APPENDIX (4)

Marlow Consulting Limited

Arboricultural Consultants
Landscape Architects

7, Roden Avenue, Kidderminster, Worcs. DY10 2RF Tel: 01562 820907 Fax: 01562 69491 Email: enquiries@marlowconsulting.co.uk

Head of Legal, Equalities and Democratic Services
Bromsgrove District Council
The Council House
Burcot Lane
Bromsgrove
Worcestershire
B60 1AA

Ftao Mrs R Sultana

21st December 2016

Dear Mrs Sultana,

Re: Bromsgrove District Council Tree Preservation Order (N0.19) 2016 Tree/s on land at Plymouth Drive, Barnt Green

On behalf of Mr David Courts of no. 1 Plymouth Drive, Barnt Green, please accept this letter as a formal **OBJECTION** to the above Tree Preservation Order. A copy of the Tree Preservation Order (TPO) has been forwarded to us (see Appendix 1). Please find as Appendix 2 a brief cv of the author.

Summary of objection

The Tree Preservation Order seeks to protect trees that are not worthy of protection, has been poorly drafted and has been created in a way that appears unfair and cynical.

1.0 BACKGROUND

1.1 Marlow Consulting Ltd was engaged by Mr & Mrs Eden, on behalf of UDC Midlands Ltd to carry out a survey of the trees at no. 1 Plymouth Drive in accordance with BS5837:2012, Trees in Relation to Design, Demolition and Construction – Recommendations. The report was dated 28th November 2016 (copy attached as Appendix 3).

2.0 GUIDANCE IN RESPECT OF CREATING TREE PRESERVATION ORDERS

2.1 The legislation for the creation of Tree Preservation Orders is within The Town and Country Planning (Tree Preservation) (England) Regulations 2012.

2.2 Guidance in respect of the creation of a Tree Preservation Order is contained within National Planning Policy Framework, Planning Practice Guidance – Tree Preservation Orders and Trees in Conservation Areas.

2.3 Please find as Appendix 4 a copy of Planning Practice Guidance – Tree Preservation Order - General, Paragraphs 7 & 8.

3.0 REASONS FOR OBJECTING

3.1 Public Amenity

3.1.1 Tree Preservation Orders – General, Paragraph 7 states:

Orders should be used to protect selected trees and woodlands if their removal would have a significant negative impact on the local environment and its enjoyment by the public. Before authorities make or confirm an Order they should be able to show that protection would bring a reasonable degree of public benefit in the present or future.

3.1.2 Of the 13 trees and two groups surveyed as part of the Marlow Consulting Ltd report of the 28th November 2016, against the criteria within BS5837;2012, five were assessed as being of moderate suitability for retention, eight were assessed as being of low suitability for retention and two were identified to be felled.

3.1.3 The protection of a number of trees using the group classification (G1 & G2) has resulted in trees which are not worthy of protection, due to their poor condition, or limited visual amenity, being protected and also potential

confusion over which trees are protected. Within G1, the Red Oak has a basal cavity, other defects and is of poor form and shape and was rated as being of low suitability for retention. One of the Sycamores (tree 4), the Oak (tree 5) and the Lawson Cypress G1, were all rated in the Marlow Consulting Ltd tree survey as being of low suitability for retention.

3.1.4 The first schedule identifies trees within Group G1 as 1 x Sycamore, 1 x Red Oak, 1 x Horse Chestnut, 1 x Oak. The area encompassed by G1 includes two Sycamores, so which one is protected? The area on the plan also includes a group of Lawson Cypress (G1 in the Marlow Consulting Ltd tree survey). As the plan typically takes precedence in respect of what is protected, it would suggest the Lawson Cypress and two Sycamores are protected but not listed in the first schedule.

3.1.5 The Town and Country Planning (Tree Preservation) (England) Regulations 2012, provides details of what should be included in the TPO. A template (see Appendix 5) for the first schedule is provided, which specifies how the trees within the different classifications within the TPO are to be specified. For groups, it clearly states that the number of trees of each species in the group should be listed, i.e. 2 Ash, 3 Birch, 3 Oak. Within the first schedule of this TPO the description for G2 is 'All trees with a stem diameter greater than 100mm at 1.5m'. **This doesn't conform to the 2012 regulations, is vague and inaccurate.** Trees within G2 include a tree (Sycamore – tree 7) identified in the Marlow Consulting Ltd tree survey as requiring to be felled due to its poor condition.

3.1.6 Trees on the property side of the groups G1 & G2 are barely visible from outside the site and as such don't meet the criteria, that is, if they were to be removed it would have a significant negative impact on the local environment and its enjoyment by the public.

3.2 Government Guidance states;

When considering whether trees should be protected by an Order, authorities are advised to develop ways of assessing the amenity value of trees in a structured and consistent way, taking into account the following criteria;

1. Visibility

The extent to which the trees or woodlands can be seen by the public will inform the authority's assessment of whether the impact on the local environment is significant

No. 1 Plymouth Drive is within a small, relatively private development with no through traffic and therefore, little access to the wider public. There are therefore, very limited views of the trees to the public and, therefore, the impact of them on the local environment is not significant.

2. Individual, collective and wider impact

Authorities are advised to assess the importance of trees against the following criteria;

Size and form – Within the groups are a number of trees of poor form and shape and relatively small size, which in my opinion, individually or collectively, do not add any significant value to the local landscape.

Future Potential as an amenity – The future visibility of a number of the trees is unlikely to change from its current limited extent.

Rarity, cultural or historic value - The trees are not rare, have no cultural or historic value.

Contribution to, and relationship with, the landscape – In my opinion a number of these trees contribute little to the wider landscape and have no special or important relationship to it.

3.2.1 Marlow Consulting Ltd has seen nothing which demonstrates that the Local Authorities approach to the creation of this Tree Preservation Order has been carried out in a structured and consistent way, despite freely available systems such as Tree Evaluation Method for Preservation Order (TEMPO), being available, which allow this to be done.

3.3 Expediency

3.3.1 Mr David Courts, through his advisors, have been in discussions with the Local Authority for some time in respect of a potential re-development of no. 1 Plymouth Drive. I understand that on at least one previous occasion a Tree Officer from the Local Authority has visited site and viewed the trees. At any time, if Mr Courts had been minded to do so, he could have felled the trees in question, but he chose not to do so.

3.3.2 To impose a Tree Preservation Order when the occupant has had every opportunity to remove the trees, and has consistently chosen not to, and the Local Authority have been aware of proposals that might affect the trees for some time, shows in my opinion, a lack of good judgement, and appears unfair and cynical.

Jeff Marlow
MSc., Dip. Arb. (R.F.S.), F. Arbor. A., RCArborA.
Arboricultural Association Registered Consultant
Director, Marlow Consulting Ltd

21st December 2016

Appendix 1

REDDITCH BOROUGH COUNCIL
making a difference
www.redditchbc.gov.uk

Bromsgrove District Council
www.bromsgrove.gov.uk

Owner/Occupier
1 Plymouth Drive
Barnt Green
Worcestershire
B45 8JB

Our Ref RS/ TPO (19) 2016

If telephoning please ask for
Mrs R Sultana (01527) 881745
Email: r.sultana@bromsgroveandredditch.gov.uk

RECORDED DELIVERY

30th November 2016

Dear Sir/Madam,

Town and Country Planning Act 1990
Bromsgrove District Council Tree Preservation Order (No.19) 2016
Tree/s on land at Plymouth Drive, Barnt Green

The Council has made an Order under Section 198 of the Town and Country Planning Act 1990 in respect of a tree / trees on the above-mentioned land, and a copy of the Order is enclosed, together with a Notice to this effect under the provisions of the Town and Country Planning (Tree Preservation) (England) Regulations 2012.

Subject to Regulation 4 the Tree Preservation Order shall take effect provisionally today.

Yours faithfully,

Mrs R Sultana
For Principal Solicitor

Enc.

Town and Country Planning (Tree Preservation) (England) Regulations 2012

Town and Country Planning Act 1990

Tree Preservation Order (19) 2016

Bromsgrove District Council in exercise of the powers conferred on them by section 198 of the Town and Country Planning Act 1990 make the following Order—

Citation

1. This Order may be cited as Tree Preservation order (19) 2016

Interpretation

2.— (1) In this Order "the authority" means Bromsgrove District Council.

(2) In this Order any reference to a numbered section is a reference to the section so numbered in the Town and Country Planning Act 1990 and any reference to a numbered regulation is a reference to the regulation so numbered in the Town and Country Planning (Tree Preservation)(England) Regulations 2012.

Effect

3.— (1) Subject to article 4, this Order takes effect provisionally on the date on which it is made.

(2) Without prejudice to subsection (7) of section 198 (power to make tree preservation orders) or subsection (1) of section 200 (tree preservation orders: Forestry Commissioners) and, subject to the exceptions in regulation 14, no person shall—

(a) cut down, top, lop, uproot, wilfully damage, or wilfully destroy; or

(b) cause or permit the cutting down, topping, lopping, uprooting, wilful damage or wilful destruction of,

any tree specified in the Schedule to this Order except with the written consent of the authority in accordance with regulations 16 and 17, or of the Secretary of State in accordance with regulation 23, and, where such consent is given subject to conditions, in accordance with those conditions.

Application to trees to be planted pursuant to a condition

4. In relation to any tree identified in the first column of the Schedule by the letter "C", being a tree to be planted pursuant to a condition imposed under paragraph (a) of section 197 (planning permission to include appropriate provision for preservation and planting of trees), this Order takes effect as from the time when the tree is planted.

Dated this 30th November 2016

Signed on behalf of Bromsgrove District Council

.....

Authorised by the Council to sign in that behalf

SCHEDULE

Specification of trees

Trees specified individually

(encircled in black on the map)

No. on Map	Description	NGR	Situation
T1	Tulip Tree	399387 - 273988	Situated on South Eastern boundary of 1 Plymouth Drive
T2	Horse Chestnut	399402 - 274073	Situated in rear garden 10 Plymouth Drive
T3	Oak	399416 - 274070	Situated in rear garden 10 Plymouth Drive
T4	Redwood	399431 - 274076	Front of 10 Plymouth Drive
T5	Oak	399410 - 273994	Front of 7 Plymouth Drive
T6	Lime	399424 - 273974	Rear garden of 22 Plymouth Road
T7	Cedar	399408 - 273984	Rear garden of 22 Plymouth Road
T8	Cedar	399400 - 273975	Rear garden of 22 Plymouth Road
T9	Cherry	399387 - 273964	Front of 22 Plymouth Road
T10	Oak	399486 - 274000	Rear garden of 6 Plymouth Drive
T11	Pine	399494 - 274015	Side of 8 Plymouth Drive
T12	Oak	399469 - 273978	Rear garden of 6 Plymouth Drive
T13	Pine	399507 - 274060	Rear garden of 8 Plymouth Drive
T14	Lime	399507 - 274058	Rear garden of 8 Plymouth Drive
T15	Beech	399506 - 274056	Rear garden of 8 Plymouth Drive
T16	Oak	399482 - 274017	Side of 8 Plymouth Drive
T17	Oak	399483 - 273985	Rear garden of 6 Plymouth Drive

Trees specified by reference to an area

(within a dotted black line on the map)

NONE

Groups of trees

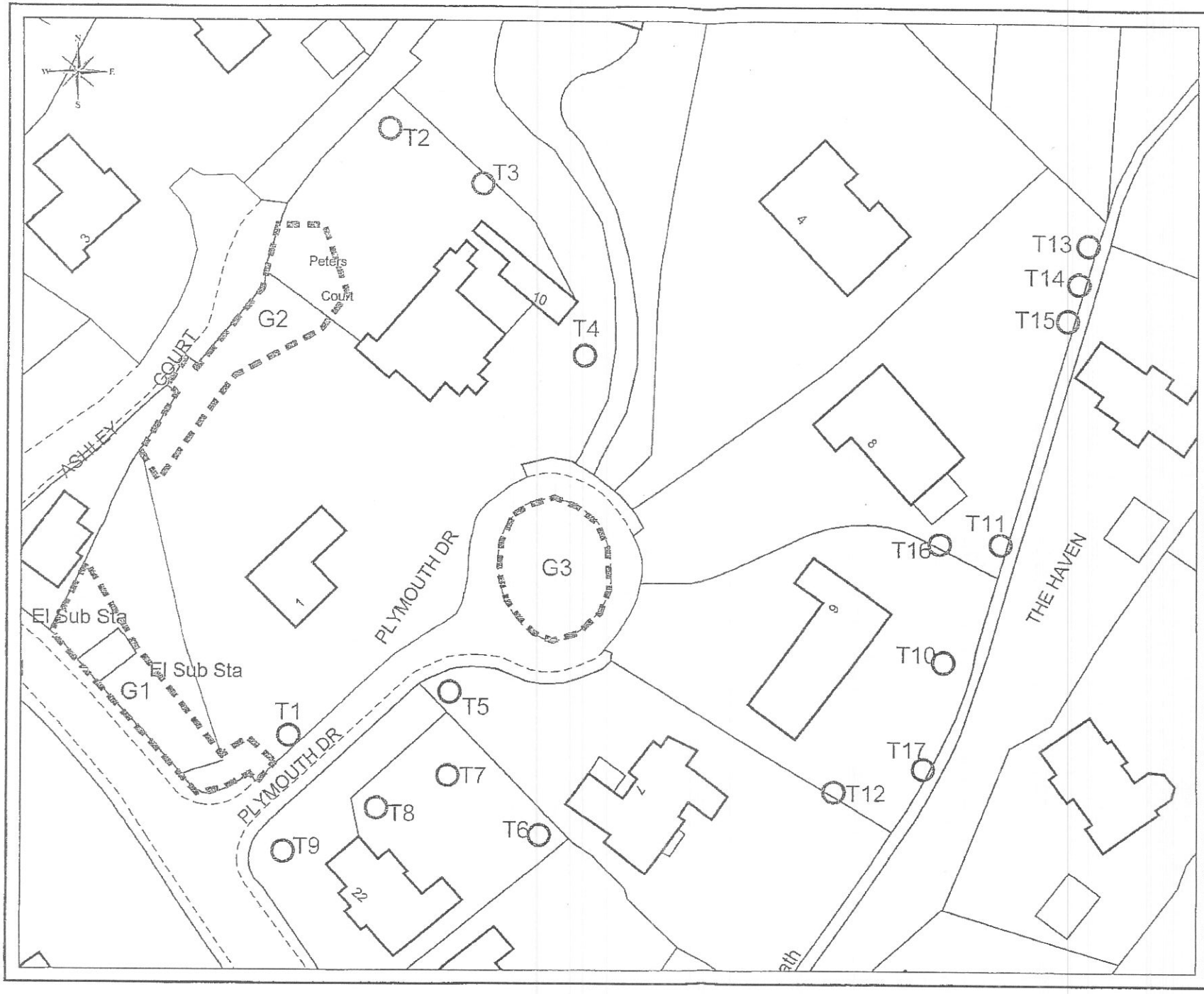
(within a broken black line on the map)

No. on Map	Description	NGR	Situation
G1	**1x Sycamore 1x Red Oak 1x Horse Chestnut 1x Oak**	**399367 - 273994**	**Situated along South Western boundary of 1 Plymouth Drive**
G2	**All trees with a stem diameter greater than 100mm at 1.5 metres**	**399381 - 274047**	**Situated along rear garden boundary lines of 1 Plymouth Drive and Peters Court**
G3	**4x Cedar 1x Beech 2x Oak**	**399427 - 274012**	**Situated on island within Plymouth Drive**

Woodlands

(within a continuous black line on the map)

NONE



Clarke.

30th NOVEMBER 2016

Date	Rev	Details

Project:

Bromsgrove District Council
TPO (19) 2016

Drawing:

Plymouth Drive
Barnt Green

Drawn:	JW	Scale:	1/530
Surveyed:		Date:	21/11/2016

Drawing No: BDC TPO (19) 2016

Landscape and Grounds Maintenance
Town Hall
Walter Stranz Square
Redditch
Worcs B98 8AH

REDDITCH BOROUGH COUNCIL
making a difference
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Bromsgrove District Council
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Appendix 2

Jeff Marlow
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Arboricultural Association Registered Consultant

Qualifications and Professional Memberships

Masters Degree in Environmental Science

Royal Forestry Society Professional Diploma in Arboriculture

National Diploma in Arboriculture

Fellow of the Arboricultural Association

Arboricultural Association Registered Consultant

Experience

Arboricultural Association Registered Consultant	2003 - present
Arboricultural Consultant	1999 - present
Director of Arboriculture Glendale Countryside	May – August 1999
Parks and Countryside Manager Wyre Forest District Council	June 1997 – May 1999
Trees and Countryside Officer Wyre Forest District Council	June 1994 – June 1997
Trees and Woodlands Officer Wyre Forest District Council	Oct 1990 – June 1994
Assistant Arboricultural Officer London Borough of Redbridge	Feb 1988 – Oct 1990

1 Plymouth Drive
Barnt Green

Arboricultural Report
in accordance with BS5837:2012

Prepared for:
Mr & Mrs Eden

Prepared by:

Marlow Consulting Ltd

Arboricultural Consultants
27 Roden Avenue
Kidderminster
Worcestershire
DY10 2RF
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28th November 2016

Arboricultural Association®
REGISTERED CONSULTANT

Arboricultural Association
50 years and still growing
trees.org.uk

Appendix 3

Contents

Appendices

1.0 INTRODUCTION

1.1 Brief

1.1.1 Marlow Consulting Ltd has been instructed by Mr & Mrs Eden to produce an Arboricultural Report in respect of the proposed demolition of an existing dwelling at 1 Plymouth Drive and the construction of two replacements. The report is produced in accordance with BS5837:2012.

1.2 Information provided

1.2.1 Marlow Consulting Ltd has been supplied with the following as a .pdf;

- Feasability Drawing produced by Simon N Hartshorne.

1.3 Scope of the report

1.3.1 The report follows the methodology set out in accordance with British Standard 5837: 2012, Trees in Relation to Design, Demolition and Construction – Recommendations, (**BS 5837**).

1.3.2 The report has been prepared by Jeff Marlow MSc., Dip. Arb. (R.F.S.), F. Arbor. A., Arboricultural Association Registered Consultant. Please find as Appendix 1 a brief CV of the author.

1.4 Limitations

1.4.1 Validity, accuracy and findings of the report will directly relate to the accuracy of information provided at the time of the survey. Without details of proposed

levels, location of services and foundation design any conclusions in respect of the impact of the proposed re-development, tree protection and future health are limited.

1.4.2 The survey is **not** an assessment of the condition of any tree referred to in it and cannot be relied upon as an assessment of the health and safety of any tree within or adjacent to the site. Any observations are visual and only consider obvious and general tree management in respect of the potential future development of the site. Detailed investigations were not carried out and no tree was climbed.

1.4.3 The report is valid for a period of twelve months from the date of the site visit.

1.4.4 No information has been sought or ascertained in respect of the underlying soils, services, ground formations and structures which may affect rooting patterns. Unless specifically informed otherwise, or clearly affected by obvious on-site factors, for the purpose of this report all tree rooting areas are presumed to be symmetrical.

1.4.5 The report does not consider the impact on any existing or proposed structure through direct or indirect root activity.

1.4.6 No part of this report may be reproduced by any means without the written consent of Marlow Consulting Ltd

1.5 Status of the trees

1.5.1 Marlow Consulting Ltd has no information in respect of the status of the trees referred to in this report.

1.5.2 Before carrying out any work, please consult the Local Authority and obtain the necessary consents in writing.

1.6 Protected wildlife and habitats

1.6.1 The Wildlife and Countryside Act 1981, Part 1, affords protection to a variety of plants, animals and birds. Before carrying out any works recommended in this report please ensure the works do not contravene the Act.

2.0 TREE SURVEY

2.1 The tree survey was carried out in accordance with the tree survey methodology within BS5837:2012 and as per sections 4.4.2.5 & 4.4.2.6 (see Appendix 2).

2.2 The trees were assessed against the cascade chart for tree quality assessment contained within Table 1 of BS5837:2012 (see Appendix 3). Please find as Appendix 4 a list of common and botanical tree names.

2.3 Please find as Appendix 5 the Tree Survey Schedule in the form of two sheets with details of the thirteen individual trees and two groups surveyed.

2.4 Please find as Appendix 6 the Tree Plan with the trees numbered. The tree numbers have been coloured according to our assessment of their suitability for retention.

2.5 Please find below as figures 1 & 2 views of trees 7 & 10 which were rated to be felled.

Figure 1 View of the trunk of Sycamore, tree 7.

Figure 2 View of the trunk of Beech, tree 10.

3.0 TREE CONSTRAINTS

3.1 Root Protection Areas

3.1.1 BS5837 recommends an area equivalent to a circle with a radius 12 times the trunk diameter(s) at 1.5m is left free from disturbance by construction. The area occupied by the circle is known as the Root Protection Area (RPA). The RPAs are plotted as red circles. The dimensions of the circles are taken from the second to last column of the Tree Survey Schedule.

4.0 ARBORICULTURAL IMPACT ASSESSMENT

4.1 If carried out with due regard to the protection of adjacent trees, the demolition of the existing dwelling should not affect the trees.

4.2 The proposed dwellings are sited outside the RPAs of the adjacent trees and therefore, subject to suitable protection, their construction should have no impact on them.

4.3 The new driveway and parking area to the front of plot 2 will impinge into the RPAs of trees 3 & 6 (moderate suitability for retention) and tree 5 (low suitability for retention). If levels allow, where the driveway impinges into RPAs, it should be constructed using 'no-dig' construction techniques.

5.0 ARBORICULTURAL METHOD STATEMENT

5.1 Tree Works

5.1.1 Prior to any other works commencing on site, including the erection of protective fencing, those trees identified to be felled, should be removed. Any other tree works should also be carried out.

5.1.2 The Tree Surgeon should be able to demonstrate proof of experience and hold the relevant insurance cover.

5.1.3 Any pruning works required to facilitate the development will be carried out. Such works will be kept to a minimum. All pruning works will be carried out in line with best practice and current industry standards.

5.1.4 The statutory protection afforded by the Wildlife and Countryside Act and Countryside and Rights of Way Act will be adhered to. If further advice is required, particularly if bats are discovered during tree work, it will be obtained from Natural England, or other competent persons and recommendations adhered to.

5.1.5 The Project Arboriculturalist will meet with the Tree Work Contractor prior to work commencing, to ensure the scope of work is clarified. Those trees identified to be felled will be clearly marked. The Local Authority Arboriculturalist will be invited to attend the site meeting and will be advised of the date of the works as far in advance as practical.

5.1.6 All work shall be undertaken at the appropriate time and with the consent of the Local Authority.

5.1.7 All operations shall be carefully carried out to avoid damage to the trees being retained or neighbouring trees. No trees shall be used for anchorage or winching purposes.

5.2 Arboricultural Supervision

5.2.1 Arboricultural Supervision involves a site visit and subsequent brief report on tree related issues on site, a copy being sent to the client, contractor and Local Authority Tree Officer.

5.2.2 The purpose of the Arboricultural Supervision is to ensure that the Tree Protection measures are being adhered to, no damage has occurred to retained trees and if any conflicts have arisen, they are promptly and effectively dealt with.

5.2.3 The following phases of Arboricultural Supervision are suggested;

Phase 1 Pre-development Stage.

- A pre-commencement meeting will be held with the Client (or his representative), the Builder and the Project Arboriculturalist.

- The purpose of the meeting will be to develop a relationship between the Arboriculturalist and the Builder and to discuss tree protection measures, including the position and type of protective fencing. The fencing is to be erected prior to any works on site commencing.

- Contact details of all parties will be exchanged to ensure effective communication.

Phase 2 Development Stage

- During the development stage, initially, regular site visits will be carried out by the Project Arboricultural Consultant. The first two site visits will be weekly.

- Once compliance with the tree protection measures is established site visits can be reduced in frequency and any concerns/issues raised on site dealt with by means of phone call or email.

Phase 3 Post-development Stage

- Once all construction related works have been completed the protective fencing will be removed.

- Any landscape operatives employed in respect of hard or soft landscaping will be briefed by the Project Arboriculturalist.

5.3 Construction Exclusion Zones

5.3.1 The line of protective fencing is defined by the extent of the Root Protection Area (RPA) of those trees to be retained within the site. The areas inside the protective fencing are the Construction Exclusion Zones. Within the CEZ, the following will apply;

- No mechanical excavation.
- No excavation by any means without arboricultural site supervision.
- No lowering or raising of levels (except removal of grass sward/surface layer, using hand tools).
- No storage of plant or materials.

- No storage or handling of any chemicals, including cement washings, vehicle oils or fuels.
- No vehicular access.
- No fire lighting.

5.4 Demolition Phase

5.4.1 All plant and vehicles engaged in demolition works should either operate outside the RPAs, or operate from existing hard surfaces. Where there is any risk of compaction the ground should be protected.

5.4.2 Where trees stand adjacent to structures to be removed, the demolition should be undertaken inwards within the footprint of the existing building.

5.4.3 If possible, underground structures within the RPA should be left in-situ. If they have to be removed, this should be done under the supervision of the Project Arboriculturalist.

5.4.4 Where an existing hard surface is scheduled for removal, care should be taken not to disturb tree roots that might be present underneath it. Hand held tools or appropriate machinery should be used (under arboricultural supervision) to remove the existing surface, working backwards over the area, so that the machine is not moving over the exposed ground.

5.5 Tree Protective Fencing

5.5.1 The position of the tree protective fencing is defined on the Tree Protection Plan. All protective fencing shall be installed prior to any of the following taking place:

- Plant and material delivery.
- Demolition.
- Soil stripping.
- Construction works.
- Utility installation.
- Landscaping

5.5.2 Once erected, all tree protective fencing will remain in place and will not be altered or moved without consultation and the agreement of the Project Arboriculturalist and the Local Authority.

5.5.3 Once the Construction Exclusion Zones have been protected construction works can commence.

5.6 Avoiding damage to stems and branches

5.6.1 Care shall be taken when planning site operations in proximity to retained trees to ensure that wide or tall loads, or plant with booms, jibs and counterweights can operate without coming into contact with retained trees. Such contact can result in serious damage and might make their safe retention impossible.

5.7 Installation of underground services within the Root Protection Area (RPA)

5.7.1 If, for whatever reason, installation of underground services has to pass within RPAs, the Project Arboriculturalist and the Local Authority must be notified prior to any tree protection barrier removal.

5.7.2 Trenching, for the installation of underground services, severs any roots present and may change the local soil hydrology in a way that adversely affects the health of the tree. For this reason particular care will be taken in the routeing and methods of installing underground services. Wherever possible, they should be kept together and arboriculturally sensitive methods of excavation used. At all times, where services are to pass within the Root Protection Area, detailed plans showing the proposed routeing will be drawn up in conjunction with an Arboriculturalist. Such plans will also show the levels and access space needed for installing the services.

5.7.3 Trenchless technology, such as thrust boring, can be used in some instances and is particularly effective as it can pass under the tree, at a depth which is likely to avoid almost all impact on roots on the subject tree. Access/thrust pits should be located outside the RPAs of the subject trees.

5.7.4 Reference can be made to National Joint Utilities Group publication (NJUG4) for guidance, but any approach must be approved by the Project Arboriculturalist and brought to the attention of the Local Authority Tree Officer.

5.8 Soft landscaping within the Root Protection Area (RPA)

5.8.1 Ground preparation will be carried out sensitively to ensure root damage is mitigated as much as practical. At no time is any heavy plant to be used within the RPA. Removal of existing vegetation will be carried out by hand. Turf may be removed using a mechanical turf stripper or by hand.

5.8.2 At no time shall a rotovator be used within any RPA to prepare the soil. Any levelling will be done by hand with the use of hand tools.

5.8.3 Should the soil be compacted or have a poor structure which may hinder the development of any new planting, soil decompaction techniques may be used upon consultation with the Project Arboriculturalist.

5.8.4 New plants will be planted individually to minimise root disturbance (e.g. no 'trench' planting).

5.8.5 No works will be carried out within any RPAs if the soil moisture is of a level likely to allow compaction to occur.

5.9 Hard landscaping within the Root Protection Area (RPA)

5.9.1 Removal of existing vegetation will be carried out by hand. Turf may be removed using a mechanical turf stripper or by hand.

5.9.2 Any hard surfacing used within the Root Protection Area (RPA) should be permeable and gas porous. Paving slabs and block paviours are available with built in infiltration spaces between the slabs or blocks. These are ideal, though they should be laid dry-jointed on a sharp sand foundation to allow air and moisture to penetrate to the rooting area.

5.9.3 Bitumen paving can consist of porous or impermeable material. As the pores in tarmac paving will become blocked, the use of the material will be limited in extent to no more than 20% of the RPA.

5.10 No- Dig Construction

5.10.1 To avoid damage, we would recommend sections of roads/driveways or footpaths which impinge into the RPAs of trees rated as being of moderate or high suitability for retention are constructed using 'no-dig' construction techniques, if levels allow.

5.10.2 Please find as Appendix 7 information in respect of one such product.

6.0 TREE PROTECTION

6.1 The position of protective fencing is shown on the Tree Plan with a dashed line. We would recommend the use of Herras panels.

Jeff Marlow
MSc., Dip. Arb. (R.F.S.), F. Arbor. A., RCArbor.A
Arboricultural Association Registered Consultant
Director, Marlow Consulting Ltd

28th November 2016

Appendix 1

Jeff Marlow
MSc, Dip. Arb. (R.F.S.), F. Arbor. A.
Arboricultural Association Registered Consultant

Qualifications and Professional Memberships

Masters Degree in Environmental Science

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Arboricultural Association Registered Consultant	2003 - present
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Parks and Countryside Manager Wyre Forest District Council	June 1997 – May 1999
Trees and Countryside Officer Wyre Forest District Council	June 1994 – June 1997
Trees and Woodlands Officer Wyre Forest District Council	Oct 1990 – June 1994
Assistant Arboricultural Officer London Borough of Redbridge	Feb 1988 – 0ct 1990
Climber Arborist London Borough of Sutton	Aug 1986 – April 1987
Climber Arborist Private Contractor	Sept 1984 – Sept 1985
Woodsman Private Estate	June 1980 - June 1981

Appendix 2

4.4.2.5 A schedule to the survey should list all the trees or groups of trees. The following information should be recorded (see **4.4.2.6** for measurement conventions):

a) sequential reference number (to be recorded on the tree survey plan);

b) species listed by common name, with a key provided to scientific names;

c) height;

d) stem diameter, measured in accordance with Annex C;

e) branch spread, taken as a minimum at the four cardinal points, to derive an accurate representation of the crown (to be plotted on the tree survey plan);

f) existing height above ground level of:

   1) first significant branch and direction of growth (e.g. 2.4-N);

   2) canopy,

   to inform on ground clearance, crown/stem ratio and shading;

g) life stage (e.g. young, semi-mature, early mature, mature, over-mature);

h) general observations, particularly of structural and/or physiological condition (e.g. the presence of any decay and physical defect), and/or preliminary management recommendations;

i) estimated remaining contribution, in years (<10, 10+, 20+, 40+);

j) category U or A to C grading (see **4.5** and Tables 1 and 2), to be recorded on the tree survey plan.

NOTE 1 It is not always practical or necessary to record branch spread for every tree within a group or woodland.

NOTE 2 In some cases, layout design might be aided by the arboriculturist providing data on future tree height and crown spread.

4.4.2.6 The measurement conventions should be as follows.

a) height, crown spread and crown clearance should be recorded to the nearest half metre (crown spread should be rounded up) for dimensions up to 10 m and the nearest whole metre for dimensions over 10 m;

b) stem diameter should be recorded in millimetres, rounded to the nearest 10 mm (0.01 m);

c) estimated dimensions (e.g. for off-site or otherwise inaccessible trees where accurate data cannot be recovered) should be clearly identified as such (e.g. suffixed with a "#").

4.4.2.7 Relevant details of shrub masses, hedges, hedgerows and stumps are expected to have been recorded during the topographical survey (see **4.2**), but should be checked by the arboriculturist for inclusion in the tree survey. In the case of regularly maintained domestic hedges and the majority of shrub masses, it will normally be sufficient to record their height and species on the tree survey plan or note these in the schedule.

4.4.2.8 Hedgerows and substantial internal or boundary hedges (including evergreen screens) should be recorded in a similar fashion to groups, with the lateral spread and average (or maximum and minimum) height and stem diameter ranges recorded, to allow the potential constraints associated with the features to be fully assessed. All woody species present should be recorded. Where woody plants are present within a hedgerow that are significantly different in character from the remainder of it, these should be identified and recorded separately, especially where they comprise distinct trees.

Appendix 3

Table 1 **Cascade chart for tree quality assessment**

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	• Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) • Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline • Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality *NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see **4.5.7**.*			See Table 2
	1 Mainly arboricultural qualities	**2 Mainly landscape qualities**	**3 Mainly cultural values, including conservation**	
Trees to be considered for retention				
Category A **Trees of high quality** with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	See Table 2
Category B **Trees of moderate quality** with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	See Table 2
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, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	See Table 2

Appendix 4

Tree
Common and Botanical Names

Common Name	Botanical Name	Common Name	Botanical Name
Alder, Common	*Alnus glutinosa*	**Elm, English**	*Ulmus procera*
Alder, Grey	*Alnus incana*	**Elm, Wych**	*Ulmus glabra*
Alder, Italian	*Alnus cordata*	**False Acacia**	*Robinia pseudoacacia*
Apple, Crab	*Malus sylvestris*	**Fir, Common Silver**	*Abies alba*
Ash, Common	*Fraxinus excelsior*	**Fir, Douglas**	*Pseudotsuga menziesii*
Ash, Caucasian	*Fraxinus oxycarpa*	**Fir, Grand**	*Abies grandis*
Aspen	*Populus tremula*	**Gum, Sweet**	*Liquidamaber styraciflua*
Beech, Antartic	*Nothofagus antarctica*	**Gum, Cider**	*Eucalyptus gunnii*
Beech, Common	*Fagus sylvatica*	**Hawthorn**	*Crataegus monogyna*
Beech, Copper	*Fagus sylvatica 'Purpurea'*	**Hazel**	*Corylus avellana*
Beech, Cut Leaf	*Fagus sylvatica 'Heterophylla'*	**Hazel, Turkish**	*Corylus colurna*
Birch, Ornamental	*Betula sp.*	**Hemlock, Western**	*Tsuga heterophylla*
Birch, Silver	*Betula Pendula*	**Holly, Common**	*Ilex acquifolium*
Birch, River	*Betula nigra*	**Honey Locust**	*Gleditsia triacanthos*
Box Elder	*Acer negundo*	**Hornbeam**	*Carpinus betulus*
Cedar, Atlas	*Cedrus atlantica*	**Hornbeam, Fastigiate**	*Carpinus betulus 'Fastigiata'*
Cedar, Doedar	*Cedrus deodora*	**Indian Bean Tree**	
Cedar, Lebanon	*Cedrus libani*	**Juniper, Common**	*Juniperus communis*
Cedar, Western Red	*Thuja plicata*	**Juniper, Chinese**	*Juniperus chinensis*
Cedar, Japanese Red	*Cryptomeria japonica*	**Laburnum**	*Laburnum anagyroides*
Cherry, Bird	*Prunus padus*	**Larch, European**	*Larix decidua*
Cherry, Ornamental	*Prunus sp.*	**Lime, Common**	*Tilia x europaea*
Cherry, Wild	*Prunus avium*	**Maple, Norway**	*Acer platanoides*
Chestnut, Sweet	*Castanea sativa*	**Maple, Cappadocian**	*Acer cappadocicum*
Chestnut, Horse	*Aesculus hippocastanum*	**Maple, Field**	*Acer campestre*
Chestnut, Red Horse	*Aesculus x carnea*	**Maple, Paper-Bark**	*Acer grisseum*
Cypress, Swamp	*Taxodium distichum*	**Maple, Silver**	*Acer saccharinum*
Cypress, Lawson	*Chamaecyparis lawsoniana*	**Monkey Puzzle**	*Araucaria araucana*
Cypress, Leylandii	*X Cupressocyparis leylandii*	**Mulberry, Common**	*Morus nigra*
Cypress, Nootka	*Chamaecyparis nootkansensis*	**Oak, English**	*Quercus robur*
Cypress, Monterey	*Cupressus macrocarpa*	**Oak, Fastigiate English**	*Quercus robur 'Fastigiata'*

Tree
Common and Botanical Names

Common Name	Botanical Name
Oak, Holm	*Quercus ilex*
Oak, Red	*Quercus rubra*
Oak, Scarlet	*Quercus coccinea*
Oak, Sessile	*Quercus petraea*
Oak, Turkey	*Quercus cerris*
Pear	*Pyrus sp.*
Pear, Willow leafed	*Pyrus salicifolia*
Pine, Scots	*Pinus sylvestris*
Pine, Corsican	*Pinus nigra var. maritima*
Plane, London	*Platanus x hispanica*
Plane, Oriental	*Platanus orientalis*
Plum	*Prunus sp.*
Poplar, Black	*Populus nigra*
Poplar, Grey	*Populus canescens*
Poplar, Hybrid Black	*Populus x euramericana*
Poplar, Lombardy	*Populus nigra var. 'Italica'*
Poplar, Western Balsam	*Populus trichocarpa*
Poplar, White	*Populus alba*
Redwood, Coast	*Sequoia sempervirons*
Redwod, Dawn	*Metasequoia glyptostroiboides*
Rowan	*Sorbus aucuparia*
Snowy Mespil	*Amelanchier lamarckii*
Spruce, Norway	*Picea abies*
Spruce, Sitka	*Picea sitchensis*
Sycamore	*Acer pseudoplatanus*
Tree of Heaven	*Ailanthus altissima*
Thorn, Cockspur	*Crategus crus-galli*
Tulip Tree	*Liriodendron tulipifera*
Walnut, Common	*Juglans regia*
Wellingtonia	*Sequoiadendron giganteum*
Whitebeam	*Sorbus aria*

Common Name	Botanical Name
Whitebeam, Swedish	*Sorbus intermedia*
Willow, Crack	*Salix fragilis*
Willow, Goat	*Salix caprea*
Willow, White	*Salix alba*
Yew, Common	*Taxus baccata*
Yew, Irish	*Taxus baccata 'Fastigiata'*

Appendix 5

Site: **1 Plymouth Drive**
Barnt Green

BS5837
Tree Survey Schedule

Marlow Consulting Ltd
t: 01562 820907

Date of Site visit: 18th November 2016

Tree No.	Species	Height	Trunk diam. at 1.5 m	Branch Spread N	S	E	W	Crown Clear.	Age Class	Physiol. Condition	Structural Condition	Preliminary Work Required	Est. Contrib. (years)	BS5837 Category Grading	Sub Cat	Root Protection Radius	Root Protection Area (m^2)
1	Horse Chestnut	18	668	7	7	4	3	4	Middle Aged	Good	Leans to the west. Crown healthy. Cut back on the west side.	No work required.	20+	Moderate B	1/2	8.02 -	202 -
2	Red Oak	16	764	8	6	1	8	9	Mature	Fair	Cavity at the base. Large tear out wound on the west side of the trunk. Large deadwood. Poor form and shape.	No work required.	10+	Low C	1/2	9.17 -	264 -
3	Sycamore	18	764	9	9	9	9	5	Mature	Good	No significant visible defects in the base and trunk. Moderate squirrel damage. Large deadwood.	Remove large deadwood.	20+	Moderate B	1/2	9.17 -	264 -
4	Sycamore	15	420	7	3	4	6	9	Middle Aged	Good	Slightly upswept tree. Extensive squirrel damage.	No work required.	10+	Low C	1/2	5.04 -	80 -
5	English Oak	12	391	0	8	8	6	2	Young	Good	No significant visible defects in the base and trunk. Poor form and shape. Suppressed by adjacent Lawson Cypress.	No work required.	10+	Low C	1/2	4.70 -	69 -
6	Tulip Tree	12	589	5	5	5	5	3	Young	Good	Twin stemmed from approx. 4m. Large deadwood. Crown healthy.	No work required.	20+	Moderate B	1/2	7.07 -	157 -
7	Sycamore	15	900 #	8	5	8	8	4	Mature	Poor	Large decaying trunk. Regrowth at high risk of failure. Extensive squirrel damage.	Fell.	<10	Fell U			
8	Holly	9	229	3	3	3	3	0	Young	Good	Leans into the site. Crown healthy.	No work required.	10+	Low C	1/2	2.75 -	24 -

Site: **1 Plymouth Drive**
Barnt Green

BS5837
Tree Survey Schedule

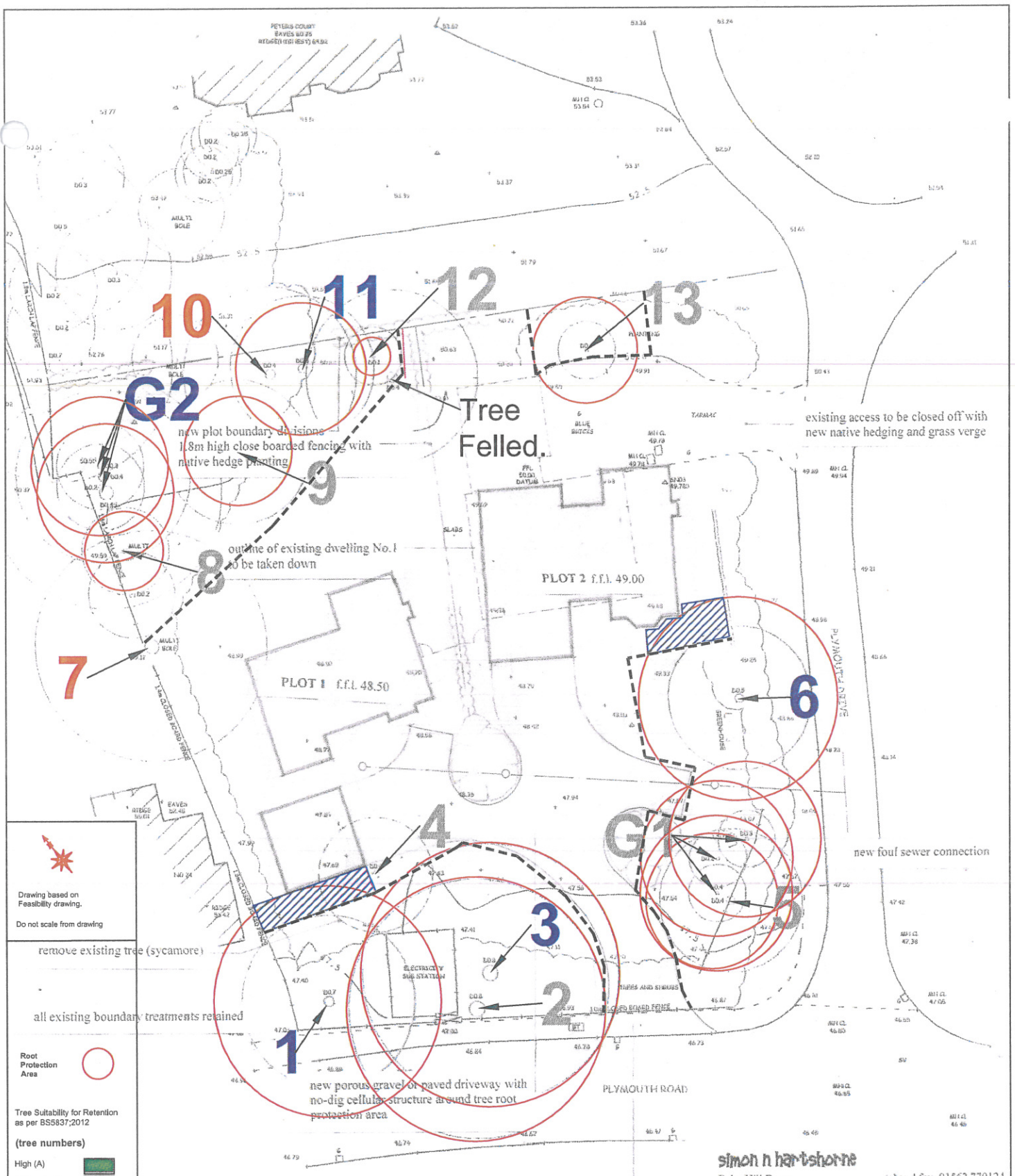
Marlow Consulting Ltd
t: 01562 820907

Date of Site visit: 18th November 2016

2

Tree No.	Species	Height	Trunk diam. at 1.5 m	Branch Spread N	S	E	W	Crown Clear.	Age Class	Physiol. Condition	Structural Condition	Preliminary Work Required	Est. Contrib. (years)	BS5837 Category Grading	Sub Cat	Root Protection Radius	Root Protection Area (m^2)
9	English Oak	16	315	1	6	4	4	1	Young	Good	No significant visible defects. Suppressed. Poor form and shape.	No work required.	10+	Low C	1/2	3.78 -	45 -
10	Common Beech	16	519	7	7	7	7	1	Young	Good	Significantly weak fork at 1.6m & weak fork at 2m - high risk of failure. Crown healthy.	Fell.	<10	Fell U			
11	Common Beech	16	382	6	6	6	4	0	Young	Good	No significant visible defects. Inhibited by the adjacent tree. Crown healthy.	No work required.	20+	Moderate B	1/2	4.58 -	66 -
12	Tulip Tree	4	110	3	1	3	3	0	Young	Good	No significant visible defects. Crown healthy. Poor form and shape due to proximity of adjacent tree, now felled.	No work required.	10+	Low C	1/3	1.32 -	5 -
13	Lawson Cypress	14	306	2	2	2	2	0	Middle Aged	Good	No significant visible defects. Crown healthy.	No work required.	10+	Low C	1/3	3.67 -	42 -
G1	Lawson Cypress	14	450 #	2	2	2	2	2	Middle Aged	Good	Minor damage to trunks. Crowns healthy.	No work required.	10+	Low C	1/3	5.40 -	92 -
G2	Beech x 4	20	400 #	10	10	10	10	0	Middle Aged	Fair	Line of four stems. Extensive squirrel damage.	No work required.	20+	Moderate B	1/3	4.80 -	72 -

Appendix 6



Drawing based on Feasibility drawing.

Do not scale from drawing

Root Protection Area

Tree Suitability for Retention as per BS5837;2012

(tree numbers)

- High (A)
- Moderate (B)
- Low (C)
- Fell (U)

Marlow Consulting Ltd
Arboricultural Consultants
27 Roden Avenue
Kidderminster
DY10 2BF
T: 01562 820907
ezenquiries@marlowconsulting.co.uk

Site: Proposed dwelling adj. no. 1 Plymouth Drive Barnt Green

Client: Mr & Mrs Eden

Drawing Title: Tree Plan

Date: 28.11.16 | Scale: 1:250@A3

PROPOSED NEW ACCESS
all in accordance with Highway Authority standards and specification
remove minimum section of hedge to allow access and visibility

0 5 10 20 30

Ground Protection

Line of Protective Fencing

rev A houses restred outside tree rpa nov 16

simon n hartshorne
Briar Hill Barns
Chaddesley Corbett
Worcestershire DY10 4NW
tel and fax. 01562 770124
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planning and building design consultants

project
SITE REDEVELOPMENT
No 1 PLYMOUTH DRIVE
BARNT GREEN WORCS

scale 1 : 250 @ A3 date OCT 16 drawn

title PROPOSED SITE PLAN

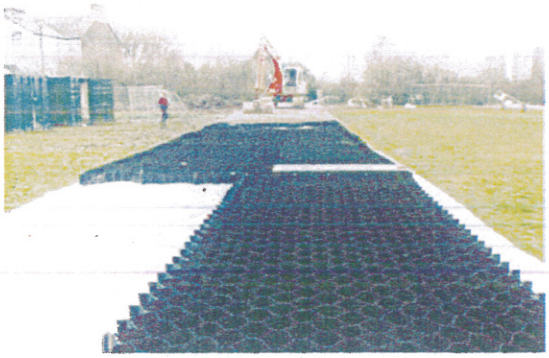
drawing no. 16.10.03 A rev

Appendix 7

Geosynthetics Ltd
Fleming Road
Harrowbrook Industrial Estate
Hinckley, Leicestershire
LE10 3DU
Tel 01455 617139 Fax 01455 617140
sales@geosyn.co.uk
www.geosyn.co.uk

Method Statement

For The Installation of Cellweb Tree Root Protection System.



When considering damage to tree roots, in applications of vehicular access and parking, the risk of oxygen depletion caused by compaction of subsoil's, site clearance damaging the root source and type of reinforcement are areas which need to be given due consideration.

Other risk factors are:

- Creating an impermeable surface
- Causing a rise in the water table due to construction
- Increasing ground level
- Contamination of subsoil's

1. **Compaction**

When looking at site conditions and use, the following information should be considered to enable a load bearing structure capable of supporting traffic to be proposed:

- Californian Bearing ratio (CBR) – Standard test method for measuring soil strength
- Soil types
- Water table
- Maximum load (vehicles)
- Acceptable rut depth
- Reinforcement type — Cellweb Cellular Confinement
- Type and Depth of engineered infill material — Clean, angular. Usually 40mm to 20mm.

2. Dig (site strip)

Site stripping does damage some root structure prior to construction; however, the use of no-dig construction elevates the access road requiring edge protection.

3. No dig

3.1. Remove surface vegetation	Use a suitable herbicide suitable for the specific vegetation and not harmful to the tree root system
3.2. Place geotextile separation filtration layer	Use a Fibretex F4M non woven Goetextile over the prepared sub-grade. Overlap dry joints by 300mm.
3.3. Cellular Confinement System	The three dimensional cell structure, is formed by ultrasonically welding polyethylene (perforated) strips / panels together to create a three dimensional network of interconnecting cells. A high degree of frictional interaction is developed between infill and the cell wall, increasing the stiffness of the system
3.4. Edge restraint	A treated timber edging is usually acceptable.

4. Cellular Confinement and Backfill Material.

Expand the Cellweb 2.56m wide panels to the full 8.1 metre length. Pin the Cellweb panels with staking pins to anchor open the cells and staple adjacent panels together to create a continuous mattress. Infill the Cellweb with a no fines angular granular fill (typically 40-20mm) within each open cell. The use of cellular confinement reduces the bearing pressure on the subsoil by stabilising aggregate surfaces against rutting under wheel loads. Comparisons between cellular confinement and traditional aggregate and geogrid-reinforced structures demonstrate a 50% reduction in construction thickness of the granular material.

5. Surfacing Options

Block Paving:
5.1. Lay second layer of Fibretex F4M Geotextile separation fabric over the infilled Cellweb sections
5.2. Lay sharp sand bedding layer compacted with a vibro compaction plate to recommended depth.
5.3. Place block paviors as per manufacturers instructions.

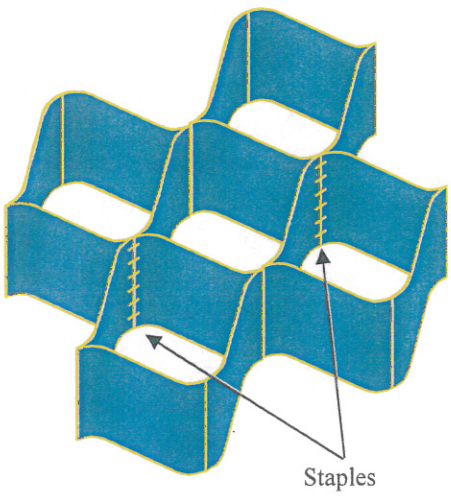
Tarmac:
Place 25mm surcharge of the granular material above the Cellweb system and lay the bitumen base and wearing courses.

Loose Gravel:
5.4. Place second layer of Fibretex F4M Geotextile separation fabric over the infilled Cellweb sections
5.5. Place decorative aggregate to required depth
NOTE: A treated timber edge should be provided to restrict gravel movement.

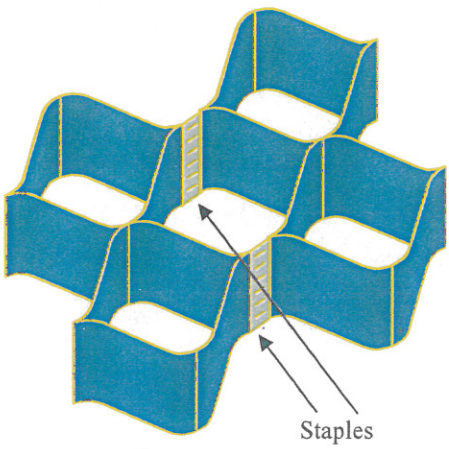
Grass Blocks:
5.6. Place second layer of Fibretex F4M Geotextile separation fabric over the infilled Cellweb sections
5.7. Place 50/50 rootzone bedding layer to the required depth
5.8. Lay recycled Duo Block 500 Grass Protection System infilled with 50/50 rootzone mix.
5.9. Seed as per architects instructions.
(Alternatively the Grass Blocks may be infilled with gravel.)

Below are illustrations of the correct stapling procedure for joining both edges and ends of panels together;

Panel Edges:



Panel Ends:



Appendix 4

Paragraph: 007 Reference ID: 36-007-20140306

What does 'amenity' mean in practice?

'Amenity' is not defined in law, so authorities need to exercise judgment when deciding whether it is within their powers to make an Order.

Orders should be used to protect selected trees and woodlands if their removal would have a significant negative impact on the local environment and its enjoyment by the public. Before authorities make or confirm an Order they should be able to show that protection would bring a reasonable degree of public benefit in the present or future.

Revision date: 06 03 2014

Paragraph: 008 Reference ID: 36-008-20140306

What might a local authority take into account when assessing amenity value?

When considering whether trees should be protected by an Order, authorities are advised to develop ways of assessing the amenity value of trees in a structured and consistent way, taking into account the following criteria:

Visibility
The extent to which the trees or woodlands can be seen by the public will inform the authority's assessment of whether the impact on the local environment is significant. The trees, or at least part of them, should normally be visible from a public place, such as a road or footpath, or accessible by the public.

Individual, collective and wider impact
Public visibility alone will not be sufficient to warrant an Order. The authority is advised to also assess the particular importance of an individual tree, of groups of trees or of woodlands by reference to its or their characteristics including:

- size and form;
- future potential as an amenity;
- rarity, cultural or historic value;
- contribution to, and relationship with, the landscape; and

- contribution to the character or appearance of a conservation area.

Other factors

Where relevant to an assessment of the amenity value of trees or woodlands, authorities may consider taking into account other factors, such as importance to nature conservation or response to climate change. These factors alone would not warrant making an Order.

Appendix 5

SCHEDULE

Article 3

Specification of trees

Trees specified individually

(encircled in black on the map)

Reference on map	*Description*	*Situation*
[T1]	[ash]	[*complete if necessary to specify more precisely the position of the trees*]

Trees specified by reference to an area

(within a dotted black line on the map)

Reference on map	*Description*	*Situation*
[A1]	[trees (of whatever species) within the area marked A1 on the map]	[*complete if necessary to specify more precisely the position of the trees*]
[A2]	[the ash, beech, larch and oak trees within the area marked A2 on the map]	[*complete if necessary to specify more precisely the position of the trees*]

Groups of trees

(within a broken black line on the map)

Reference on map	*Description (including number of trees of each species in the group)*	*Situation*
[G1]	[2 ash trees, 3 birch trees and 3 oak trees]	[*complete if necessary to specify more precisely the position of the trees*]

Woodlands

(within a continuous black line on the map)

Reference on map	*Description*	*Situation*
[W1]	[mixed hardwoods (mainly oak, ash and alder)]	[*complete if necessary to specify more precisely the position of the trees*]
[W2]	[mixed conifers and deciduous trees (mainly Scots pine and birch)]	[*complete if necessary to specify more precisely the position of the trees*]