

Tree Survey BS5837:2012

Land at Kenyon Lane, Manchester, M40 5FH

Jigsaw Homes Group

Revision C - October 2023



ecology

QUALITY ASSURANCE

REPORT TYPE	SITE NAME	REVISION
Tree Survey BS5837:2012	Land at Kenyon Lane, Manchester, M40 5FH	B

CLIENT	COMMISSION DATE
Jigsaw Homes Group	April 2023

	NAME	QUALIFICATIONS	DATE
PRINCIPAL AUTHOR	Elizabeth McBride	BSc(Hons) Dip Arb L4(ABC), MCIEEM	11/09/2023
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REVISION HISTORY			
REVISION	DATE	AUTHOR	DESCRIPTION
A	July 2023	EM	Original based on Schedules and Site Plan – Drawing No. 105 Rev. 4
B	September 2023	EM	Revised in line with Schedules and Site Plan – Drawing No. 105 Rev. 8
C	October 2023	EM	Tree Constraints Plan revised to show updated site boundary

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A INTRODUCTION

A.1 Background to Survey

- 1 In April 2023 LM Ecology was commissioned by Jigsaw Homes Group to carry out a tree survey BS5837:2012 at the location detailed in Table 1 below. The principal author of this report is Elizabeth McBride BSc (Hons).

Table 1. Site details

SITE ADDRESS	GRID REFERENCE
Land at Kenyon Lane, Manchester, M40 5FH	SD8767201221

- 2 The survey has been commissioned to support a planning application to construct nine houses at the site, with associated parking, private gardens and public greenspace.
- 3 LM Ecology has been provided with the plans as shown within Table 2 below.

Table 2. Pre-existing Information

TYPE	ITEM TITLE / REFERENCE	PRODUCED BY	DATE PRODUCED
Plan	Topographical Survey	Survey & Engineering Projects Ltd	March 2021
Plan	Schedules and Site Plan – Drawing No. 105 Rev. 8 (KL-BTP-00-SP-DR-A-3785_105.8)	BTP Architects	15 th June 2021 (Updated 29.08.23)

A.2 Site Location and General Description

- 4 The site consists of a triangle of public greenspace adjacent to an area of broadleaved plantation woodland. It is located at the south-east end of Kenyon Lane in Moston, Manchester. There is housing to the north and west, with further woodland and greenspace to the south and east.

B SURVEY DETAILS AND LIMITATIONS

- 5 The fieldwork was carried out on 22nd June 2023 by Elizabeth McBride, assisted by Louisa Molloy. Elizabeth has a degree in Environmental Science and a Level 4 Diploma in Arboriculture. She has worked as an ecologist since 2006.
- 6 The survey was undertaken in accordance with BS 5837:2012 Trees in relation to Design, Demolition and Construction – Recommendations.
- 7 Tree locations were taken from the topographical plan provided and the trees were surveyed visually from the ground.
- 8 Please note this report represents a BS5837 tree survey and should not be accepted as a tree safety inspection report.
- 9 Details of the trees present can be found in Table 3. The tree locations, canopy size, retention category and root protection areas are shown on the Tree Constraints Plan in Appendix F.1. Photographs are included in Appendix F.2.
- 10 Trees within close proximity to each other and of similar age and species have been surveyed in groups, as defined in BS 5837.
- 11 Saplings and shrubs were deemed insignificant and omitted from the survey.
- 12 Root protection areas were calculated from stem diameter.
- 13 Some trees develop multiple stems either from ground level or close to the ground. Where possible for these trees the average stem diameter is calculated and the number of stems recorded. A calculation can then be carried out to estimate the root protection area.
- 14 The topographical plan shows the canopy of the woodland but few individual trees as the surveyors were unable to access the majority of the woodland due to dense vegetation. The Root Protection Area (RPA) and canopy spread of the woodland have therefore been estimated based on the information available.

C RESULTS

C.1 Tree Data

15 See Tables 3 to 5 and accompanying Tree Constraints plans in Appendix F.1. Photographs are included in Appendix F.2.

Table 3: Tree data

Tree reference	Species	Life stage	Estimated height (metres)	Estimated crown height (metres)	Estimated crown spread (metres) N W E S	Stem diameter (mm)	Physiological condition	Structural condition	Observations	Estimated remaining contribution (years)	Retention category
T1	Ash <i>Fraxinus excelsior</i>	SM	16	1.5	4 2 5 5	413	Poor	Fair	Off-site tree. Significant bark loss on lower stem – almost entirely circling stem. Significant canopy dieback. Could be due to damage to stem or potentially infection by <i>Hymenoscyphus fraxineus</i> .	<10	U
T2	Ash <i>Fraxinus excelsior</i>	SM	16	1	4 5 3 4	507	Good	Fair	Off-site tree. Slightly constrained by adjacent tree (T1). Canopy shows good leaf cover. Recommend tree is monitored for ash dieback <i>Hymenoscyphus fraxineus</i> (no current signs of infection).	20+	B1

Table 4: Group data

Tree reference	Species	Life stage	Estimated height (metres)	Estimated crown height (metres)	Estimated crown spread (metres) N W E S	Stem diameter (mm)	Physiological condition	Structural condition	Observations	Estimated remaining contribution (years)	Retention category
G1	Sycamore & ash <i>Fraxinus excelsior</i> & <i>Acer pseudoplatanus</i>	Y	8-9	2	2 2 2 2	Average 89 (4 stems)	Good	Fair	Off-site group of trees. Multi-stemmed self-seeded sycamore and ash growing within an area of cherry laurel.	40+	C2

Table 5: Woodland data

Tree reference	Species	Life stage	Estimated height (metres)	Estimated crown height (metres)	Estimated crown spread (metres) N W E S	Stem diameter (mm)	Physiological condition	Structural condition	Observations	Estimated remaining contribution (years)	Retention category
W1	Aspen, crack willow, cherry, common lime, ash, alder, field maple, hawthorn, rose sp. Also goat willow, sessile oak, white poplar, beech	SM & Y	18-20	1-2	Approx. 5m into grassland	Average larger tree 339 Average young tree 137	Good	Fair	Section of a planted woodland stand approx. 0.13ha in size (whole area of woodland is approx. 0.41ha). Supports a mix of broadleaved species. Younger self-seeded trees (mainly aspen) along the edges. Understorey/ground flora of hawthorn, rose and bramble. Some damage to tree stems – possibly vandalism. W1 forms part of a larger site which supports grassland and areas of plantation woodland.	40+	B2

Key to Table 3

Life stage

Y	Young – in first quarter of life
SM	Semi-mature – in second quarter of life
EM	Early mature – in third quarter of life
M	Mature – in final quarter of life
OM	Over mature – in natural decline

Height

The height of the tree in metres from the stem base - estimated using a clinometer.

Crown height

The average height in metres of the crown – estimated using a clinometer.

Crown spread

Measured from the centre of the stem base to the tips of the branches in all 4 cardinal points

Stem diameter

The diameter of the stem measured at 1.5m from the base

Physiological condition

Good – Healthy and in good vigour

Fair – Vigour of tree is impaired

Poor – Vigour of tree is extremely low

Structural condition

Good – No obvious defects

Fair – Slightly compromised with minor structural defects

Poor – Significantly compromised with major structural defects

Estimated remaining contribution

An indication of the number of years before removal of the tree may be required

Categories: < 10 less than 10 years

10+

20+

40+

Retention Category

A – Trees of high quality – marked green on the plan

Further subdivided as follows:

A1 – Trees that are particularly good examples of their species or essential components of groups

A2 – Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features

A3 – Trees, groups or woodlands of significant conservation, historical or commemorative value

B – Trees of moderate quality – marked blue on the plan

Further subdivided as follows:

B1 – Trees that have been downgraded from A because of impaired condition or trees lacking in the special quality necessary to merit the category A designation

B2 – Trees present in numbers that attract a higher collective rating than as individuals

B3 – Trees with material conservation or other cultural value

C – Trees of low quality – marked grey on the plan

Includes all young trees with a stem diameter below 150mm.

Further subdivided as follows:

C1 – Unremarkable trees of limited merit or impaired condition

C2 – Trees in groups or woodlands with limited collective landscape value

C3 – Trees with low material conservation or cultural value

U – Trees unsuitable for retention - marked red on the plan

These trees are in such a condition that they cannot be realistically retained for longer than 10 years e.g. due to serious structural defects, disease, or death

C.2 Root Protection Areas

16 The root protection radius for each tree is shown below in Table 6.

Table 6: Root protection area and root protection radius

Tree Number	RPA (m ²)	RPA Radius (m)
T1	N/A	N/A
T2	6.3	124
G1	2.4	18
W1	4.2	55

C.3 Legal Status

17 Manchester City Council planning office confirmed by email on 13th July 2023 that there are no Tree Preservation Orders (TPO) covering the site or adjacent land and the site is not located within a Conservation Area.

C.4 Summary of Results and Discussion

18 The tree survey revealed a total of two individual off-site trees, one group of off-site trees and one area of on-site woodland. One tree and the woodland were identified as retention category B (moderate quality), one group was identified as retention category C (low quality) and one tree was assessed as being unsuitable for retention (category U). This information is summarised in Table 7 below.

19 The only trees located within the red-line boundary of the site are within the plantation woodland (W1). The woodland extends along the southern edge of the site and is part of a larger woodland stand, which is a component of Lightbowne Country Park. The woodland was likely planted decades ago as a shelterbelt between the railway depot and the nearby housing estate.

20 The canopy of the section of woodland within the site boundary consists of aspen and crack willow, with occasional alder, ash, cherry, common lime and field maple. Other broadleaved trees are present in small amounts. Young self-seeded aspen is present along the majority of the boundary where the woodland meets the grassland.

21 Nearby off-site trees include an ash in poor health (T1), which is unsuitable for retention; a second ash tree (T2) and a small group of young self-seeded sycamore and ash trees within an area of cherry laurel.

Table 7: Summary of Tree Categories

	Tree	Total
Category A Trees/Groups of high quality		0
Category B Trees/Groups of moderate quality	T2, W1	2
Category C Trees/Groups of low quality	G1	1
Category U Trees/Groups unsuitable for retention	T1	1

D ARBORICULTURAL IMPACT ASSESSMENT

D.1 Proposed Development

- 22 The proposals for the site include the construction of nine houses, with associated parking, private gardens and public greenspace. The layout plan shows site access is from Kenyon Lane at the north-east boundary (Schedules and Site Plan – Drawing No. 105, Rev 8).

D.2 Impact Assessment

- 23 The southern edge of the houses and gardens extend into the edge of the woodland (W1). As the trees within the woodland have not been individually mapped on the topographical plan, it is not possible to accurately assess how many trees will be impacted or will need to be removed. However, the majority of the woodland is to be retained and the surrounding stands of woodland that also comprise Lightbowne Country Park will not be impacted. Many of the trees along the edge of the woodland are self-seeded and young, therefore it is anticipated that it will mostly be young trees that require removal and the majority of the larger trees can be retained. Therefore the impact of the proposals on the tree resource of the local area is considered to be minor.
- 24 The RPA of the off-site tree T2 extends slightly into the site, but should not be impacted by the development as the RPA falls within an area of public greenspace. The tree will need to be protected by temporary fencing during the clearance and construction works (see Section D.3). The trees in G1 are of low value and their RPAs do not extend into the site, so no further consideration is required.

D.3 Mitigation Proposals

- 25 Once the site layout is finalised, a Tree Protection Plan (TPT) should be produced which details the measures to be taken to protect the retained trees and woodland, including fencing and any required temporary ground protection to prevent compaction of the soil within the RPA.
- 26 The trees must be protected during the site clearance and construction phases using suitable fencing as specified in BS5837:2012 and included in Appendix F.3. The areas within the fencing are to be considered Construction Exclusion Zones (CEZ) and there must be no change of ground level, digging, use of machinery or storage of materials within the CEZ. The protective fencing must remain in place until all construction is complete and all machinery has been removed from the site.
- 27 The proposals show eight new trees are to be planted within areas of public greenspace at the site. It is recommended that these are heavy or extra heavy standards and that native species or species with known wildlife value are selected. Examples include rowan, cherry, apple, hazel, bird cherry and hawthorn.

28 Any further required off-setting could involve improving the adjacent woodland through appropriate management actions.

E REFERENCES

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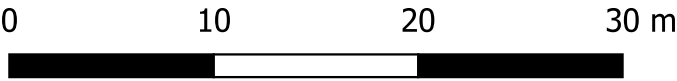


Legend

- Tree Location
 - Root Protection Area (RPA)
 - Site Boundary
- Retention Categories
- Category B Tree - Canopy Spread
 - Category C Tree - Canopy Spread
 - Category U Tree - Canopy Spread

Based on topographical data

Project	Land at Kenyon Lane, Manchester M40 5FH
Title	F.1 Tree Constraints Plan
Client	Jigsaw Homes Group
Date	July 2023
Ref	[LM0117]F.1[REV B]TCP



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F.2 Photographs

Photographs taken during the site visit.



Photograph 1: Site at Kenyon Lane



Photograph 2: Tree T1 with T2 behind



Photograph 3: Tree T2



Photograph 4: Group G1 within cherry laurel

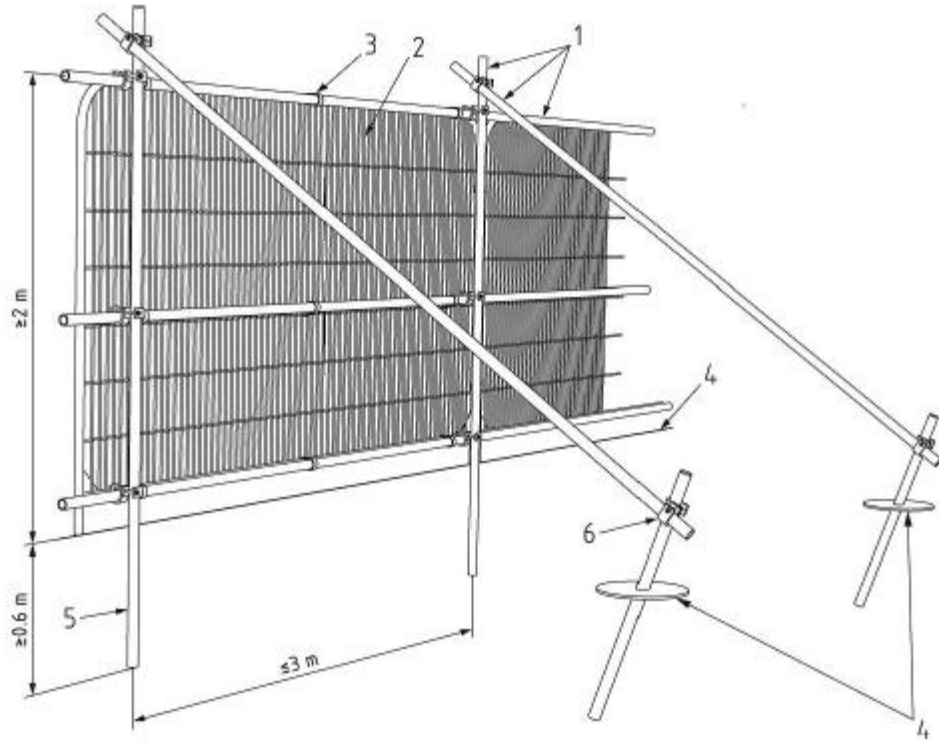


Photograph 5: Woodland W1



Photograph 6: Woodland W1

F.3 Protective Fence Specifications



- Key:
- 1 Standard scaffold poles
 - 2 Heavy gage 2m tall galvanized tube and welded mesh infill panels
 - 3 Panels secured to uprights and cross-members with wire ties
 - 4 Ground level
 - 5 Uprights driven in the ground until secure (minimum depth 0.6m)
 - 6 Standard scaffold clamps

Taken from BS5837:2012 Figure 2 Default specification for protective barrier