESL (Ecological Services) Limited (ESL) has been commissioned to undertake an Arboricultural Impact Assessment on behalf of Mr Ian Trevor with regard to the proposed re-development of The Ferns, Beck Bank, Quadring Bank, Spalding.

1.1.2 The site is located on the southern boundary of Quadring Fen, south of South Drove and west of Beck Bank (approximate central grid reference TF 18665 32258).

1.1.3 The entire working area, together with its immediate surroundings, was surveyed on 6th June 2024 to assess the impact of the proposed works.

1.2 LIMITATIONS

1.2.1 ESL does not carry out soil assessments or pronounce on the health of trees beyond the initial visual assessment.

1.2.2 Dense bramble, dilapidated sheds and the generally-overgrown nature of the site made access to some areas very difficult but this is considered unlikely to have an impact on the assessment. The surveyor had access to key boundary trees from land adjacent.

2 SURVEY METHODOLOGY

2.1 STANDARDS AND HARDWARE USED

2.1.1 The survey was carried out with reference to the guidelines detailed in 'BS 5837:2012 – Trees in relation to design, demolition and construction – recommendations' (hereafter, 'the Standard').

2.1.2 Tree positions were recorded with a Trimble DA2 GNSS.

2.1.3 Stem diameters were measured using a stem diameter tape where practicable, otherwise by estimation, in accordance with Annex C of the Standard.

2.1.4 Tree heights were measured in accordance with Section 4.4.2.6 of the Standard.

2.1.5 Canopy spreads and other measurements were made by tape and/or Leica DISTO D110 where practicable, otherwise by estimation (also in accordance with Section 4.4.2.6 of the Standard).

2.1.6 A schedule of the trees, tree groups and hedgerows surveyed is given as Appendix 1.

2.1.7 Common names are used throughout this report with scientific names given in the schedule. Where species not listed in the schedule are mentioned, their scientific name is given at the first instance.

3 ARBORICULTURAL IMPACT ASSESSMENT

3.1 TREE PRESERVATION ORDERS AND CONSERVATION AREAS

3.1.1 South Holland District Council's website was used to confirm there are no Tree Preservation Orders or Conservation Areas on or adjacent to the site.

3.2 SURVEY RESULTS

3.2.1 The site covers an area of approximately 0.13ha and comprises a derelict single-storey building set within a garden that also contains a number of sheds, greenhouses and kennels (all also derelict). The site is roughly triangular and is described as having an eastern, southern and western boundary. To the north of the site are residential properties, to the east is Beck Bank (beyond which is a wide grass margin and a large drain), to the south is a residential property and to the west is arable land. The site is generally flat and level and is accessed off Beck Bank on the eastern boundary.

3.2.2 The site is so overgrown that is can only be described as a single tree group, although individual trees within the group have been recorded to allow for bespoke assessment. This group comprises a mix including whitebeam, cherry, ash, oak, birch, poplar, beech, willow, laburnum, sycamore, myrobalan plum and Leyland cypress with an understory that includes hawthorn, hazel, apple, hornbeam, guelder rose, cherry laurel, lilac, magnolia and rowan. Some of the specimens on site are ornamental forms of common species, such as purple sycamore.

3.2.3 The largest trees on site are along the western boundary while those within the northern corner of the site are generally sub-75mm stem diameter or self-set scrub; the trees along the eastern boundary have slightly larger stem diameters (ca.150mm). The site generally is overrun with elder and bramble.

3.2.4 Many of the trees along the eastern boundary have been heavily modified, resulting in asymmetric crowns, poor form and an excessive number of wounds, many of which are flush-cuts. This management may be due to the presence of overhead cables, which run along the western edge of Beck Bank.

3.2.5 There is a row of Leyland cypress within the curtilage of the residence that abuts the southern boundary. The owner of these trees is in the process of felling.

3.2.6 Photographs of the site are given as Appendix 2.

3.3 IMPACT ASSESSMENT

3.3.1 There will be no impact to any tree subject to a Tree Preservation Order or with Conservation Area status.

3.3.2 As mentioned above and evidenced in Appendix 2, the general condition of the trees on site is poor. The client is keen to retain the larger trees along the western boundary, shown as T01 to T05 on the Tree Protection Plan. These may require some minor crown modification to address issues such as the torsion failure of a major limb on the oak and the minor dieback/phototropic growth on the ash. Standing deadwood is also present on this boundary and while this is a valuable resource, its retention in this location should only be contemplated if safe to do so (perhaps monolithing to a safe height). Retaining the larger boundary trees ensures the site continues to blend in with the surrounding area and retains some much-needed maturity for future landscaping.

3.3.3 Retaining selected trees on the eastern boundary would require a great deal of effort and add a significant degree of complexity to the proposed build (access, material storage etc.). It would also mean that continued tree operations would be required to avoid impacting the overhead cables and, as seen on site, when this is done unsympathetically, it can have a negative impact on the tree and increase the risk of failures, a particular issue with roadside trees. The removal of the trees along this boundary would greatly simplify the build process and the proposed post-and-rail fence with beech/hornbeam/rowan hedgerow along the entire eastern boundary mould mitigate any losses while providing a more manageable feature.

3.3.4 The site clearance and demolition phases have the potential to impact the retained trees (dust deposition, flying debris etc.). Protective measures are given in the method statement.

3.3.5 The removal of so much woody vegetation from the site has the potential to greatly effect ground water movement and the hydrology of the site. It is strongly recommended this impact be assessed and understood before moving forward.

3.3.6 Clearing the site will have a significant but temporary impact on the site's public amenity value; provided a suitable landscaping plan is put in place, the final result should be better suited to the conditions on site.

3.3.7 The content of the following method statement must be communicated to all site staff and visitors, by way of induction or a toolbox-talk, to ensure everyone on site is aware of their responsibilities.

4 ARBORICULTURAL METHOD STATEMENT

4.1 CONTACT INFORMATION

Report Author	Client/Agent
John Pover	Ian Trevor
ESL (Ecological Services) Limited	The Ferns
1 Otago House	Beck Bank
Allenby Business Village	Quadring Bank
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Lincoln	PE11 4QY
LN3 4NL	e-mail: iantrevor3@gmail.com
Tel: 01522 539325	
e-mail: john_pover@esl-lincoln.co.uk	

4.1.1 The Client may retain the services of a specialist to carry out specific tasks relating to this project (e.g., Access Facilitation Pruning); contact details for specialist contractors are available from the Client.

4.2 AUDITING

4.2.1 It is strongly recommended an auditable record of all protection measures be kept; this should include records of tool-box talks and inductions, together with the locations, specifications and inspection regimes for fencing, ground protection and any other measure implemented to comply with this Method Statement.

4.3 PRE-COMMENCEMENT TREE OPERATIONS

4.3.1 All tree related operations (e.g., crown modification) will be completed before works commence on site.

4.3.2 These operations will be undertaken by a suitably-qualified arborist working to industry best practice (e.g., BS 3998). Method statements must be submitted prior to any proposed operations commencing.

4.4 BARRIERS AND FENCING

4.4.1 By default, protective fencing and associated signage will be installed outside the Root Protection Areas as shown on the Tree Protection Plan before works commence on site. Any installation within a Root Protection Area will be agreed with the scheme arborist in advance. The Root Protection Area defined in the schedule will be applied to the trees, tree groups and

hedgerows and/or any remnant thereof. Restrictions with regard to Root Protection Areas (as given below) will apply during all operations to install protective fencing.

4.4.2 Barriers must be fit for the purpose of excluding construction activity and appropriate to the degree and proximity of work taking place around the retained tree(s). They will be inspected by the site manager to ensure they remain effective throughout the duration of the works. Examples of protective fencing are shown in Diagrams 1 (default) and 2 (above-ground stabilising system).

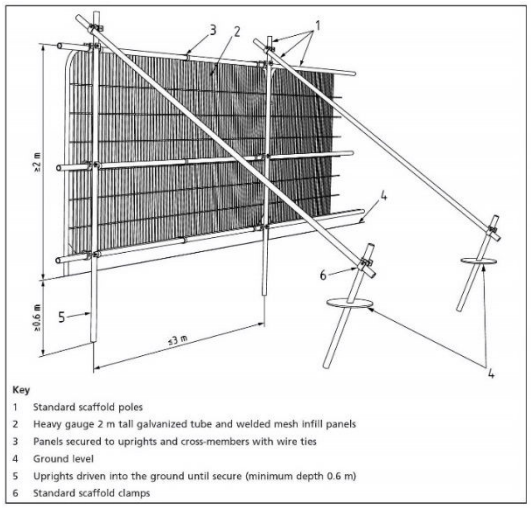


Diagram 1. Default specification for protective barrier.

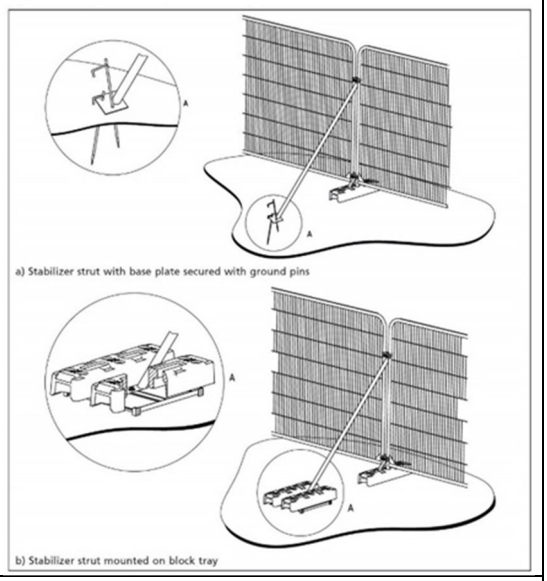


Diagram 2. Examples of above-ground stabilizing systems.

4.5 DEMOLITION PHASE

4.5.1 Given the proximity of the various buildings to the retained trees, the outbuildings will be brought down by hand. The main building will be demolished using a top-down/pull-back method. Suitable screening will be affixed to the protective fencing to protect the retained trees from flying debris.

4.6 ROOT PROTECTION AREAS

4.6.1 A Tree Protection Plan is given as Figure 1.

4.6.2 The following restrictions must be applied to all Root Protection Areas. By default:

- No access by foot- or vehicular-traffic into a Root Protection Area.
- No storage of spoil, materials, chemicals &c. on or adjacent to a Root Protection Area.
- No changes to ground level within a Root Protection Area.
- The site manager will safeguard against contamination of Root Protection Areas (e.g., wash-off, chemical/fuel spill &c.).

4.6.3 Additional precautions for outside Root Protection Areas include:

- No fires within 20m of a Root Protection Area (this includes areas designated for smokers). Always note wind direction before starting a fire so that debris (especially that capable of causing ignition) does not blow into a Root Protection Area.
- No sprayed herbicide will be used near to a Root Protection Area as overspray or drift could affect retained trees. Only use topical application and follow the manufacturer's instructions at all times.

4.7 DUST MANAGEMENT

4.7.1 Trees and hedgerows adjacent to the proposed works will be inspected on a regular basis (at least once every two weeks during the growing season) for signs of dust/debris deposition. If found, it will be washed off using clean water and a low-pressure delivery system. It must not be knocked or brushed off as this may cause damage to the tree/hedgerow.

4.7.2 Where practicable, operations likely to produce dust or flying debris should be located away from any Root Protection Area. If this is not practicable, protective screens will be erected to prevent impact damage to adjacent trees.

4.8 BIOSECURITY

4.8.1 Good biosecurity practices must be used at all times, such as disinfecting tools used on one tree before using them on another and cleaning soil/debris from vehicles, boots and clothing prior to leaving site.

4.9 CONTRACTOR PARKING, SITE HUTS AND FACILITIES, STORAGE AREAS

4.9.1 These facilities are restricted to the footprint of existing carriageways, hardstanding or on land outside the Root Protection Areas as shown on the Tree Protection Plan.

4.9.2 Areas used for storing, fuelling or maintenance of tools and equipment must be located away from Root Protection Areas. Where this is not possible, measures must be implemented (e.g., spill mats) to ensure there is no pollution of the soil within or adjacent to a Root Protection Area.

4.10 WORKING SPACE

4.10.1 Consideration must be given to working space required for construction. Operatives and materials must be able to move without entering into/passing over a Root Protection Area or impacting adjacent trees. Particular care must be taken with regard to the overhanging canopies. Where necessary, use a banksman.

4.11 SERVICES

4.11.1 All new services will be installed outside the Root Protection Areas as shown on the Tree Protection Plan. If this is not practicable, a safe-working method will be agreed with the scheme arborist prior to works commencing.

4.12 MITIGATION PLANTING

4.12.1 All mitigation planting must be of locally-appropriate stock supplied and planted by a competent contractor working to industry best practice guidelines (e.g., BS 3936-1).

4.12.2 A minimum five-year aftercare plan must be in place for all mitigation planting, including a suitable monitoring programme.

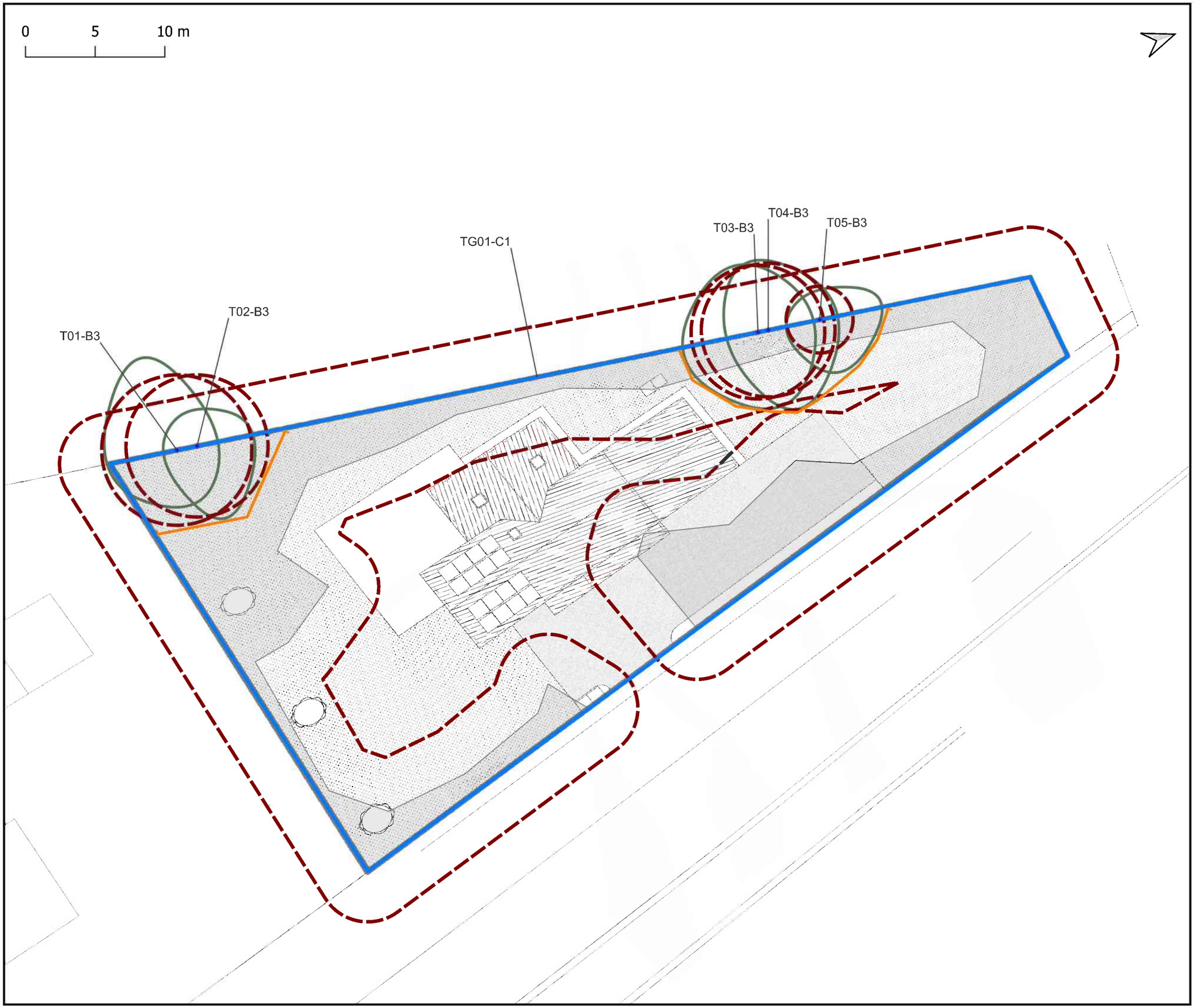
5 POST-DEVELOPMENT

5.1 REMOVAL OF PROTECTIVE MEASURES

5.1.1 Works to remove any protective measures (such as fencing) must be carried out in a way that respects the restrictions associated with a Root Protection Area.

KEY

- Cat B tree
- Survey area
- Protective fence
- Cat C tree group
- RPA/CEZ



(ecological services) limited

SITE NAME:
The Ferns, Beck Bank, Quadring Fen

DRAWING TITLE:
Tree Protection Plan.

Dwg no.: ES159-L086-001
Scale: 1:250 @ A3

Date: Sep 2024
Figure: 1-01

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APPENDIX 1

TREE SCHEDULE

Tree number	Species	Height	Stem type	Estimated	Stem Diameter	Branch spread - North	Branch spread - East	Branch spread - South	Branch spread - West	Height above ground - First significant branch and direction	Height above ground - Canopy	Life stage	Physiological condition	Structural condition	Preliminary Management Recommendations	Estimated Remaining Contribution	Category	RPA (m)	RPA (m^2)
T01	Fexc	14	S		450	3.00	4.00	5.00	7.00	3E	3.00	Mature	Fair	Fair	None	20+	B3	5.40	92.00
T02	Qrob	12	S		425	4.00	5.50	2.50	2.50	5E	4.00	Newly p	Fair	Fair	None	20+	B3	5.10	81.00
T03	Fexc	11	S		400	5.00	6.00	3.00	5.00	3SE	2.00	Mature	Fair	Fair	None	20+	B3	4.80	72.00
T04	Fexc	11	S		400	4.00	5.50	5.50	5.00	3SE	2.00	Mature	Fair	Fair	None	20+	B3	4.80	72.00
T05	Apse	8	S		200	4.50	4.00	2.50	2.00	3E	3.00	Mature	Fair	Fair	None	20+	B3	2.40	18.00

Tree group number	Species	Stem type	Estimated	Stem Diameter	Height	Branch spread	Height above ground - First significant branch and direction	Height above ground - Canopy	Life stage	Physiological condition	Structural condition	Preliminary Management Recommendations	Estimated Remaining Contribution	Category	RPA (m)
TG01	Sari Pave Fexc Qrob Bpen Fsyl Scap Scin Clat Sauc Svul Lana Apse Vopp Cley Mdom	S/MS		300	8.00	4.00	1W	1.00	Mature	Poor	Poor	None	10+	C1	3.60

Code	Scientific name	Common name
Apse	*Acer pseudoplatanus*	Sycamore
Bpen	*Betula pendula*	Silver birch
Bpub	*Betula pubescens*	Downey birch
Cave	*Corylus avellana*	Hazel
Clat	*Crataegus laevigata*	Midland hawthorn
Cley	x *Cupressocyparis leylandii*	Leyland cypress
Fexc	*Fraxinus excelsior*	Ash
Fsyl	*Fagus sylvatica*	Beech
Lana	*Laburnum anagyroides*	Laburnum
Mdom	*Malus domestica*	Orchard apple
Pcer	*Prunus cerasifera*	Myrobalan plum
Plau	*Prunus laurocerasus*	Cherry laurel
Qrob	*Quercus robur*	English oak
Sari	*Sorbus aria*	Whitebeam
Sauc	*Sorbus aucuparia*	Rowan
Scap	*Salix caprea*	Goat willow
Scin	*Salix cinerea*	Grey willow
Svul	*Syringa vulgaris*	Common lilac

Key to Tree Schedule

PHYSIOLOGICAL CONDITION
Good – A tree in good health with no significant defects.
Fair – A tree in generally good health that might require remediation for some issues.
Poor – A tree in poor health having issues that cannot be remediated.
Dead – A tree without sufficient live material to sustain life.

STRUCTURAL CONDITION
Good – A tree with no obvious sign of defect.
Fair – A tree with minor defects or defects that can be corrected.
Poor – A tree with major defects or defects beyond remediation.

CATEGORY
U - Trees unlikely to contribute beyond 10 years.
A - Trees of HIGH quality with an estimated remaining life expectancy of at least 40 years.
B - Trees of MODERATE quality with an estimated remaining life expectancy of at least 20 years.
C - Trees of LOW quality with an estimated remaining life expectancy of at least 10 years or young trees with a stem diameter of less than 150mm.

Appendix 2

Photographs



Photograph 1. Looking south at T01 and T02.



Photograph 2. An attempt to show the torsion failure on T02 (red arrow).



Photograph 3. Trees T03-T05 as seen from adjacent land.



Photograph 4. Looking south along Beck Bank at eastern boundary of the site (note: OHC).



Photograph 5. Looking south at site entrance showing cherry tree with major dieback in crown and heavily-modified whitebeam with asymetric crown.



Photograph 6. Indicative view north into the corner of the site.



Photograph 7. Mature laburnum, partially toppled and heavily modified.



Photograph 8. Indicative view of the back garden with one of the many sheds and a cherry with serous form issues.