Contracting

Tree surgery
Site clearance
Health and safety
Veteran tree works
Local Authority

midland forestry

Consultancy

Planning
TPO
Safety
Subsidence
Management

Rear of Eastcote Hall Farm, Barston Lane
Hampton-in-Arden, Solihull, West Midlands, B92 0HR
Tel:01675 443400
Fax: 01675 443480
Email: enquiries@midlandforestry.co.uk
www.midlandforestry.co.uk

Arboricultural Advice in accordance with BS 5837:2012 Trees in relation to construction – Recommendations

Tree survey and Impact Assessment
Tree Protection Plan
Arboricultural Method Statement

16 June 2015

Subject Property: Potato Wharf
Manchester

Instructing Client: WSP
The Victoria,
150-182 The Quays,
Salford
M50 1SP

Completed by: Chris Shortis Dip. Arb. (RFS) M. Arbor A.
Midland Forestry Ltd
Eastcote Hall Farm
Barston Lane
Hampton-in-Arden
Solihull
B92 0HR

Table of Contents

		Page
1	**INTRODUCTION**	1
2	**BS5837:2012 - THE ITERATIVE PROCESS**	2
3	**THE TREE SURVEY**	4
4	**ARBORICULTURAL IMPACT ASSESSMENT**	14
5	**SUMMARY & CONCLUSION**	16

Appendices

1	**Tree Retention & Removal Plan**	17
2	**Tree Protection Plan**	19
3	**Qualifications and experience**	21

1 INTRODUCTION

1.1 **Brief:** We are instructed to carry out an arboricultural survey of land at Potato Wharf, Manchester and to provide a tree survey and arboricultural impact assessment in accordance with BS5837:2012 *Trees in relation to construction – Recommendations* (hereafter BS5837).

1.2 **Qualifications and experience:** I have based this report on my site observations and the provided information, and I have come to conclusions in the light of my experience. I have experience and qualifications in arboriculture and list the details in Appendix 3. Observations or comments on structural engineering and the law are made from an arboricultural perspective. Specialist professional advice should be sought to clarify such observations.

1.3 **Documents and information provided:** I was provided with copies of the following documents:

- The topographical survey
- Masterplan (dated 13.05.15)

1.4 **Scope of this report:** This report includes an assessment of the trees in relation to potential development in order to:

1. Record principle attributes (species, height, crown spread and stem diameter).
2. Determine their quality and value.
3. Identify their remaining contribution and retention grading.
4. To identify the level of tree retention and removal and to illustrate on a tree retention and removal plan.
5. To appraise the impact of tree losses arising as a result of the proposals.
6. To appraise the impact of the proposals on the retention trees.

1.5 **Purpose of the report:** This report utilises the tree survey data to detail the arboricultural impact of the proposed layout.

1.6 **Caveats:** This report is only concerned with trees in relation to construction. It includes a detailed assessment based on the site visit and the documents provided, listed in 1.3 above. All my observations were from ground level without detailed investigations. Aerial tree inspection, invasive procedures and sub-soil investigations are outside the scope of the report. Should further assessment involving any of these be required it will be highlighted in the report.

Chris Shortis Dip. Arb. (RFS), M. Arbor A.
Midland Forestry Ltd, R/o Eastcote Hall Farm, Barston Lane, Hampton-in-Arden, Solihull, B92 0HR
www.midlandforestry.co.uk

2 BS5837:2012 - THE ITERATIVE PROCESS

2.1 Trees and the planning system – BS5837 Annex B

3.1.1 Under the UK planning system, local authorities have a statutory duty to consider the protection and planting of trees when granting planning permission for proposed development. The potential effect of development on trees, whether statutorily protected (e.g. by a tree preservation order or by their inclusion within a conservation area) or not, is a material consideration that is taken into account in dealing with planning applications. Where trees are statutorily protected, it is important to contact the local planning authority and follow the appropriate procedures before undertaking any works that might affect the protected trees.

3.1.2 The nature and level of detail of information required to enable a local planning authority to properly consider the implications and effects of development proposals varies between stages and in relation to what is proposed. Table B.1 provides advice to both developers and local authorities on an appropriate amount of information. The term "minimum detail" is intended to reflect information that local authorities are expected to seek, whilst the term "additional information" identifies further details that might reasonably be sought, especially where any construction is proposed within the Root Protection Area (RPA)[1].

3.1.3 Table B.1 Delivery of tree-related information into the planning system

Stage of process	Minimum detail	Additional information
Pre-application	Tree survey	Tree retention/removal plan (draft)
Planning application	Tree survey (in the absence of pre-application discussions) Tree retention/removal plan (finalized) Retained trees and RPAs shown on proposed layout Strategic hard and soft landscape design, including species and location of new tree planting Arboricultural impact assessment	Existing and proposed finished levels Tree protection plan Arboricultural method statement – heads of terms Details for all special engineering within the RPA and other relevant construction details
Reserved matters/ planning conditions	Alignment of utility apparatus (including drainage), where outside the RPA or where installed using a trenchless method Dimensioned tree protection plan Arboricultural method statement – detailed Schedule of works to retained trees, e.g. access facilitation pruning Detailed hard and soft landscape design	Arboricultural site monitoring schedule Tree and landscape management plan Post-construction remedial works Landscape maintenance schedule

[1] Root Protection Area is a 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

Chris Shortis Dip. Arb. (RFS), M. Arbor A.
Midland Forestry Ltd, R/o Eastcote Hall Farm, Barston Lane, Hampton-in-Arden, Solihull, B92 0HR
www.midlandforestry.co.uk

3.1.4 In support of the application the following documents have been prepared:

a. Tree survey compliant with BS 5837
b. Arboricultural Impact Assessment
c. Tree Protection Plan (including an arboricultural method statement).

Instruction: Potato Wharf. 16.06.15
Ref: MF8640
Chris Shortis Dip. Arb. (RFS), M. Arbor A.
Midland Forestry Ltd, R/o Eastcote Hall Farm, Barston Lane, Hampton-in-Arden, Solihull, B92 0HR
www.midlandforestry.co.uk

3 THE TREE SURVEY

3.1 Tree survey methodology

3.1.1 A tree survey was carried out compliant with BS5837. The collected data is included below and the pertinent information is shown graphically on the Tree Constraints Plan (Appendix 1).

3.1.2 Trees are categorised in accordance with the cascade chart in Table 1 of BS5837:2012. The purpose of the categorisation process is to differentiate the quality and value of the existing tree stock so that informed decisions can be made on the retention or removal of trees.

3.1.3 The tree categories are summarised thus:

Category U: Trees unsuitable for retention that will be lost within the short term for reasons of physiology or structural integrity.

Category A: Trees of particularly high quality in arboricultural, landscape or cultural/conservation terms

Category B: Moderate quality trees downgraded from the high category because of significant defects, groups with a collective value through numbers rather than individual tree quality or trees with identifiable cultural or conservation values.

Category C: Trees with low value in arboricultural, landscape or cultural/conservation terms. Also includes young trees with a stem diameter of less than 150mm.

For trees in categories A – C subcategories 1, 2 & 3 are given to reflect arboricultural, landscape and cultural values respectively.

3.2 Findings of the survey

3.2.1 In the course of the tree survey we identified 11 individual trees and 8 tree groups with no hedges or woodland groups present. Of these it was found that they fell into the following quality and value grades:

QV Category	Description	No. of trees	%	No. of groups	%
U	Trees lost in the short term (<10 yrs)	1	9	0	0
A	Trees of particularly high quality	0	0	0	0
B	Trees of moderate quality	3	27	1	12.5
C	Trees of low quality	7	64	7	87.5
		10	100	8	100

Instruction: Potato Wharf. 16.06.15
Ref: MF8640
Chris Shortis Dip. Arb. (RFS), M. Arbor A.
Midland Forestry Ltd, R/o Eastcote Hall Farm, Barston Lane, Hampton-in-Arden, Solihull, B92 0HR
www.midlandforestry.co.uk

3.3 Tree Survey Schedule

3.3.1 Explanatory notes for individual trees

- **ID no**.: Trees are recorded using a site-specific unique identification number. This identification number is used for all references throughout the report and associated plans
- **Species:** The species identification is based on visual observations and the common English name of what the tree appeared to be is listed. In some instances, it may be difficult to quickly and accurately identify a particular tree without further detailed investigations. Where there is some doubt of the precise species of tree, it is indicate it with a '?' after the name in order to avoid delay in the production of the report. The species listed for groups and hedges represent the main component and there may be other minor species not listed.
- **Estimated dimensions:** Estimated dimensions are marked *.
- **Height:** The height of the tree in metres.
- **Stem diameter(s):** This is measured at 1.5m above ground level and recorded in millimetres. Trees with low crowns are measured just above the root flare. For trees with multiple stems see 3.2.2 in main text. For groups the stem diameter for 80 percentile member is recorded
- **N/S/W/E:** The branch spread is measured in metres at the four cardinal points of the compass to derive an accurate representation of the crown.
- **Ht 1st branch**: Height above ground in metres of attachment point of first significant branch (cardinal point may be given indicating direction of lowest branch).
- **Crown Clearance:** Height of the crown above ground level at the lowest point.
- **Life Stage:** Assessed as Young, Semi-Mature, Early-Mature, Mature, Over Mature and Veteran.
- **Phys. condition:** An assessment of the physiological condition (i.e. health/vitality) status of the tree summarised into:

  Good: Generally in healthy condition

  Fair: Condition satisfactory though below mean species performance

  Poor: Tree in decline

Chris Shortis Dip. Arb. (RFS), M. Arbor A.
Midland Forestry Ltd, R/o Eastcote Hall Farm, Barston Lane, Hampton-in-Arden, Solihull, B92 0HR
www.midlandforestry.co.uk

Dead: Self-explanatory

- **Structural condition & Notes:** Notes on the structural integrity of the tree based on visual tree assessment, including damage, decay fungi, pests, etc as appropriate, plus other pertinent observations
- **Management recommendations:** Recommendations for retention or removal in light of the development proposals.
- **Ret. Span:** An estimate of the remaining contribution span that the tree or group of trees is expected to have, based on species, condition and context. The following longevity bands are used, categorised accordingly:

  <10 Tree is dead, dying, has a severe structural defect, or will become exposed following inevitable loss of companion shelter. Possibly requires sanitation felling Unsuitable for retention

  10+ Short-term longevity only: replacement planting generally appropriate

  20+ Mid-term longevity

  >40 Good longevity

- **QV Grade:** Quality & Value grade classification according to BS5837

  U - Unsuitable for retention
  A - High retention priority
  B - Moderate retention priority
  C - Low retention priority
  +subcategories 1, 2 & 3 reflecting arboricultural, landscape and cultural values respectively.

- **Retention / removal colour code**:

  Trees and groups to be retained
  Trees and groups to be removed to facilitate development
  Trees and groups to be removed for arboricultural reasons

Chris Shortis Dip. Arb. (RFS), M. Arbor A.
Midland Forestry Ltd, R/o Eastcote Hall Farm, Barston Lane, Hampton-in-Arden, Solihull, B92 0HR
www.midlandforestry.co.uk

3.3.2 **Tree survey schedule for individual trees**

ID No.	Species	Ht.	Dia. (mm)	N	S	W	E	Ht. 1st br.	Cr. Clr.	Life Stage	Phys. Cond.	Structural condition & Notes	Management recom-mendations	Ret. Span	QV Grade
1	Alder	15	420*	3.5*	5*	5*	5*	4	2	F	M	Tree located outside the site boundary fence with no access for close inspection. The branch tips are touching the railway over bridge	No action required at time of survey	20+	B1
2	Alder	15	380* 280*	4*	4*	4*	4*	2	2	G	M	Tree located outside the site boundary fence with no access for close inspection. Twin stems from ground level.	No action required at time of survey	20+	B1
3	Norway maple	6.5	100* 75*	2.5*	2.5*	2.5*	2.5*	4	4	F	Y	Tree located outside the site boundary fence with no access for close inspection. Twin stems from ground level.	Remove to facilitate development	10+	C1
4	Norway maple	7.5	95	3.5	3.5	3.5	3.5	2	3	G	Y	Tree located outside the site boundary fence with no access for close inspection. Appears to be of self-set origin and is of indifferent form.	Remove to facilitate development	10+	C1
5	Goat willow	6	210	2.5	3	3	2	1	1	F	M	Pollarded at 1m and showing substantial regrowth, but is an unattractive specimen.	Remove to facilitate development	10+	C1

ID No.	Species	Ht.	Dia. (mm)	N	S	W	E	Ht. 1st br.	Cr. Clr.	Life Stage	Phys. Cond.	Structural condition & Notes	Management recom-mendations	Ret. Span	QV Grade
6	Rowan	6.5	210 130	3.2	3*	3.5	3*	1.6	2.5	P	M	Twin stems from ground level with bark inclusion. Areas of bark loss on both stems. Crown dysfunction and tree generally struggling.	Remove for reasons of sound arboricultural management	<10	U
7	Hawthorn	4	130	1.5	1.5	1.8	1.5	1	2	G	Y	Twin stems with early bark in-clusion at 0.5m.	Remove to facilitate development	40+	C1
8	Willow	14	8 x 150*	4*	4*	4*	4*	1	3	F	M	Canal side tree located outside the site boundary fence with no access for close inspection; in-spection completed from Egerton Street bridge. Multiple stems from ground level, possi-bly caused by regrowth from the stump when previously cut.	No action required at time of survey	10+	C1
9	Grey poplar	25	600*	6*	6*	6*	6*	5	7	G	M	Canal side tree located outside the site boundary fence with no access for close inspection; in-spection completed from Egerton Street bridge. Appears to be a fine specimen with no apparent significant defects, though limited longevity be-cause of species characteristics.	No action required at time of survey	20+	B1
10	Rowan	6.5	200* 160*	2.5*	3.4	2.5*	4.2	1	3	F	M	A riverside tree of poor shape and form growing through chainlink fence.	Remove to facilitate development	10+	C1

ID No.	Species	Ht.	Dia. (mm)	N	S	W	E	Ht. 1st br.	Cr. Clr.	Life Stage	Phys. Cond.	Structural condition & Notes	Management recom-mendations	Ret. Span	QV Grade
11	Sycamore	15*	400*	4*	4*	4*	4*	2	2	F	M	Tree located outside the site with the only close visibility the limited view through the partial-ly boarded windows of the adjacent building. All details preliminary subject to further inspection.	No action required at time of survey	10+	C1

3.3.3 **Explanatory notes for tree groups**

- **ID no**.: Unique tree group reference number.
- **Species:** The species identification is based on visual observations and the common English name of what the tree appeared to be is listed. The species listed represent the main components and there may be other minor species not listed.
- **Estimated dimensions:** Estimated dimensions are marked *.
- **Count:** Number of trees recorded within groups or woodlands. Accurate count for less than 20 trees, estimated number for 20+ trees.
- **Area:** Approximate area of woodland groups recorded in hectares.
- **Height:** Height is to the nearest metre.
- **Stem diameter(s):** Stem diameter at 1.5m above ground level for 80 percentile member of TG or WG. Trees with larger diameters are identified on the plan at Appendix 3.
- **MRCS:** An estimated mean radial crown spread for trees at the 80 percentile size.

- **Ht 1st branch**: Height above ground in metres of attachment point of first significant branch (cardinal point may be given indicating direction of lowest branch).
- **C**rown **Cl**ea**r**ance**:** Height of the crown above ground level at the lowest point.
- **Life Stage:** Assessed as Young, Semi-Mature, Early Mature, Mature, Over Mature and Veteran.
- **Phys. condition:** An assessment of the physiological condition (i.e. health/vitality) status of the tree summarised into:

  Good: Generally in healthy condition
  Fair: Condition satisfactory though below mean species performance
  Poor: Tree in decline
  Dead: Self-explanatory
- **Structural condition & Notes:** Notes on the structural integrity of the tree based on visual tree assessment, including damage, decay fungi, pests, etc as appropriate, plus other pertinent observations
- **Management recommendations:** Recommendations for intervention (e.g. tree surgery, felling, etc) prior to any development. Immediately hazardous trees will be notified to the client separately.
- **Ret. Span:** An estimate of the remaining contribution span that the tree or group of trees is expected to have, based on species, condition and context. The following longevity bands are used, categorised accordingly:

  <10 Tree is dead, dying, has a severe structural defect, or will become exposed following inevitable loss of companion shelter. Possibly requires sanitation felling Unsuitable for retention
  10+ Short-term longevity only: replacement planting generally appropriate
  20+ Mid-term longevity
  40+ Good longevity
- **QV Grade:** Quality & Value grade classification according to BS5837:2012

  U - Unsuitable for retention
  A - High retention priority
  B - Moderate retention priority
  C - Low retention priority

+subcategories 2 & 3 reflecting arboricultural, landscape and cultural values respectively.

Chris Shortis Dip. Arb. (RFS), M. Arbor A.
Midland Forestry Ltd, R/o Eastcote Hall Farm, Barston Lane, Hampton-in-Arden, Solihull, B92 0HR
www.midlandforestry.co.uk

- **Retention / removal colour code**:

  Trees and groups to be retained
  Trees and groups to be removed to facilitate development
  Trees and groups to be removed for arboricultural reasons

3.3.4 **Tree survey data for tree groups**

ID No.	Count	Species	Ht.	Dia. (mm)	MCRS	Ht. 1st br.	Cr. Clr.	Life Stage	Phys. Cond.	Structural condition & Notes	Management recommendations	Ret. Span	QV Grade
TG 1	2	Goat willow	10	180	4	1	0	EM	F	Pair of scrubby trees located outside the site boundary fence with no access for close inspection. Cankers through the crowns. Trees have partially fallen into the canal.	No action required at time of survey	10+	C2
TG 2	5	Norway maple	11	150	3.5	1	1	Y	F	Self-set trees of poor shape and form from competition for light. Located outside the site boundary fence with no access for close inspection.	No action required at time of survey	20+	C2
TG 3	4	Norway maple & Sycamore	9	190	5	1	1	EM	F	Located outside the site boundary fence with no access for close inspection but there are no apparent significant defects. Trees suppressed by trees 1 & 2.	No action required at time of survey	20+	C2

ID No.	Count	Species	Ht.	Dia. (mm)	MCRS	Ht. 1st br.	Cr. Clr.	Life Stage	Phys. Cond.	Structural condition & Notes	Management recom-mendations	Ret. Span	QV Grade
TG 4	16	Grey poplar, Norway maple & Holly	25	600*	6*	2	3	M	G	Canal side trees located outside the site boundary fence with no access for close inspection; in-spection completed from Egerton Street bridge. Very large poplars with understorey of suckers and other trees. No significant defects apparent from limited inspection but longevity limited by species life span.	No action required at time of survey	20+	B2
TG 5	3	Whitebeam & Rowan	9.5	280	4.2	2	2	M	F	Close-set trees forming a joint canopy. Recent disturbance in rooting area and impact wounds on the stem of the centre tree.	Remove to facilitate development.	10+	C2
TG 6	4	Rowan, Goat willow & Elder	6-7	300*	4	1	1	M-OM	P	Scruffy group among landscape planting and between river and a metal railing fence.	No action required at time of survey	10+	C2
TG 7	25	Alder	6-8	90	1.5	2	2	Y	F	Dispersed group of recent land-scape planting. Variable success in establishment but good poten-tial	Remove to facilitate development. Note there may be scope to incorporate these trees into the landscape scheme.	40+	C2

ID No.	Count	Species	Ht.	Dia. (mm)	MCRS	Ht. 1st br.	Cr. Clr.	Life Stage	Phys. Cond.	Structural condition & Notes	Management recom-mendations	Ret. Span	QV Grade
TG 8	50	Grey poplar	8-18	200	4	1	1.5	Y-EM	G	Canal side trees located outside the site boundary fence with no access for close inspection; in-spection completed from Egerton Street bridge. Dense stand of suckers including some substantial specimens. Limited arboricultural significance.	No action required at time of survey	20+	C2

Chris Shortis Dip. Arb. (RFS), M. Arbor A.
Midland Forestry Ltd, R/o Eastcote Hall Farm, Barston Lane, Hampton-in-Arden, Solihull, B92 0HR
www.midlandforestry.co.uk

4 ARBORICULTURAL IMPACT ASSESSMENT

4.1 Tree retention and removal

4.1.1 From on site evidence recent land use has been exclusively industrial and includes a cement depot. The tree population is mainly around the perimeter of the site, including some off-site trees; the recent industrial activity has limited the opportunities for internal tree establishment beyond a small number of self-set trees.

4.1.2 The proposed development consists of the construction of two apartment blocks (providing a total of 191 apartments), landscaping and other associated works. The development forms the second phase of Potato Wharf and as such the buildings are defined as Blocks 3 and 4. Block 3 will provide 112 apartments and Block 4 will provide 79 apartments.

4.1.3 In critically grading the trees to make informed decisions on the retention and removal decisions the emphasis is on the loss of lower quality trees to enable the retention of better quality trees. Trees with a retention span of less than 10 years for reasons connected with their physiological or structural condition are not a consideration in the planning process. These trees are graded Category U in the BS 5837 categorization method. Low quality trees are graded Category C and can generally be considered for removal to facilitate development.

4.1.4 Trees in higher categories that are considered to impose such a constraint on development that their retention would be disproportionate to their existing value are also sometimes identified for removal. This only rarely applies to A category trees, being those of 'high quality and value', but can more defensibly apply to B grade trees, i.e. those of 'moderate quality and value'.

4.1.5 I have overlaid the proposal with the previously produced tree constraints plan and assessed the impact on the trees. Five individual trees of low quality and value will be removed to facilitate development along with a single tree that is unsuitable for development. Two of the tree groups will be removed to facilitate development and both these are groups of low quality. Trees to be removed are listed in the table below.

ID No.	Species	Structural condition & Notes	Management recommendations	QV Grade
3	Norway maple	Tree located outside the site boundary fence with no access for close inspection. Twin stems from ground level.	Remove to facilitate development	C1
4	Norway maple	Tree located outside the site boundary fence with no access for close inspection. Appears to be of self-set origin and is of indifferent form.	Remove to facilitate development	C1
5	Goat willow	Pollarded at 1m and showing substantial regrowth, but is an unattractive specimen.	Remove to facilitate development	C1

ID No.	Species	Structural condition & Notes	Management recommendations	QV Grade
6	Rowan	Twin stems from ground level with bark inclusion. Areas of bark loss on both stems. Crown dysfunction and tree generally struggling.	Remove for reasons of sound arboricultural management	U
7	Hawthorn	Twin stems with early bark inclusion at 0.5m.	Remove to facilitate development	C1
10	Rowan	A riverside tree of poor shape and form growing through chainlink fence.	Remove to facilitate development	C1
TG 5	Whitebeam & Rowan	Close-set trees forming a joint canopy. Recent disturbance in rooting area and impact wounds on the stem of the centre tree.	Remove to facilitate development.	C2
TG 7	Alder	Dispersed group of recent landscape planting. Variable success in establishment but good potential	Remove to facilitate development. Note there may be scope to incorporate these trees into the landscape scheme.	C2

4.1.6 Scattered around the perimeter of the site are areas of scrub growth including self-set saplings below the size threshold for inclusion into the tree survey. All these areas will also be removed to facilitate development.

4.1.7 All other trees will be retained including all trees of moderate quality. There are no high quality trees on this site.

4.2 Construction in Root Protection Areas

4.2.1 There are no areas where construction in RPAs is proposed.

4.3 Shading

4.3.1 The trees to the south of the development are sufficiently distant from the apartment blocks for issues of shading and dominance not to be a concern. Furthermore they are separated by the viaduct creating a physical barrier between the trees and the apartments.

4.4 Tree protection during construction.

4.4.1 Trees can be irreparably and unwittingly damaged in a few minutes during construction. Accordingly a tree protection scheme has been prepared in accordance with the guidance of BS 5837 for the proposal to ensure the successful long-term retention of the trees (Appendix 2).

4.5 Post development landscaping

4.5.1 No details of the landscaping scheme have been provided beyond the masterplan however I note there is considerable scope for new planting. The proposed layout shown in excess of new 60 trees and thus there is opportunity for substantial mitigation of tree losses to provide increased levels of tree presence post-development.

5 SUMMARY & CONCLUSION

5.1 The trees on the site are of low quality; the only trees of higher quality are located outside the site boundary to the south of the site. These better quality trees will be retained whilst the lower quality trees within the site will be removed to facilitate development.

5.2 There is scope through post-construction landscaping to both mitigate the tree losses and also increase the tree presence.

5.3 A tree protection plan and associated arboricultural method statement has been prepared to minimize harm to the retention trees during construction and ensuring the long term retention of retained trees.

5.4 Overall I consider the development of the site to be arboriculturally acceptable and in accordance with the recommendations of BS 5837.

This completes my advice to date

Chris Shortis

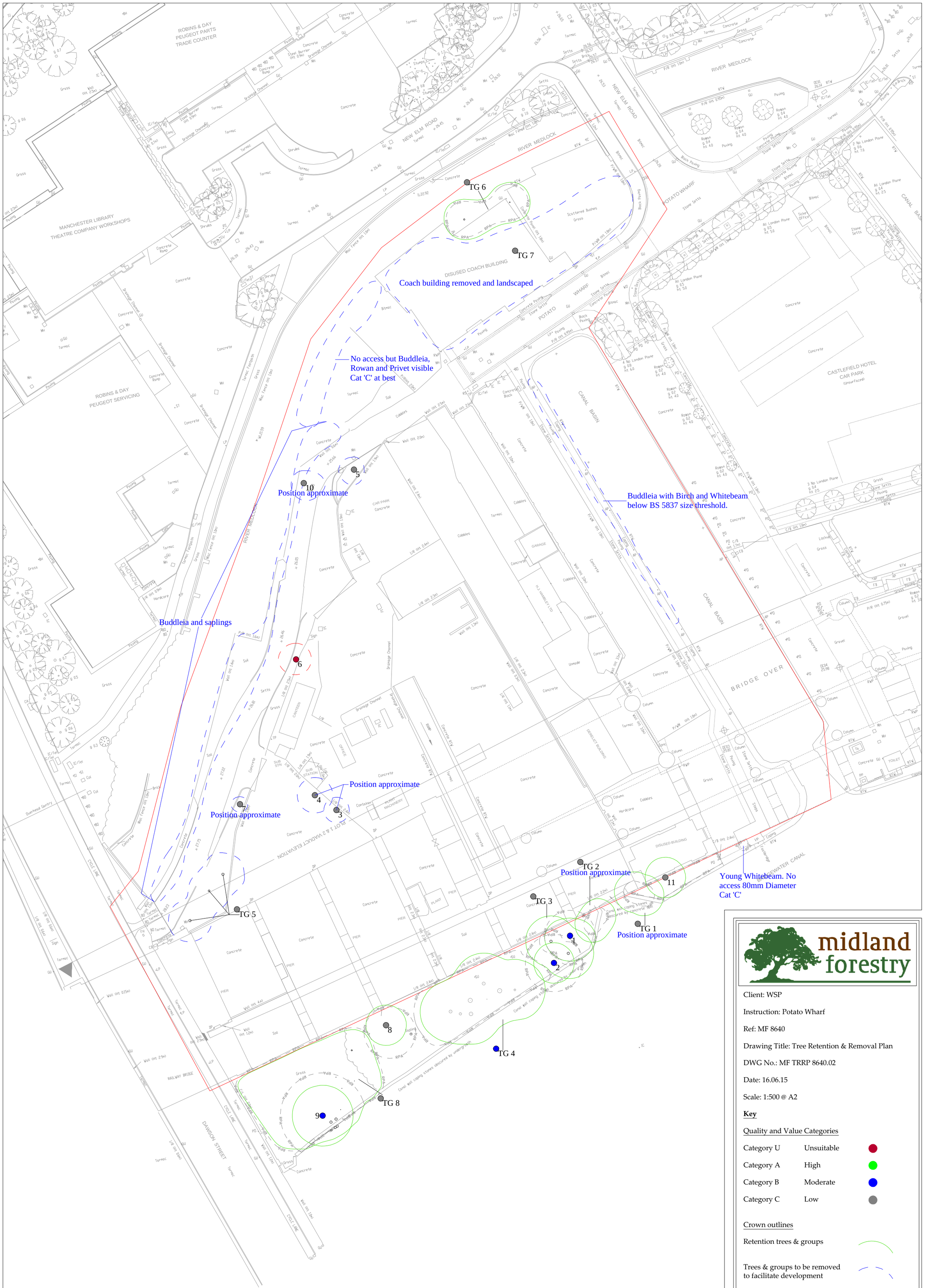
Chris Shortis Dip. Arb. (RFS), M. Arbor A.
Associate Director

APPENDIX 1

TREE RETENTION & REMOVAL PLAN

Note this drawing is scaled for printing at A2 and is intended to be read in colour

Chris Shortis Dip. Arb. (RFS), M. Arbor A.
Midland Forestry Ltd, R/o Eastcote Hall Farm, Barston Lane, Hampton-in-Arden, Solihull, B92 0HR
www.midlandforestry.co.uk



midland forestry

Client: WSP

Instruction: Potato Wharf

Ref: MF 8640

Drawing Title: Tree Retention & Removal Plan

DWG No.: MF TRRP 8640.02

Date: 16.06.15

Scale: 1:500 @ A2

Key

Quality and Value Categories

Category U	Unsuitable	
Category A	High	
Category B	Moderate	
Category C	Low	

Crown outlines

Retention trees & groups

Trees & groups to be removed to facilitate development

Trees & groups to be removed for reasons of sound arboricultural management

Root protection area (RPA) calculated using stem diameter modified for site conditions

Chris Shortis Dip. Arb. (RFS) M. Arbor A.
Midland Forestry Ltd
Eastcote Hall Farm
Barston Lane
Hampton-in-Arden
Solihull B92 0HR
Tel. 01675 443 400 Mob. 07973 524032
e-mail: chris@midlandforestry.co.uk

APPENDIX 2

TREE PROTECTION PLAN

Note this drawing is scaled for printing at A2 and is intended to be read in colour

Chris Shortis Dip. Arb. (RFS), M. Arbor A.
Midland Forestry Ltd, R/o Eastcote Hall Farm, Barston Lane, Hampton-in-Arden, Solihull, B92 0HR
www.midlandforestry.co.uk

ARBORICULTURAL METHOD STATEMENT

1. Prior to commencement of construction operations, including preparatory tree work, a tree protection meeting shall take place attended by Midland Forestry, the tree contractor and the building contractor. This meeting will inform construction personnel on requirements for tree protection during construction, and shall identify any additional requirements for access facilitation pruning, if necessary. A specification for this tree work shall subsequently be prepared by Midland Forestry.

2. Approved tree removal shall be undertaken prior to implementation of physical tree protection measures (see below). Each tree approved for removal shall be cut down to a low stump.

3. Trees for removal to enable construction that stand within retention trees' RPA shall have their stumps ground out.

4. Stumps from felled trees not in proximity to retention trees can be grubbed out.

5. Following completion of preparatory tree works, physical tree protection measures for the main build phase shall be installed in line with the provisions of BS5837 and at the locations shown in magenta on the this plan. These measures shall comprise of one of the following:
a) tree protection fencing to BS5837 Figure 3 (see detail on this dwg)
b) the site exclusion fencing where appropriate
c) existing metal palisade boundary fencing
Note where surveyed trees are outside the site exclusion fence protection measures may not be necessary.

6. The tree protection fencing of the types listed above comprise the Construction Exclusion Zone (CEZ). Within this Zone, the following activities are strictly prohibited:
a) Excavation / lowering of levels into rootable soil: removal of surface organic matter using hand tools is acceptable; scraping or reduction in depth of topsoil is not
b) Removal of existing hard surfaces
c) Grubbing out of redundant buried services/structures
d) Installation of new services, including drainage.
e) Formation of new hard surfaces or paths
f) Operation, transit or storage of plant, and storage of materials, including during hard and soft landscaping, other than on ground protection boarding
g) Storage or handling of any chemical substance injurious to trees, including fuels, oils, lubricants and cement washings

7. No elements of the tree protection shall be removed or altered without prior written consent from the local planning authority.

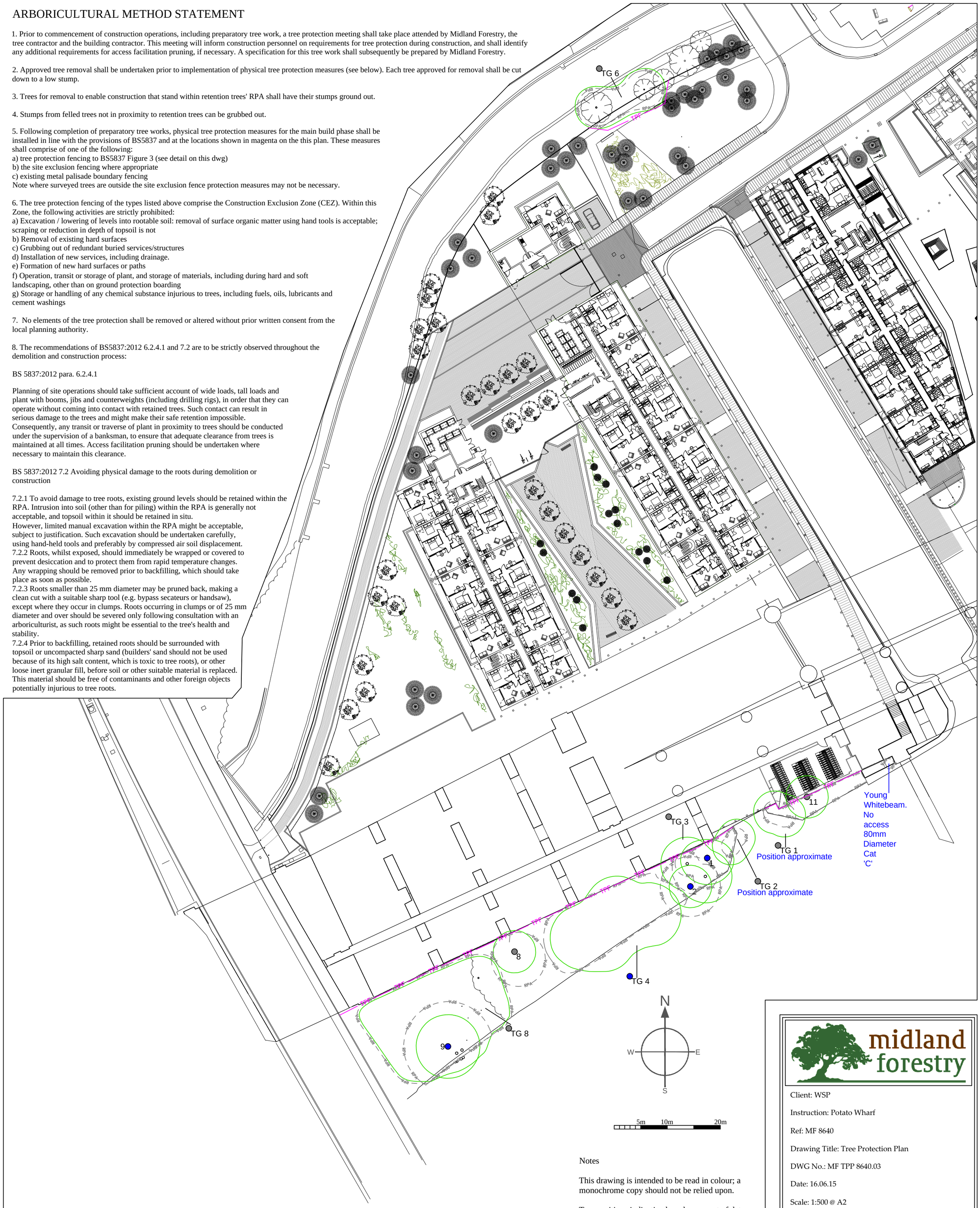
8. The recommendations of BS5837:2012 6.2.4.1 and 7.2 are to be strictly observed throughout the demolition and construction process:

BS 5837:2012 para. 6.2.4.1

Planning of site operations should take sufficient account of wide loads, tall loads and plant with booms, jibs and counterweights (including drilling rigs), in order that they can operate without coming into contact with retained trees. Such contact can result in serious damage to the trees and might make their safe retention impossible. Consequently, any transit or traverse of plant in proximity to trees should be conducted under the supervision of a banksman, to ensure that adequate clearance from trees is maintained at all times. Access facilitation pruning should be undertaken where necessary to maintain this clearance.

BS 5837:2012 7.2 Avoiding physical damage to the roots during demolition or construction

7.2.1 To avoid damage to tree roots, existing ground levels should be retained within the RPA. Intrusion into soil (other than for piling) within the RPA is generally not acceptable, and topsoil within it should be retained in situ.
However, limited manual excavation within the RPA might be acceptable, subject to justification. Such excavation should be undertaken carefully, using hand-held tools and preferably by compressed air soil displacement.
7.2.2 Roots, whilst exposed, should immediately be wrapped or covered to prevent desiccation and to protect them from rapid temperature changes. Any wrapping should be removed prior to backfilling, which should take place as soon as possible.
7.2.3 Roots smaller than 25 mm diameter may be pruned back, making a clean cut with a suitable sharp tool (e.g. bypass secateurs or handsaw), except where they occur in clumps. Roots occurring in clumps or of 25 mm diameter and over should be severed only following consultation with an arboriculturist, as such roots might be essential to the tree's health and stability.
7.2.4 Prior to backfilling, retained roots should be surrounded with topsoil or uncompacted sharp sand (builders' sand should not be used because of its high salt content, which is toxic to tree roots), or other loose inert granular fill, before soil or other suitable material is replaced. This material should be free of contaminants and other foreign objects potentially injurious to tree roots.



Notes

This drawing is intended to be read in colour; a monochrome copy should not be relied upon.

Tree positions indicative based on an out of date topographical survey underlaid into the Ordnance Survey Base map.

midland forestry

Client: WSP

Instruction: Potato Wharf

Ref: MF 8640

Drawing Title: Tree Protection Plan

DWG No.: MF TPP 8640.03

Date: 16.06.15

Scale: 1:500 @ A2

Key

Quality and Value Categories

Category B	Moderate	●
Category C	Low	●

Crown outlines

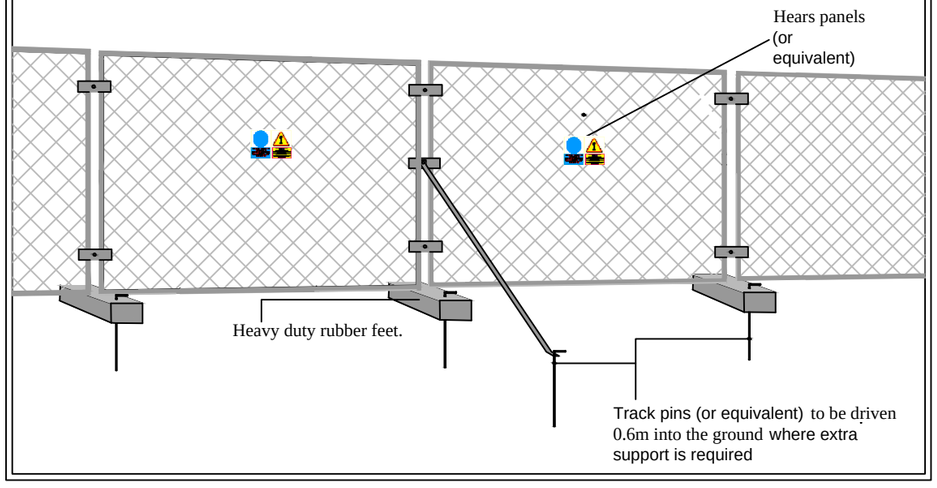
Retention trees & groups

Root protection area (RPA) calculated using stem diameter — RPA

Tree Protection Fence — TPF

Chris Shortis Dip. Arb. (RFS) M. Arbor A.
Midland Forestry Ltd
Eastcote Hall Farm
Barston Lane
Hampton-in-Arden
Solihull B92 0HR
Tel. 01675 443 400 Mob. 07973 524032
e-mail: chris@midlandforestry.co.uk

Tree Protection Fencing
Modified from BS5837:2012 Figure 3





PROTECTIVE FENCING. THIS FENCING MUST BE MAINTAINED IN ACCORDANCE WITH THE APPROVED PLANS AND DRAWINGS FOR THIS DEVELOPMENT.



TREE PROTECTION AREA
KEEP OUT !
(TOWN & COUNTRY PLANNING ACT 1990)
TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY PLANNING CONDITIONS AND/OR ARE THE SUBJECTS OF A TREE PRESERVATION ORDER.
CONTRAVENTION OF A TREE PRESERVATION ORDER MAY LEAD TO CRIMINAL PROSECUTION

ANY INCURSION INTO THE PROTECTED AREA MUST BE WITH THE WRITTEN PERMISSION OF THE LOCAL PLANNING AUTHORITY

Appendix 3

Brief qualifications and experience of Chris Shortis

1. Qualifications

- Royal Forestry Society Professional Diploma in Arboriculture.
- Arboriculture Association Technician Certificate (Credit).
- National Certificate in Arboriculture and Forestry (Double Distinction).
- Awarded Warwickshire College Arboriculture Student of the Year.
- Professional Tree Inspection
- Licensed user of *Quantified Tree Risk Assessment.*

2. Practical experience:

- Bournville Landscapes and Tree Care Ltd: Arborist.
- Midland Forestry Ltd: Arboriculturalist.
- Midland Forestry Ltd: Arboricultural Consultant
- Midland Forestry Ltd: Associate Director

3. Continuing professional development:

Midland Forestry is committed to continuing professional development to ensure all staff continue to learn and develop throughout their careers so they keep their skills and knowledge up to date and are able to work safely, legally and effectively.
Sample of the seminars and conferences attended:

- International Society of Arboriculture conference 'Defensible Tree Management Systems'
- Practitioners guide to Visual Tree Assessment
- Arboriculture Association conference 'New Horizons in Arboriculture'
- Visual Tree Assessment, Tree Safety Diagnosis and Failure Analysis seminar by Dr. Claus Mattheck
- Preparing for and giving evidence at Public Local Inquiries
- 40th National Arboriculture Conference
- Fungal Decay Process & Applied Engineering
- The Institute of Chartered Foresters' conference Trees, People & the Built Environment
- Designing with Trees
- Capital Asset Value for Amenity Trees
- Dynamic Structural Analysis of Trees Subject to Wind Loading & the Biomechanical Implications

4. Membership of professional bodies:

- Professional Member of the Arboriculture Association.
- Member of the Royal Forestry Society.
- Associate Member of the Institute of Chartered Foresters.