

Trees and Construction

BS5837:2012 Tree Survey, Arboricultural Implications Assessment & Method Statement

Site: 3A Lindfield Gardens, NW3 6PX

Ref: 251297/A2/AIA/AMS

Client: Fatmir Cekoja



(Mail) 2nd Floor | 1 Hunters Walk | Canal Street | Chester | CH1 4EB

0333 123 7080 | info@indigosurveys.co.uk

www.IndigoSurveys.co.uk

Arboricultural Consultant (Author):
Rod Benzies ND Arb, BSc Forestry, MArborA

- Apr 2025 -

TABLE OF CONTENTS

Chapter	Title	Page
1	Introduction	3
2	Site & Application Information	4
3	Findings & Recommendations	5 - 6
4	Scheme / Impact Assessment	6 - 7
5	Method Statement 'Considerations'	8 - 10

Appendices

Caveat	I
Terms and Definitions	II
Tree data table, Tree Constraints Plan & Tree Protection Plan	III

Revision	Description	Date
/	Tree Survey Advice (251297A1)	10/01/2025

1. INTRODUCTION

- 1.1 **Instruction:** This advice has been prepared for the client Fatmir Cekoja (hereafter; client) and is in respect of the tree related planning considerations at 3A Lindfield Gardens, NW3 6PX (hereafter; site).

As the proposal relates to development works at site, the advice herein is produced in accordance with the British Standard 5837 : 2012 '*Trees in Relation to Design, Demolition and Construction - Recommendations*' (hereafter; BS5837).

- 1.2 **BS5837:** The scope of BS5837 is to provide guidance on how trees and other vegetation can be integrated into construction and development design schemes. The overall aim is to ensure the protection of amenity by trees which are appropriate for retention.

- 1.3 **Scope of this advice:** This advice has been produced in accordance with BS5837 and is intended to demonstrate the site's realistic arboricultural constraints and assist with the design process. The objective is to systematically assess the site and provide suitable recommendations regarding the proposal's potential impact on trees and vice versa.

- 1.4 Following instruction the consultant surveyed the site on the 16th Apr 2025 where a site walkover and BS5837 tree survey were carried out; all trees on site and around the application boundary were surveyed from ground level and plotted as either an individual or a tree group.

- 1.5 This advice is subject to caveat at Appendix I, outlines relevant terms and definitions at Appendix II and constitutes the findings of the preliminary site assessment and associated arboricultural recommendations.

- 1.6 The survey data and site observations use the supplied plan to illustrate the surveyed trees in plan format as a 'Tree Constraints Plan' (hereafter; TCP); the TCP and the tree survey data table are at Appendix III.

2. SITE INFORMATION & TREE ASSESSMENT

- 2.1 The site is occupied by a detached building divided into apartments with associated gardens to the front and rear and access from Lindfield Gardens.
- 2.2 **Proposal:** The client proposes a rear extension and patio as per client provided plans LG3A-01-1002.
- 2.3 The site requires consideration from an arboricultural perspective due to the presence of trees on and around the site; these trees are deemed to be within impacting distance of the existing property and potential construction area.
- 2.4.1 The tree survey and assessment resulted in the BS5837 quality/retention categories of 'C - low' being attributed to trees.
- 2.4.2 There are identified defects to the surveyed trees although these are currently limited and hence only preventative management recommendations are outlined within the appended survey table. Thereafter, general site inspections and tree works will be required for H&S tree risk management.

3. FINDINGS & RECOMMENDATIONS

- 3.1 For the purpose of this assessment, the 'proposed scheme' has been used as a basis for consideration. This takes account of anticipated tree removals, tree protection options and potential alterations to account for arboricultural features.
- 3.2 The following information, as with the prior contents of this report, should be read with the appended tree data table and tree constraints plan (251297/TCP/01).
- 3.3 General Considerations for Tree Retention / Removal
- 3.3.1 The trees on site are typical ornamental garden species
- 3.3.2 The client provided scheme has been overlaid with our TCP and this shows that 2 trees will be affected directly, these are T4 and T5

4. SCHEME / IMPLICATIONS ASSESSMENT

4.2.1 For this assessment, the proposed scheme has been considered (see; s.2.2 herein). This includes consideration for arboricultural management / tree works for H&S tree risk management, tree removal and pruning options, design solutions, tree protection and sensitive measures to account for trees. As per s.1.6 and s.2.2 herein, the TCP scheme overlay illustrates the proposed scheme.

4.2.2 *Consideration for Remaining Tree-*

The remaining trees are to be protected by avoidance and existing, temporary protection fencing and ground protection as per the TPP

NOTE: Further to the above scheme review as the AIA, working methods and design solutions are then included within Arboricultural Method Statement 'considerations' (AMS) hereafter at s.5.

5. METHOD STATEMENT 'CONSIDERATIONS'

5.1 Arboricultural Construction Restrictions

5.1.1 The following restrictions are considered relevant for tree protection purposes which are illustrated on the appended Tree Protection Plan:

- a) Approved or notified tree works are to be completed prior to site works: no tree works are required to facilitate the proposed scheme, and no leaning against or attaching of objects to trees is permitted unless agreed in writing by the council.
- b) A secure section of Protective Barrier Fencing (hereafter; PBF) is to be installed in locations as shown on the TPP. The PBF may be Heras panels, or, fixed ply / chip board panels fixed to site hoarding and will be installed after tree works and prior to material delivery or site works commencing.
- c) Following the installation of PBF the fenced off sections are Exclusion Zones (hereafter; CEZ) and will have retained hard surfaces supplemented with ground protection.
- d) No chemicals/materials are to be transported/stored/used/mixed within exposed grounds on site; all chemical / cement storage, transport or use will be pre-prepared with impermeable liner and detail within a Construction Management Plan.
- e) No fires are to be lit and no machinery, plant or vehicles are to be washed down within 10m of a tree's canopy, within an RPA / CEZ.
- f) During construction processes the RPA/CEZ may not be breached, i.e. no other works than are approved for the landscape borders and patio areas and no mechanical digging or scraping is permitted within a RPA/CEZ.
- g) Only following construction completion can the PBF be removed to facilitate the commencement of hard landscape, garden works and the soft surface scheme can be implemented.

5.2 Arboricultural Site Monitoring / Supervision

- 5.2.1 The site should be checked by a qualified arboriculturist throughout the construction processes to ensure the tree protection measures are adhered to, thus -
- (a) after tree works, and Protective Barrier Fencing and ground protection are installed.
 - (b) after construction and landscape completion to confirm tree protection adherence.

5.3 Tree Works

- 5.3.1 All approved tree works must be undertaken with the council's written permission (subject to statutory exemption) and undertaken to BS3998 by a tree service contractor who is suitably qualified, experienced and insured to for arboricultural contracting.
- 5.3.2 In accordance with the approved scheme and the tree related planning condition(s), the following tree works are recommended in conjunction with the scheme (additional tree works must only be undertaken with the full and written permission of the council):

TREE WORK SUMMARY

NUMBER	TREE REMOVALS / PRUNING WORKS	
T4 and T5	Remove	Remove in conjunction with the scheme: Replacements to be provided within the landscape scheme.
Retained trees		Protection by placement of fixed BS5837 specification Heras panels around the crown / RPA extents to have no access during construction and manually operative sensitive surface works and retained soil levels within RPAs. Ground protection to be used as indicated on the TPP within RPA's outside of PBF,

5.4 Underground utilities

- 5.4.1 For the most part the proposed drainage and underground utilities will be well clear of retained trees (those within the rear garden) meaning that no arboricultural restrictions are to be applied to the excavations or installations.
- 5.4.2 It is anticipated that all utility runs will be located to the side and/or front of the property. These are to be shown on a dedicated utilities layout plan and be clear from RPAs; if this is not the case special measures for underground utilities will be required.
- 5.4.3 The following restrictions are recommended for underground utilities within RPAs:
- Any necessary excavations to be undertaken sensitively using either a no-dig method (e.g. Air-Spade) and/or under arboricultural supervision;
 - Any exposed roots shall be packed with a clean damp sand (not builders sand) and wrapped in hessian sacking to protect them;
 - Small roots which are identified (those less than 25mm diameter) may be carefully pruned back with a clean sharp tree saw; and
 - Larger roots which are identified (those greater than 25mm in diameter) are to be retained and protected as they may be necessary for a tree's health and stability.

5.5 Protective Barrier Fencing (PBF) Specification

- 5.5.1 Barrier fencing is to be installed (and signed off by way of arboricultural supervision) following the completion of the tree works. It is illustrated on the Tree Protection Plan and is to remain in situ for the entire duration of ground works/construction processes unless otherwise agreed in writing by the council.
- 5.5.2 The barrier fencing is to consist of a series of Heras panels secured in place or fixed hoarding (ply / chipboard panels) to ensure that the fencing lines are well braced to resist impact, prevent access to the RPA/CEZ areas around the approved works.
- 5.5.3 PBF will be supplemented by ground protection, by way of retained hard surfaces, polythene layer for grounds outside of the PBF and ply boards for pedestrian access.

5.5 Report Handling

- 5.5.1 This report is released to the client and architect to be distributed at their discretion and the consultant is available for queries relating to this report and/or trees.
- 5.5.2 The proposed scheme is reviewed in respect of the arboricultural constraints and is considered to be achievable in line with the BS5837 guidance. The tree protection methods herein may be approved by the council for which a planning approval will be subject to a final and detailed Arboricultural Method Statement based on the approved information and other detail perhaps not available at the pre-planning approval stage, i.e. utility layout, final landscape plan, construction management plan (CMP) etc.
- 5.5.3 This AMS and the TPP may be approved by the council in support of the application, subject to a conditioned final AMS and TPP as a means of authorised tree protection measures; all site personnel will have access to a copy and the tree work and protection details are to be inspected as per s.5.2 for '*Arboricultural Monitoring / Supervision*'.

This concludes our advice.

Appendix I

Caveat

Any and all information supplied to Indigo Surveys Ltd by/on behalf of the client is assumed to be accurate unless otherwise informed. | This advice is limited to the observations made on the date of inspection as detailed herein and any deletion, editing or alteration will result in the advice being null and void in its entirety. | This advice in its entirety may be deemed null and void if remedial works are undertaken on any area of the site, on or after the date of the survey. | No liability is assumed by the author or by Indigo Surveys Ltd for any misuse, misinterpretation or misrepresentation of this advice. | This advice is not valid in adverse or unpredictable weather conditions or for any failure due to 'force majeure' or unpredictable events. | No responsibility is assumed either by the author of this advice or by Indigo Surveys Ltd for any legal matters that may arise as a consequence. | Neither the author nor Indigo Surveys Ltd will be required to attend court or give testimony as part of this agreement. | The responsibility for any works undertaken on the basis of the recommendations of this advice does not form part of this agreement.

Appendix II

Terms and Definitions

“Arboriculturist” - person who has, through relevant education, training and experience, gained expertise in the field of trees in relation to construction.

“Competent Person” - person who has training and experience relevant to the matter being addressed and an understanding of the requirements of the particular task being approached.

“Topographical survey” - an accurately measured land survey undertaken to show all relevant existing site features. *A method of carrying out topographical surveys is given in RICS specification* Surveys of land buildings and utility services at scales of 1:500 and larger.

“BS5837 Tree survey” - should be undertaken by an arboriculturist to record information about the trees on or adjacent to a site. The results of the tree survey, including material constraints arising from existing trees that merit retention, should be used (along with any other relevant baseline data) to inform feasibility studies and design options. For this reason, the tree survey should be completed and made available to designers prior to and/or independently of any specific proposals for development.

“Tree categorisation method” - trees should be categorised in accordance with the BS5837 cascade chart by an arboriculturist. This is to identify the quality and value (in a non-fiscal sense) of the existing tree stock, allowing informed decisions to be made concerning which trees should be removed or retained in the event of development occurring.

“Root protection area (RPA)” - layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree’s viability, and where the protection of the roots and soil structure is treated as a priority, shown as an arboricultural constraint in m². The radius is calculated using the BS5837 calculation method. An arboriculturist may change the shape of an RPA but not reduce its area.

“Arboricultural implications assessment” - a study, undertaken by an arboriculturist, to identify, evaluate and possibly mitigate the extent of direct and indirect impacts on existing trees that may arise as a result of the implementation of any site layout proposal.

“Arboricultural method statement” - methodology for the implementation of any aspect of development that is within the root protection area, or has the potential to result in loss of or damage to a tree to be retained.

“Tree protection plan” - a scale drawing, informed by descriptive text where necessary, based upon the finalised proposals, showing trees for retention and illustrating the tree and landscape protection measures.

Appendix III

Data Table:	As appended (BS5837 Tree Survey Key & Table)
Tree Constraints Plan: (TCP / Scheme Overlay)	As appended (251297/TCP/01)
Tree Protection Plan: (Application Stage)	As appended (251297/TPP/01)

TREE SURVEY IN ACCORDANCE WITH BRITISH STANDARD 5837:2012 'TREES IN RELATION TO DESIGN, DEMOLITION & CONSTRUCTION - RECOMMENDATIONS'

CLIENT: Fatmir Cekoja

PROJECT REF: 251297

SITE: 3A Lindfield Gardens, NW3 6PX

CONTACT:

SURVEY DATE: 16 April 2025

ARB CONSULTANT: Rod Benzies BSc MArborA

TREE REF. #	SPECIES	AGE	HEIGHT (in m)	CANOPY (in m) N - S - E - W				STEM (in mm)	RPA (in m)	CLEARANCE (in m)	1st BRANCH (in m)	VITALITY	LIFE EXPEC.	NOTES	BS CAT.	MANAGEMENT
T1	Olive tree	Y/SM	4	1	0	1	1	130*	1.6	1	1	Norm	10-20	Set in feature hard landscaping bed;Surrounding paving is cracked;Set above street level by 1m approx	C 1	
T2	Magnolia; Magnolia (species); Magnoliaceae	SM/EM	4	2	0	1.5	1.5	180*	2.2	2	2	Norm	10-20	Set in feature hard landscaping bed;Set above street level by 1m approx;Managed by clipping and pruning	C 1	
T3	Cherry; Prunus (species); Rosaceae	SM/EM	5	1.5	1.5	1.5	1.5	180*	2.2	2	2	Norm	10-20	Council maintained street tree;Set in public pavement	C 1	
T4	Lawson Cypress; Chamaecyparis lawsoniana; Cupressacea	EM	19	2	2	2	2	430*	5.2	2	2	Norm	10-20	Set on boundary adjacent to hard landscape steps;Main stem splits into Co-dominant structure at 4m	C 1	
T5	Portugal Laurel; Prunus Lusitanica; Rosaceae	M	6	1.5	2.5	2	2	340*	4.1	2	2	Norm	10-20	Managed by crown reduction and crown lifting;lvy on stem;Set on boundary adjacent to hard landscape steps	C 1	

TREE REF. #	SPECIES	AGE	HEIGHT (in m)	CANOPY (in m) N - S - E - W	STEM (in mm)	RPA (in m)	CLEARANCE (in m)	1st BRANCH (in m)	VITALITY	LIFE EXPEC.	NOTES	BS CAT.	MANAGEMENT
TREE SURVEY 'KEY' - BRITISH STANDARD 5837:2012 'TREES IN RELATION TO DESIGN, DEMOLITION & CONSTRUCTION - RECOMMENDATIONS'													
	TPO/CA	-	On client request: presence of Tree Preservation Orders (TPO) / site location within a Conservation Area (CA) & date checked;										
	TREE REF. #	-	Tree reference number: tag or plan number (T - individual tree, G - group of trees/shrubs, H - hedge);										
	SPECIES	-	Genus, species and/or common name;										
	AGE	-	Age classification (NP - new planting, Y - young, EM - Early-Mature, SM - semi mature, M - mature, LM - late mature, OM - over mature);										
	HEIGHT (in m)	-	Approximate height of tree in metres;										
	CANOPY (in m) N - S - E - W	-	Approximate branch spread in metres of the four principal compass points;										
	STEM (in mm)	-	Stem diameter in millimetres: measured in accordance with s.4.6 of BS5837;										
	RPA (in m)	-	Circle radius of the Root Protection Area: calculated using the stem diameter (single/multiple stem variant, as outlined within BS5837);										
	CLEARANCE (in m)	-	Crown clearance in metres above the adjacent ground level;										
	1ST BRANCH (in m)	-	Clearance in metres to first significant branch and direction of growth (where relevant);										
	VITALITY	-	Physiological condition typically gauged from canopy cover and annual extension growth (good, fair, poor, dead);										
	ESTIMATED REMAINING CONTRIBUTION	-	Approximate number of years a tree will continue to contribute without the need for oppressive arboricultural intervention, categorised in years as <10, 10-20, 20-40 and >40;										
	NOTES	-	Structural and physiological condition observations;										
	BS CAT.	-	BS5837 tree quality assessment category: resulting from structural/physiological condition and remaining contribution (approximate useful life expectancy);										
		-	Standard retention category U : in such a condition that any existing value would be lost within 10 years;										
		-	Standard retention category A : high quality and value, in such a condition as to be able to make substantial contribution of 40+ years;										
		-	Standard retention category B : moderate quality and value, in such a condition as to make a significant contribution of 20+ years;										
		-	Standard retention category C : low quality and value, currently in adequate condition to remain until new planting could be established 10+ years;										
	MANAGEMENT	-	Standard retention sub-category, mainly due to: 1- Arboricultural values, 2- Landscape values, 3- Cultural values, including conservation;										
		-	Preliminary management recommendations (as appropriate);										
	' * '	-	Within the survey schedule denotes an estimate										

Root Protection Area (RPA) Notes

BS5837:2012 standard circular RPAs are illustrated here, with consideration required for anticipated root growth influence and restrictions, such as –

Root growth from trees generally may be absent restricted or deflected from site due to the lower/higher level changes, raised concrete structures, existing foundations, hard surfaces, longstanding compacted ground and existing structures for example. Further investigation may be required to establish the presence or absence of roots.

KEY

Tree Crown Spread

Root Protection Area (RPA)

Tree Stem

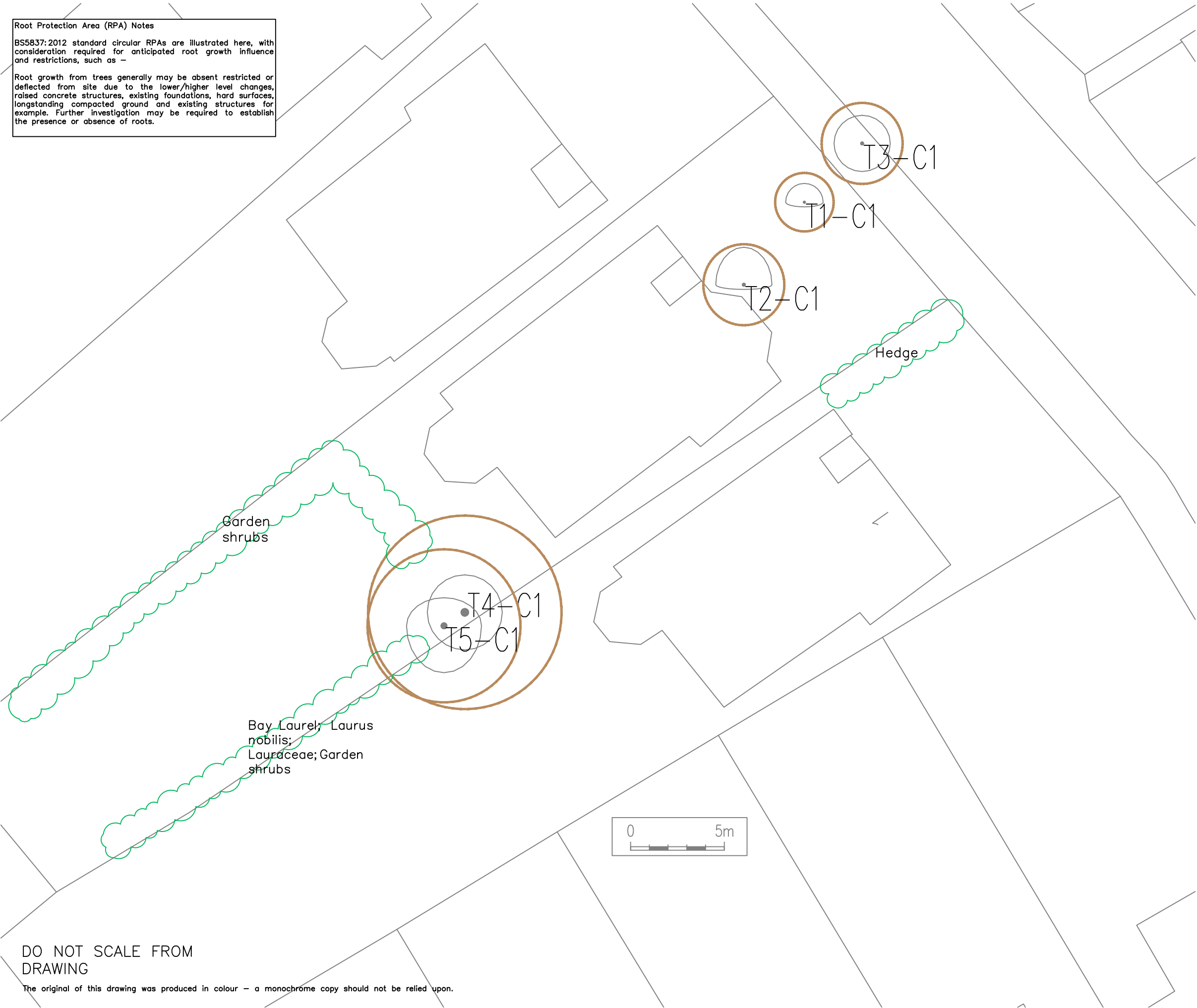
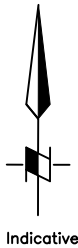
T1 Tree No.

Removed Tree

Tree Condition Category

A
B
C
U

The surveyed trees are illustrated on this Constraints Plan which is prepared in accordance with British Standard BS5837: 2012 'Trees in Relation to Design, Demolition and Construction – Recommendations'



DO NOT SCALE FROM
DRAWING

The original of this drawing was produced in colour – a monochrome copy should not be relied upon.

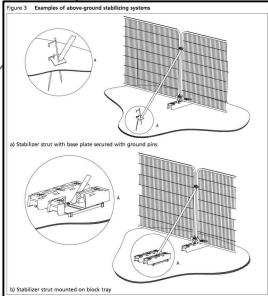
REV.	DESCRIPTION	DWN	CHK'D	DATE		
CLIENT						
Fatmir Cekoja						
PROJECT						
251297/A1 3A Lindfield Gardens, NW3 6PX						
TITLE						
Tree Constraints Plan						
DWN	DATE	CHK'D	DATE	APP'D	DATE	SCALE
RPHB	22/04/2025	AT	22/04/2025			1–250
<div><div><div></div><div></div></div><div>Indigo^{Ltd} Surveys</div></div> <p>(Mail) Second Floor, 1 Hunter's Walk, Canal Street, Chester. CH1 4EB Telephone: 0333 123 7080 www.indigosurveys.co.uk</p> <div><div>Drawing Number</div><div>251297/A1/TCP/01</div><div>A3</div><div>REV.</div></div>						

THIS DRAWING IS CONFIDENTIAL AND MUST NOT BE REPRODUCED WITHOUT THE CONSENT OF INDIGO SURVEYS LTD.

Root Protection Area (RPA) Notes

BS5837:2012 standard circular RPAs are illustrated here, with consideration required for anticipated root growth influence and restrictions, such as –

Root growth from trees generally may be absent restricted or deflected from site due to the lower/higher level changes, raised concrete structures, existing foundations, hard surfaces, longstanding compacted ground and existing structures for example. Further investigation may be required to establish the presence or absence of roots.



Tree Protection Specification

The tree protection measures outlined within the Arboricultural Method Statement (ref: 251297/A2_AA_AMS) are to be adhered to as illustrated on this Tree Protection Plan (ref: 251297_A2-TPP-01), and the additional details below, thus:

- Tree works are to be completed prior to commencement of any and all site processes: no additional tree works (not specified in the method statement), or leaning against or attaching of objects to a tree, are permitted.
- Protective Barrier Fencing (PBF), with Tree Protection Signs fixed at least every 5m (see detail and illustration on this TPP), is to be installed prior to the site works commencing.
- Hard Surfaces within RPAs are to be retained where ongoing access is required and supplementary ground protection is to be installed for exposed soft surfaced RPA sections for material drop-off and storage (needs to be load bearing and prevent chemical run-off or leaching into soils).
- No chemicals or materials are to be transported or stored or used or mixed within a RPA or Construction Exclusion Zone (CEZ).
- No fires are to be lit and no machinery, plant or vehicles are to be washed down within 10m of a tree's canopy or in a CEZ.
- During site works RPAs and CEZs may not be breached, i.e. no surfacing works, without the prior advice of the consultant and the consent of the council.
- No mechanical digging or scraping is permitted within a RPA or CEZ.
- When all construction works are completed the PBF can be removed however, should be retained consistent with the final landscape design to allow for the hard landscape improvement works to be undertaken ahead of the soft landscape shrub and tree planting works.



Suitable fence to partition front garden from access to 3A. No material storage

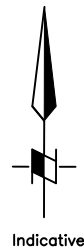
KEY

- Tree Crown Spread
- Root Protection Area (RPA)
- Tree Stem
- T1 Tree No.
- Removed Tree

Tree Condition Category

- A
- B
- C
- U

The surveyed trees are illustrated on this Constraints Plan which is prepared in accordance with British Standard BS5837: 2012 'Trees in Relation to Design, Demolition and Construction – Recommendations'



Tree Removals:
T4 and T5 to be removed to facilitate the scheme; replacement tree detail to be included within the landscape scheme.

Protective Barrier Fencing (PBF):
To comprise of 2m tall welded mesh panels on rubber or concrete feet. Panels are to be joined together using a minimum of two anti-tamper couplers, installed so that they can only be removed from inside the fence. The panels should be supported on the inner side by stabilizer struts, which should be attached to a base plate and secured with ground pins. All weather notices should be erected at regular intervals on the weld mesh panels with words such as "Tree Protection Area – Keep out". See example on TPP.

REV.	DESCRIPTION	DWN	CHK'D	DATE

CLIENT
Fatmir Cekoja

PROJECT
251297/TPP/A2
3A Lindfield Gardens, NW3 6PX

TITLE
Tree Protection Plan

DWN	DATE	CHK'D	DATE	APP'D	DATE	SCALE
RPHB	22/04/2025	AT	22/04/2025			1–250



(Mail) Second Floor, 1 Hunter's Walk, Canal Street, Chester. CH1 4EB
Telephone: 0333 123 7080 www.indigosurveys.co.uk

Drawing Number
251297/A2/TPP/01

A3
REV.

THIS DRAWING IS CONFIDENTIAL AND MUST NOT BE REPRODUCED WITHOUT THE CONSENT OF INDIGO SURVEYS LTD.

DO NOT SCALE FROM
DRAWING

The original of this drawing was produced in colour – a monochrome copy should not be relied upon.