B. J. UNWIN FORESTRY CONSULTANCY Ltd.

Jim Unwin **BScFor, MICFor, FArborA, CEnv.**
Chartered Forester
Fellow of the Arboricultural Association
Chartered Environmentalist.

Institute of Chartered Foresters
Registered Consultant

MEMBER INTERNATIONAL SOCIETY OF ARBORICULTURE ISA

Parsonage Farm,
Longdon
Tewkesbury,
Glos.
GL20 6BD
UK
[redacted]

10th August 2022 - BJU/mmi

To: **Mr Jamil Hamed**
[redacted]

Co: 122 Oakengates, Hanworth, Bracknell, RG12 7QL.

Dear Mr Hamed,

Ref: **Scots pine tree at No.123 Oakengates Road.**

1. Instruction.

1.1 A Scots pine at No.123 is growing over and under your front parking area. So the roots are trespassing. Worse, they are lifting the paving and growing to the house.

1.2 Therefore, you have asked B.J. Unwin Forestry Consultancy to inspect the pine, and advise on any work for health & safety, and good arboricultural management. In the appendices we give guidance on owner's responsibility: ***NTSG advice to tree owners*** & ***Zones of Confluence*** from ***VALID*** (Regardless of your insurer's requirement.)

2. Inspection.

2.1 I visited site on 3rd August 2022, and made an accompanied inspection in good light conditions.

2.2 The survey was from ground level. It involved visual observation, measurements, and sounding bases with a hammer: and chisel and long steel rod as required (Visual Tree Assessment: Mattheck and Breloer 1994 and Lonsdale 1999).
We lifted pavers in three places.

2.3 The survey was by Jim Unwin who has >45 years' experience working with trees, (professional CV attached).

Notes:

Limitation of Report:-The statements made in this Report do not take account of the effects of extremes of climate, vandalism or accident, whether physical, chemical or fire. BJUFC cannot therefore accept any liability in connection with these factors, nor where prescribed work is not carried out in a correct and professional manner in accordance with current good practice. The authority of this Report ceases at any stated time limit within it, or if none stated after two years from the date of the survey or when any site conditions change, or pruning or other works unspecified in the Report are carried out to, or affecting, the Subject Tree(s), whichever is the sooner.

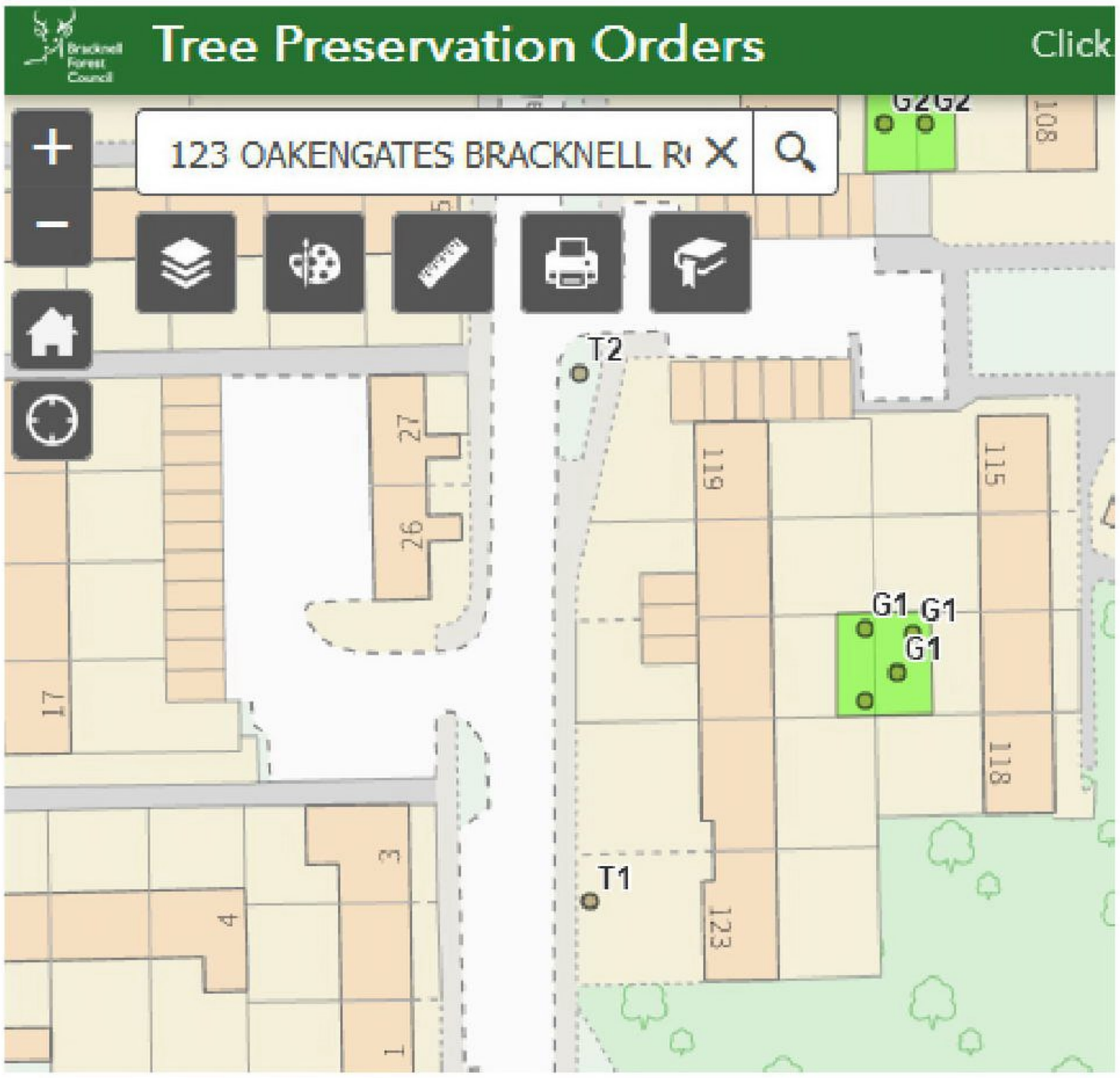
3. The Site.

3.1 The site is the frontage of Oakengates, a quiet residential cul-de sac road running north off Ringmead commuter road. No.123 is at the southern end of a terrace set about 12.5m back from the road edge. No.122 extends to its north.

3.2 Geology from British Geological Survey website is:
Superficial deposits: None recorded.
Bedrock geology: Camberley Sand Formation - Sand. Sedimentary bedrock formed between 47.8 and 41.2 million years ago during the Palaeogene period.
Therefore, subsoil may be coarse-textured, without volume-change potential. So from map study there is no evidence of subsidence or heave risk. This would need confirming by ground investigation.

3.3 Google Earth below shows the area of interest. Scots pine marked.

3.4 The pine is protected as T1 of Bracknell Forest Council TPO 619. Extract from their GIS map below.



4. The Tree.

4.1 The mature Scots pine is located in No.123's front garden, lawn and shrubs with a 2.4m wide concrete drive along its northern edge. The pine is 3.9m south from No.122's southern boundary and about 9m from the house.

4.2 The pine has dbh of 71cm, height of 16m and crown radii 6.7m north, 3.8m east, 4.4m south and 5.8m west. The tree's location is shown on the sketch plan overleaf.

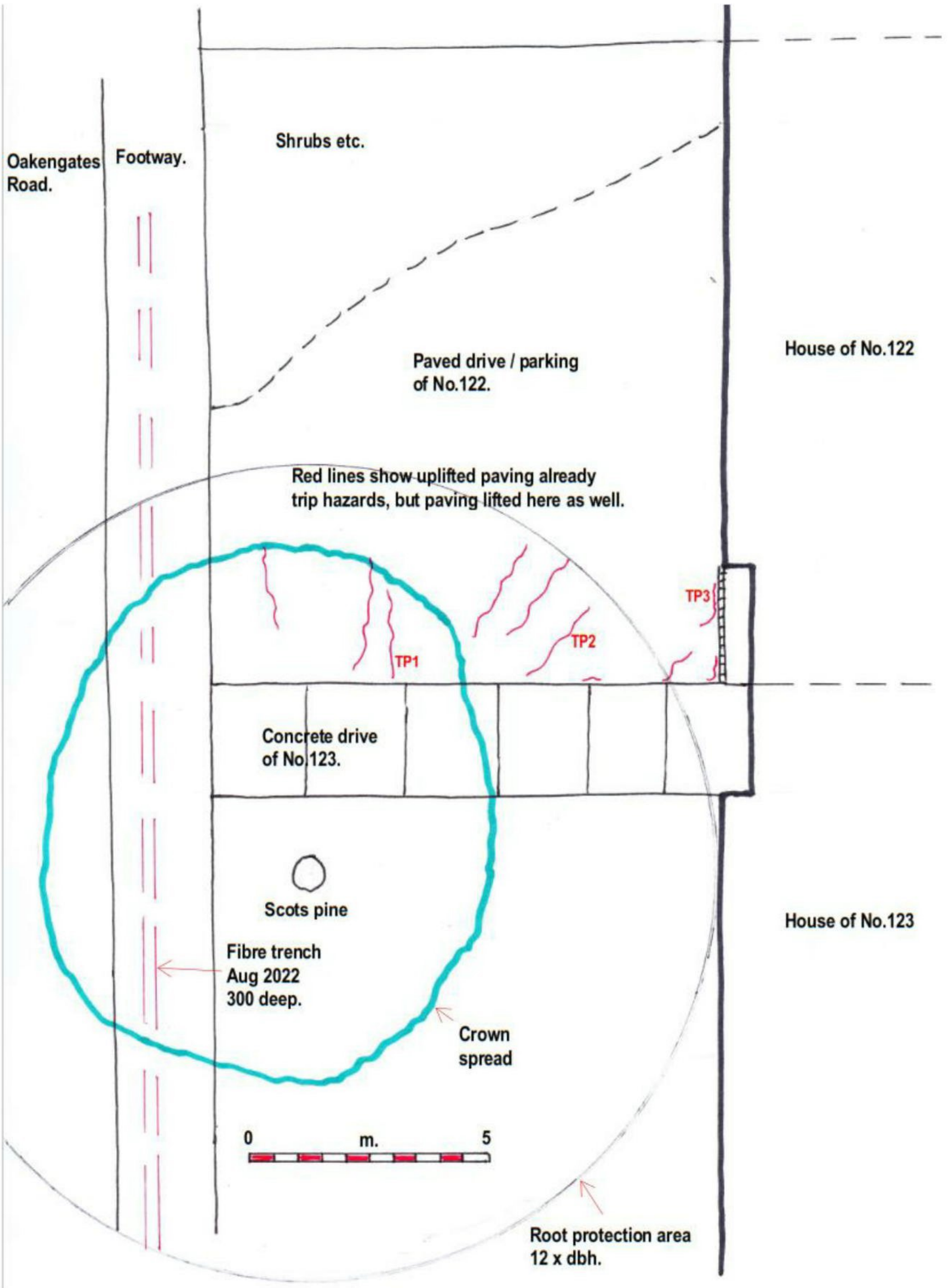
4.3 Roots from the pine have caused uplift of No.122's paved front drive & parking: including trip hazards over an area of at least 10m x 5m.

4.4 Photo below shows general uplift of pavers, where some stand above others by 10-25mm.

4.5 The sketch tree plan shows the most obvious uplifted areas, which are actual trip hazards now. But undulations caused by the pine's roots continue north across at least half the paved area.

4.6 After the plan are details and photos of three excavations I made, shown TP1, TP2 & TP3 on the tree plan.

4.7 Sketch below shows the pine, its crown spread over No.122, and its Root Protection Area, (the rooting area considered the minimum to sustain a full-crowned tree on development sites; refer to BS5837).



4.8 **TP1:**
Located 4.2m north east from the pine.

This clearly shows two significant pine roots, one 35mm diam and the other 20mm diam, both with calluses where they have pushed against paving.

Photos on right shows location of TP1 with tree in background.

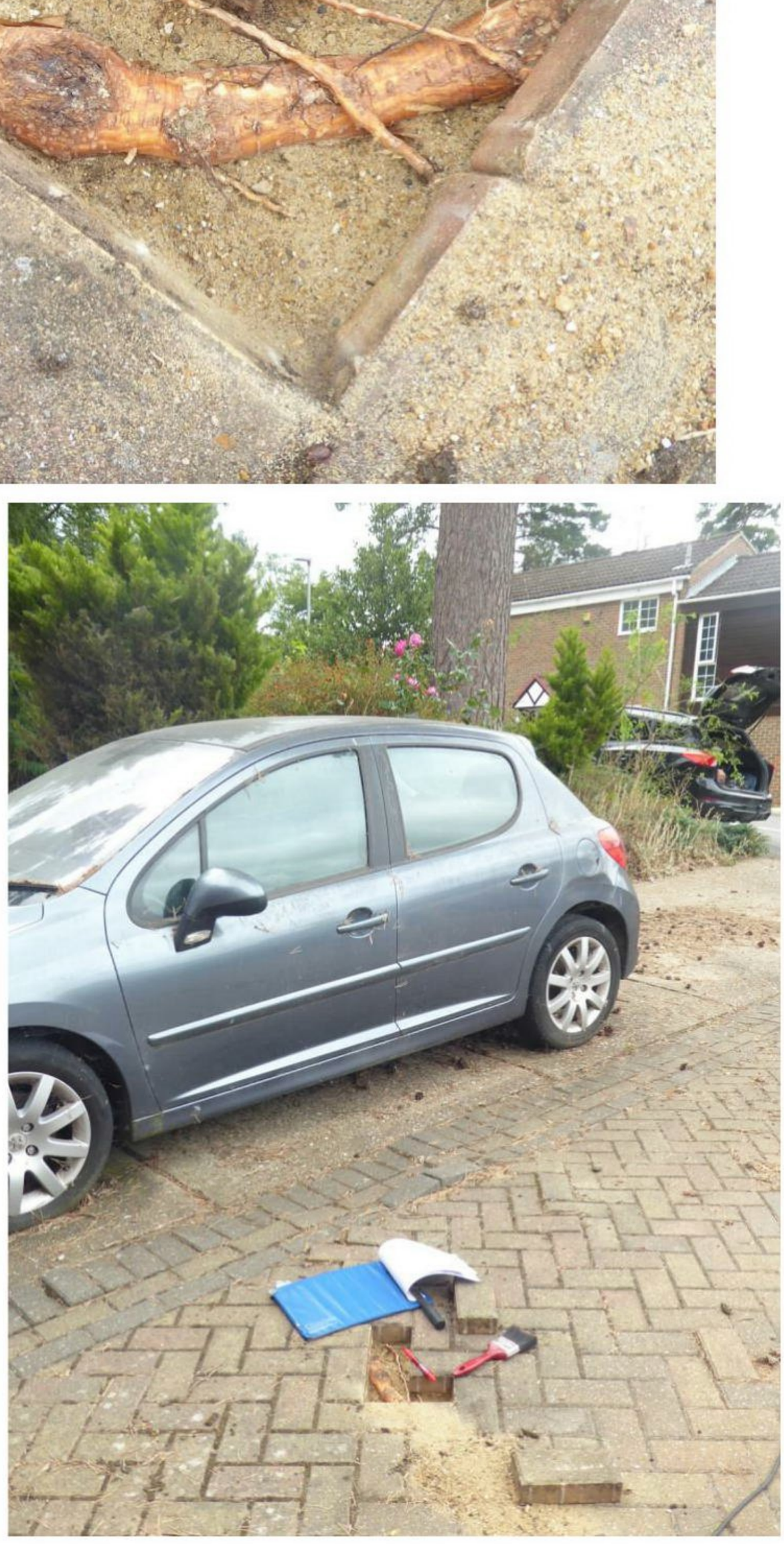
There are no other trees in the vicinity except pine T1.

4.9 **TP2:**
Located 5.9m north east from the pine.

This clearly shows a large root of 30mm diam plus a network of smaller roots.

Photos on right shows location of TP2 with tree in background.

There are no other trees in the vicinity except pine T1.



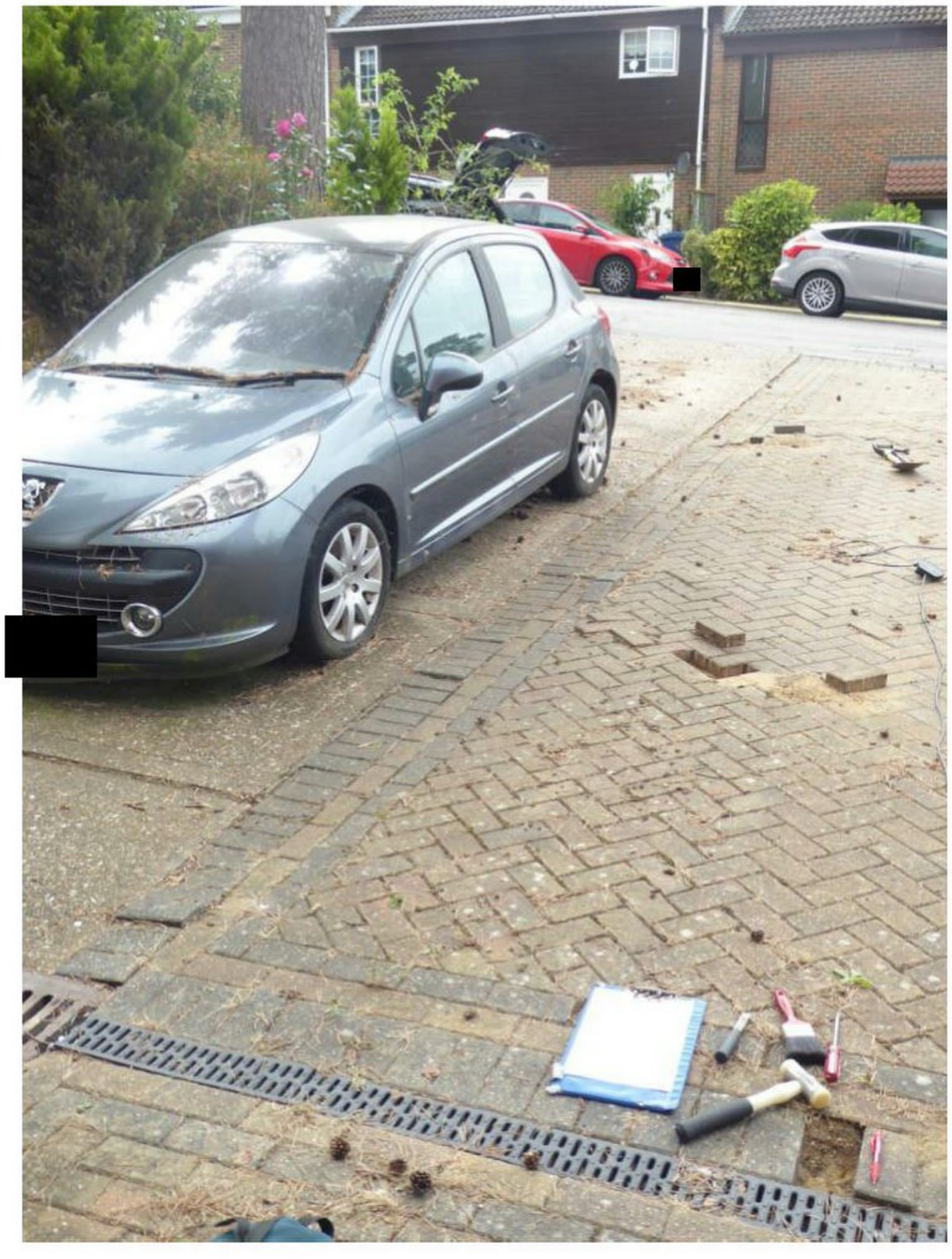
4.10 **TP3:**

Located 9.5m north east from the pine.

This shows a root of 10mm diam plus a network of smaller roots running across the drain at the front of No.122's garage by the corner of the main house.

Photos on right shows location of TP3 with tree in background.

There are no other trees in the vicinity except pine T1.



4.11 Discussion.

4.11.1 Tree roots often trespass across boundaries. Here the pine roots from pine T1 in the front garden of No.123 are trespassing and causing an actual nuisance to No.122.
My understanding is that the tree owner has a duty to abate the nuisance caused by the tree.

4.11.2 Pruning off all pine roots, sufficient to install a root barrier between the tree and No.122 to prevent future root trespass, will require lifting at least the northern 0.5m of the concrete drive of No.123.

4.11.3 Note in photo below the trench just dug on the opposite side of the road for fibre cabling, with another proposed trench marked out past the pine where the contractor is walking. By now, the contractors will have dug a 300mm-deep trench along the footway at 2.5m from the pine.

4.11.4 The Root Protection Area (RPA) is the area of rooting considered sufficient to maintain a full-crowned tree, as defined in ***BS5837 2012 Trees in relation to design, demolition & construction***. This is 8.5m radius around the pine, or 227m^2, and shown on the sketch tree plan.

4.11.5 Clearly the tree enjoys rooting conditions in No.122's paved front garden. So severing roots here may lose more root volume than just the RPA area would suggest.
Further, the newly-dug cable trench will lose roots to the west.

4.11.6 Trenching will cut off about 48m^2 of RPA, and the root pruning on No.123's boundary a further 40m^2 of RPA. This is 38% loss of the pine's RPA.

4.11.7 The weight of the pine is to the north, close to two houses, parking area and road. It is also isolated and exposed to prevailing and other winds. Therefore, 38% would be an unacceptable loss of rooting to maintain the tree's health and its resistance to uprooting.

4.11.8 Given the extent of root loss to mitigate current damage caused by the pine T1, and the recent trenching to its west, I do not consider it would be viable to retain the pine and mitigate the trespass.

4.11.9 Risk of heave:
If the pine is removed, there should be no heave risk, if the geology map is correct: that the site is underlain by non-shrinkable geology.

5. Treework informatives

5.1 Disturbance to wildlife.

It is essential to check for nesting birds, bat roosts, badgers and hibernating animals such as hedgehogs under trees, before pruning or removing trees, as negligent disturbance is an offence under the EC Habitat Directive 1992 as amended and strengthened 21st August 2007 to protect European Protected Species (bats are most relevant concerning trees) and CROW Act 2000.
In general, autumn tree work: **September, October and November** is least disruptive to bats and birds. However, with appropriate risk assessment work can proceed at any time.

5.2 Permission.

Tree Preservation Order constraints apply.
A Felling Licence may be required for felling or thinning > 5 tonnes of wood in any calendar quarter, eg thinning roadside woodland edges (not needed for small roadside elms).
As part of a felling licence, European Protected Species must be considered. Therefore, a contractor must satisfy himself that all necessary permissions are in place before touching trees.

5.3 Contractor.

All off-ground tree work should be done by insured tree surgeon with certificates in aerial chainsaw use (new designations:- NPTC 020-04, 0020-05, 0020-07, 0021-01, 0021-07; LANTRA 600/5703/8, 600/5717/8, 600/5715/5, 600/5704/X, 600/5714/2), and working to BS3998:2010, and *"Treework at Height"*, the Arboricultural Association's ICoP.
Thinning work can be done by a competent woodland contractor
(Stumps can be left to shoot again, ground out, or grubbed out, or poisoned depending on location.)

Please share this report with any interested parties. Contact us if you have any queries, or require further assistance.

Yours sincerely,

Author: [redacted]

B J Unwin Forestry Consultancy.

References:

"The Body Language of Trees". Claus Mattheck and Helge Breloer. HMSO 1994.
"Principles of Tree Hazard Assessment and Management". David Lonsdale. HMSO 1999.
BS 3998: 2010 "*British Standard Recommendations for Treework*".
BS 5837: 2012 *"Trees in Relation to Design, Demolition & Construction"*.
BS 8545 "*Trees: from nursery to independence in the landscape* – Recommendations". BSI 2014.
NJUG Volume 4 2007 "*Guidelines for the Planning, Installation and Maintenance of Utility Services in Proximity to Trees"*. NJUG, 30 Millbank, London,SW1P 4RD.
"Trees and Development". Nelda Matheny and James R Clark. ISA. 1998.
BS 8206:1992 "*Lighting for buildings*" .

BRE guide 209 (2002) "*Site Layout planning for daylight and sunlight*" .
NHBC Chapter 4.2, *Building Near Trees*. National House Building Council, 2021.
"*Tree Roots in the Built Environment*". J Roberts, N Jackson & M Smith. R.A.T.8, TSO (The Stationary Office), London, 2006.
"Tree Species Selection for Green Infrastructure – A guide for specifiers" Dr Andrew Hirons & Dr Henrik Sjoman Issue 1.3 2019.
"Treework at Height" Industry Code of Practice. Arboricultural Association. 2020.
"The use of Cellular Confinement Systems near Trees". Practice Guidance Note 12. Arb Association. Sept 2020.

Attached:

- **A1 - NTSG advice to tree owners.**
- **A2 - Zones of confluence From VALID**
- **A3 - BJUFC Professional CV.**

A1

The extract below from *Common Sense Management of Trees, NTSG,* details tree owner's responsibilities.

The legal framework:

Under both the civil law and criminal law, an owner of land on which a tree stands has responsibilities for the health and safety of those on or near the land and has potential liabilities arising from the falling of a tree or branch. The civil law gives rise to duties and potential liabilities to pay damages in the event of a breach of those duties. The criminal law gives rise to the risk of prosecution in the event of an infringement of the criminal law.

The civil law:

The owner of the land on which a tree stands, together with any party who has control over the tree's management, owes a duty of care at common law to all people who might be injured by the tree. The duty of care is to take reasonable care to avoid acts or omissions that cause a reasonably foreseeable risk of injury to persons or property.

The duty holder:

This is the person who has control of the tree's management whether as owner, lessee, licensee or occupier of the land on which the tree stands. The relevant highway authority is responsible for trees on land forming part of the highway.

The person to whom the duty is owed:

This is any person who can be reasonably foreseen as coming within the tree's vicinity and being injured by a fall of the tree or a branch from the tree. those using highways, footways, public footpaths, bridleways, railways and canals are likely to come within striking distance of trees on adjacent land. In public spaces, and semi-public spaces such as churchyards and school grounds, those working in or visiting them can be expected to come within the vicinity of trees. On private land, visitors and employees can also be expected to come within the reach of trees. Trespassers may also, in certain circumstances, be expected to come within the vicinity of trees on private land.

The duty owed

This can be stated in general terms as being a duty to take reasonable care for the safety of those who may come within the vicinity of a tree. The courts have endeavoured to provide a definition of what amounts to reasonable care in the context of tree safety, and have stated that the standard of care is that of "the reasonable and prudent landowner". The tree owner is not, however, expected to guarantee that the tree is safe. They have to take only reasonable care such as could be expected of the reasonable and prudent landowner. the duty owed under

the tort of nuisance is owed by a tree owner to the occupier of neighbouring land. the duty, however, is no different to the general duty owed under the tort of negligence. It is the duty holder's fundamental responsibility, in taking reasonable care as a reasonable and prudent landowner, to consider the risks posed by their trees. the level of knowledge and the standard of inspection that must be applied to the inspection of trees are of critical importance. It is at this point that the balance between the risk posed by trees in general terms, the amenity or other values of trees and the cost of different types of inspection and remedial measures becomes relevant.

A2

Zones of high confluence from VALID: example of an attempt to objectify tree risk assessment.
www.validtreerisk.com

What is a zone of high confluence?

A typical zone of high confluence

We're most likely to find any risks that are not Acceptable or Tolerable where we have a combination of high-use that's not affected by foul weather and large trees. We call these 'zones of high confluence' because in tree risk-benefit language they're where the highest categories of Likelihood of Occupancy and Consequences merge; Likelihood of Failure being the third risk component. A typical large tree, providing many benefits, may have a very low Likelihood of Failure in a high-use zone. For risk management zoning rather than assessment, the highest Consequences are trees that have a diameter at breast height of about 50cm or more. It's these trees that we'll carry out Active Assessment on.

Zones of highest occupancy (high-use)

This is how we're measuring the zones of highest occupancy

The highest Likelihood of Occupancy zones for roads are where traffic is on average 1400 or more vehicles per day. Generally, they're roads you'd think of as being busy. We zone train or tram lines as being the highest occupancy. For people, it's roughly someone passing about every minute or so between 7am –7pm, Monday to Friday, which is around 1200 per day. Typical combinations of traffic and people which are zones of highest occupancy are urban areas that are rich with offices, shops, bars, and restaurants. Shopping centres and markets make it into this category as well. In and immediately around schools, colleges, universities, hospitals, transport stations and stops, sports stadiums, and many pedestrian crossings, also qualify. Some footpaths through urban parks that are well-used to get to work or school are included. Last, locations where events are held, emergency routes, and campsites, are in the highest Likelihood of Occupancy categories.

Zones of high confluence maps

Our zones of high confluence are marked on maps

The following maps illustrate our zones of high confluence. We're managing the risk in all zones with Passive Assessment, day in day out. We'll carry out an Active Assessment in zones of high confluence every 5 years.

A3

- B J UNWIN FORESTRY CONSULTANCY Ltd. -

Head office: **Parsonage Farm, Longdon, Tewkesbury, Gloucestershire. GL20 6BD.**
Tel / Fax: [redacted] Home Tel: [redacted]
Satellite Offices: - Haley Ridge, Highcliffe**, Nr. Wadebridge, Cornwall**, PL27 6TN.
-105 Charfield Court, 2 Shirland Road, **London**, W9 2JR.
Associate office: - 1 Market Place Mews**, Henley-on-Thames, Oxfordshire,** RG9 2AH.
Principal: **Jim Unwin BScFor, MICFor, FArborA, CEnv.**
Chartered Forester - ICF Registered Consultant - Fellow of the Arboricultural Association - Chartered Environmentalist.

From:	**Jim Unwin**	*To:*	**Prospective Client**
Date:	**Jan'22**	*No. of pages:*	**2**
Subject:	**Professional CV**		

Below are set out **B J Unwin Forestry Consultancy**'s competences and experience.

Insurance:-

£5m Public Liability & **£2m Professional Indemnity** **(renewed June)**.

Personnel:-

B J Unwin (born 1956) started his forestry career as a tree surgeon and landscape contractor in 1975. He studied forestry at Aberdeen University from 1977 to 1981, worked for Unilever as a Forestry Manager in the Solomon Islands from 1981 to 1983. Since then he has been based in Gloucestershire assisting clients to manage their woodland, trees and vegetation throughout Southern Britain, and occasionally in northern England, Scotland and Northern Ireland.

In the mid-1980s to mid-1990s for a period of about ten years he taught chainsaw, tree felling and tree surgery courses at Worcestershire Agricultural College on a part-time basis. He was assessed and passed as a LANTRA assessor in these skills, and held NPTC certificates of competence in chainsaw use on the ground and up trees.

He now works as a tree consultant / manager / contract manager to a range of clients listed below.

For tree decay testing we have a **PICUS II ULTRASOUND** tomograph with electronic callipers and **RESISTOGRAPH-R400** drill.

He works with two self-employed arboriculturalists of >30 years' combined experience:-

Jasper Fulford-Dobson Arboricultural Association Registered Consultant - Associate Member of the Institute of Chartered Foresters - Professional member of the International Society of Arboriculture - Technicians Certificate (ArborA) 2005, now regarded as NQF "level 4" - Professional Tree Inspection Certificate (LANTRA) 2013,

Owen Hutchison BSc(Hons) Agriculture & Estate Management, Level 4 Diploma Arboriculture, LANTRA Professional Tree Inspection & working with trees since 2007.

Plus a secretary/ plan technician; calling in extra help as required (eg ecologist or arboricultural assistant). On bigger projects he regularly works as a part of a multi-disciplinary team.

Current BJUFC qualifications are:-

BSc Forestry Hons 1st Class, Aberdeen 1981.

Chartered Forester No. 0330064, 1986.

Fellow of the Arboricultural Association, 1995.

Licensed Subsidence Risk Assessor, 1997-2001 (scheme closed in 2001).

Completed Training in September 2002 to Prepare Native Woodland Plans for CCW and FC in Wales.

Arboricultural Association Registered Consultant No. 42, from 2004 to May 2021.

LANTRA certificate for Arboriculture and Bats, BJU in 2005.

Examined and approved to submit Welsh WGS as Management Planner and PAWS Assessor, 2006.

Joined Utilities Vendor DataBase, Supplier No: 88101 in Feb 2006 (left 2010).

Training and Certification in basic CAD operation 2006.

Chartered Environmentalist April 2008.

Woodfuel Production and Supply : LANTRA Certificate of Training Dec 2008.

Training in CAVAT amenity tree asset valuation October 2010.

Company Safety Policy:- We were successfully assessed by Safety Management Advisory Services (SMAS) for many years as meeting CDM Regs 2015 Core Criteria Stage 1, as a ***Worksafe Consultant No. 75950.*** expired 09/2020. Not renewed.

CITB *Health, Safety & Environment Test for Managers & Professionals* passed 22/01/2015.

First-aid at work June 2013.

DBS Basic Certificate P0003GX9B7C dated 11 Dec 2021 Certificate 001048986050.

Current clients and typical work include:-

English Heritage	Tree safety inspection contract 2007-2013 for East Midlands, East Anglia, London and SE England. Tree safety inspection contract for West of England & Midlands 2013-2021.
Planning Inspectorate (**PINS**) & Dept for Communities and Local Government. 2000-2017.	**Arboricultural Inspecting Officer** in South-West England, South East England, West Midlands and East Midlands; advising the First Secretary of State on TPO appeals since 2000. Contract with DCLG expired April 2008 when transferred to PINS. Contract continued with PINS, as Non-Salaried **Arboricultural Inspector, determining TPO appeals and High Hedge appeals. All non-salaried inspectors released in 2017.**
Architects / Developers / Planning Appeals	Complete Tree Constraints, Impact Assessment & Tree Protection advice for planning, working with other professionals to input arboriculture into more complex development schemes. Recent assignments in Liverpool to Cornwall, Kent, Norfolk & London. All using BS5837:2012. FULL CAD CAPABILITY.
Amey Mouchel Ltd	Overseeing Amey Tree Officer on motorway and trunkroad tree inspections throughout Midlands and Marches to 2012. Amey Mouchel are agents for Highways Agency.
CRH Tarmac Ltd, + Midland Quarry Products + Quarryplan (in Northern Ireland).	Since 1990 working with Estates staff, quarry managers and Landscape / ecological consultancies organising and managing contracts for tree and woodland planting both pre- and post- quarrying. Also preparing landscape restoration schemes for straightforward sites plus landscape management on sites throughout southern England, East Anglia and south and south-west Wales. (Commendations for Land Restoration and Environmental improvements from Spelthorne Borough Council 2003.) Also in England & Northern Ireland ongoing tree consultancy for Quarryplan.
Land Agents	Assisting Bruton Knowles clients' with woodland management and other tree issues since 1984. We also assist clients of Fisher German and Savills on a regular basis.
Tarmac Central now CRH Tarmac Ltd.	1988-2018 woodland management of Hopwas Hays Wood, Tamworth.
Rural estates in Herefordshire, Worcestershire and Gloucestershire, plus private woodland owners in southern England and Wales.	Since 1983 woodland management, tree management, hedgerow management. Many are Ancient woodlands and SSSI's requiring detailed ecological management plans produced in consultation with ecologists. About forty Farm Woodland Premium Schemes and about twenty Native Woodland Plans prepared to date in England and Wales. On-going EWGS grant applications. Input into Tir Gofal (and its successor) and Stewardship schemes. Better Woods for Wales (BWW) applications.
British Waterways	Ten-year Tree and Vegetation Management Plans along canals and around reservoirs in London, Hertfordshire, Berkshire, Birmingham, Staffordshire, Worcestershire, Gloucestershire, Shropshire, Llangollen Canal, etc: plus help in dispute with riparian owners. This work ceased around 2011.
Stroud District Council	Management of 49Ha woodland since 1989 on FC schemes plus grassland on DEFRA Stewardship Schemes, including HLS. Retired Nov07.
One–off clients	Since 1983 assisting tree owners, developers, lawyers etc throughout southern or midland Britain, including Wales, on a wide range of tree-related issues including planning, planning appeals, subsidence, health & safety, disputes, vegetation control, expert witness, valuation of woodlands, standing and felled timber, Christmas trees etc, and tree and landscape planting schemes. Recently High Hedge issues and BS5837 are hot topics.
Malvern Hills District Council. South Oxfordshire District Council	BJU Stand-in part-time Consultant Tree Officer Summer 2003. JF-D stand in Consultant Tree Officer summer 2009 to spring 2010.
Golf course & leisure facilities	Assistance with development of Carden Park golf course in Cheshire. Management advice for trees on other golf courses: Eg Ross Golf Club, Swindon Golf Club .
Farm management	Management of own 95Ha farmland since 1985.

Please do not hesitate to ask for further information. B J Unwin END.