

# **Tree Survey BS5837:2012**

Land at Lathbury Road, Manchester, M9 5GN

Jigsaw Homes Group

Revision B - October 2023



ecology

## QUALITY ASSURANCE

| REPORT TYPE             | SITE NAME                                | REVISION |
|-------------------------|------------------------------------------|----------|
| Tree Survey BS5837:2012 | Land at Lathbury Road, Manchester M9 5GN | A        |

| CLIENT             | COMMISSION DATE |
|--------------------|-----------------|
| Jigsaw Homes Group | April 2023      |

|                  | NAME              | QUALIFICATIONS                          | DATE                                                                   |
|------------------|-------------------|-----------------------------------------|------------------------------------------------------------------------|
| PRINCIPAL AUTHOR | Elizabeth McBride | BSc(Hons)<br>Dip Arb L4(ABC),<br>MCIEEM | 12/10/2023                                                             |
| REVIEWED BY      | Louisa Molloy     | BSc (Hons) Consultant<br>Ecologist      | 12/10/2023                                                             |
| REVISION HISTORY |                   |                                         |                                                                        |
| REVISION         | DATE              | AUTHOR                                  | DESCRIPTION                                                            |
| A                | July 2023         | EM                                      | Original based on Schedules and Site Plan – Drawing No. 105 Rev. 5     |
| B                | October 2023      | EM                                      | Revised in line with Schedules and Site Plan – Drawing No. 105 Rev. 11 |

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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 Lathbury Road, Manchester M9 5GN | SD8590900894   |

- 2 The survey has been commissioned to support a planning application to construct six houses at the site, with associated parking and private gardens.
- 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. 11 (LR-BTP-00-SP-DR-A-3788_105.11) | BTP Architects                    | 29 <sup>th</sup> October 2020<br>(Updated 28.09.23) |

### A.2 Site Location and General Description

- 4 The site consists of a rectangle of rough grassland at the corner of Lathbury Road and Carisbrook Street in Monsall, Manchester. It is surrounded by a wire mesh fence and is not accessible to the public. There is housing to the north and west, with sports pitches and greenspace to the east and an area of grassland and woodland surrounding Moston Brook to the south.
- 5 The site supports a single large cherry tree and a twin-stemmed silver birch tree, with many self-seeded saplings and young trees growing around the fence boundary.

## **B SURVEY DETAILS AND LIMITATIONS**

- 6 The fieldwork was carried out on 22<sup>nd</sup> 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.
- 7 The survey was undertaken in accordance with BS 5837:2012 Trees in relation to Design, Demolition and Construction – Recommendations.
- 8 Tree locations were taken from the topographical plan provided and the trees were surveyed visually from the ground.
- 9 Please note this report represents a BS5837 tree survey and should not be accepted as a tree safety inspection report.
- 10 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.
- 11 Trees within close proximity to each other and of similar age and species have been surveyed in groups, as defined in BS 5837.
- 12 Saplings and shrubs were deemed insignificant and omitted from the survey.
- 13 Root protection areas were calculated from stem diameter.
- 14 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.
- 15 Some young groups of trees were not shown on the topographical plan and therefore their locations have been estimated.

## **C RESULTS**

### **C.1 Tree Data**

16 See Tables 3 & 4 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)<br>N<br>W S E | Stem diameter (mm) | Physiological condition | Structural condition | Observations                                                                          | Estimated remaining contribution (years) | Retention category |
|----------------|---------------------------------------|------------|---------------------------|---------------------------------|-----------------------------------------------|--------------------|-------------------------|----------------------|---------------------------------------------------------------------------------------|------------------------------------------|--------------------|
| T1             | Silver birch<br><i>Betula pendula</i> | EM         | 12                        | 2                               | 5<br>3 4<br>4                                 | Twin<br>292<br>339 | Good                    | Good                 | Twin-stemmed from base                                                                | 20+                                      | B1                 |
| T2             | Cherry<br><i>Prunus avium</i>         | M          | 16                        | 1.5                             | 7<br>6 6<br>8                                 | 789                | Good                    | Good                 | Large cherry in corner of site. Good canopy cover and large number of fruits present. | 40+                                      | A1                 |

Table 4: Group data

| Tree reference | Species           | Life stage | Estimated height (metres) | Estimated crown height (metres) | Estimated crown spread (metres)<br>N<br>W S E | Stem diameter (mm)        | Physiological condition | Structural condition | Observations                                                                                                                                                                                              | Estimated remaining contribution (years) | Retention category |
|----------------|-------------------|------------|---------------------------|---------------------------------|-----------------------------------------------|---------------------------|-------------------------|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|--------------------|
| G1             | Sycamore          | Y          | 7 – 8                     | 0.5                             | 2<br>2 2<br>2                                 | Average multi-stem<br>214 | Good                    | Poor                 | Group of self-seeded multi-stemmed sycamore. Approximately 5 trees. Constrained by fence and growing through it. Poor growth form.                                                                        | 20+                                      | C2                 |
| G2             | Sycamore & Cherry | Y          | 6 – 8                     | 0.5                             | 3<br>3 3<br>3                                 | Average multi-stem<br>90  | Good                    | Poor                 | Group of self-seeded multi-stemmed sycamore with shorter cherry saplings spreading from adjacent cherry tree. Poor growth form.                                                                           | 20+                                      | C2                 |
| G3             | Sycamore & Cherry | Y          | 6                         | 0.5                             | 2<br>2 2<br>2                                 | Average<br>70             | Good                    | Poor                 | Group of 2 or 3 self-seeded multi-stemmed sycamore with several young cherry saplings. Poor growth form.                                                                                                  | 20+                                      | C2                 |
| G4             | Sycamore & Ash    | Y          | 5 – 6                     | 1                               | 2<br>2 2<br>2                                 | Average multi-stem<br>180 | Fair                    | Poor                 | Small group of two sycamore trees and one ash tree – all self-seeded and multi-stemmed. Also a small ash sapling showing ash dieback infection <i>Hymenoscyphus fraxineus</i> . Poor growth form.         | 20+                                      | C2                 |
| G5             | Sycamore & Ash    | Y          | 6 – 7                     | 0.5                             | 2<br>2 2<br>2                                 | Average<br>73             | Fair                    | Poor                 | Group of several self-seeded multi-stemmed sycamores with a couple of ash trees and some ash saplings. Ash saplings showing signs of dieback infection <i>Hymenoscyphus fraxineus</i> . Poor growth form. | 20+                                      | C2                 |
| G6             | Sycamore          | Y          | 8                         | 0.5                             | 2<br>2 2<br>2                                 | Average<br>71             | Good                    | Poor                 | Group of approximately 6 self-seeded sycamore trees.                                                                                                                                                      | 20+                                      | C2                 |

### **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

17 The root protection radius for each tree is shown below in Table 5.

**Table 5: Root protection area and root protection radius**

| Tree Number | RPA (m <sup>2</sup> ) | RPA Radius (m) |
|-------------|-----------------------|----------------|
| T1          | 5.4                   | 92             |
| T2          | 9.6                   | 290            |
| G1          | 2.7                   | 23             |
| G2          | 1.2                   | 5              |
| G3          | 0.9                   | 3              |
| G4          | 2.4                   | 18             |
| G5          | 0.9                   | 3              |
| G6          | 0.9                   | 3              |

## C.3 Legal Status

18 Manchester City Council planning office confirmed by email on 13<sup>th</sup> 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

19 The tree survey revealed a total of two individual trees and six groups of trees. One tree was identified as retention category A (high quality), one tree was identified as retention category B (moderate quality) and all six groups were identified as retention category C (low quality). This information is summarised in Table 6 below.

20 The two trees with value are the silver birch (T1) and the cherry (T2). All other trees within the site are young and have seeded themselves at the base of the fence. Sycamore is the most frequently occurring species, with occasional ash and frequent cherry saplings spreading from the cherry tree. Many of these trees are multi-stemmed and have poor form due to their position at the base of the fence and their proximity to each other.

**Table 6: Summary of Tree Categories**

|                                                       | Tree | Total |
|-------------------------------------------------------|------|-------|
| <b>Category A</b><br>Trees/Groups of high quality     | T2   | 1     |
| <b>Category B</b><br>Trees/Groups of moderate quality | T1   | 1     |

|                                                            |                        |   |
|------------------------------------------------------------|------------------------|---|
| <b>Category C</b><br>Trees/Groups of low quality           | G1, G2, G3, G4, G5, G6 | 6 |
| <b>Category U</b><br>Trees/Groups unsuitable for retention |                        | 0 |

## **D ARBORICULTURAL IMPACT ASSESSMENT**

### **D.1 Proposed Development**

- 21 The proposals for the site include the construction of six houses, with associated parking and private gardens (Schedules and Site Plan – Drawing No. 105, dated 29/10/2020, Rev 11).

### **D.2 Impact Assessment**

- 22 The layout plan shows that both T1 and T2 are to be retained.
- 23 The current proposed layout of the site shows T1 and its Root Protection Area (RPA) entirely within the proposed rear garden of plot 6, so there should be no significant impacts on this tree. T2 will be located within the rear garden of plot 4 and the house encroaches into the edge of the RPA of the tree. However, less than 5% of the RPA is affected and therefore the impact on the tree is considered to be minor and the tree can still be retained. A hardstanding path passes through the RPA and this should be constructed using no-dig methods with permeable paving/surfacing, as shown for the driveways. The driveway of plot 3 will also need to be constructed using no-dig methods.

### **D.3 Mitigation Proposals**

- 24 A Tree Protection Plan (TPT) should be produced which details the measures to be taken to protect the retained trees including fencing and any required temporary ground protection to prevent compaction of the soil within the RPA.
- 25 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.
- 26 The proposed layout plan does not show any tree planting. There are no areas of public greenspace in the proposals, therefore any tree planting would have to be within private gardens which may impact the permanence of the new trees.
- 27 It is recommended that any new trees consist of native species or species with known wildlife value. Examples include rowan, cherry, apple, hazel, bird cherry and hawthorn.

## E REFERENCES

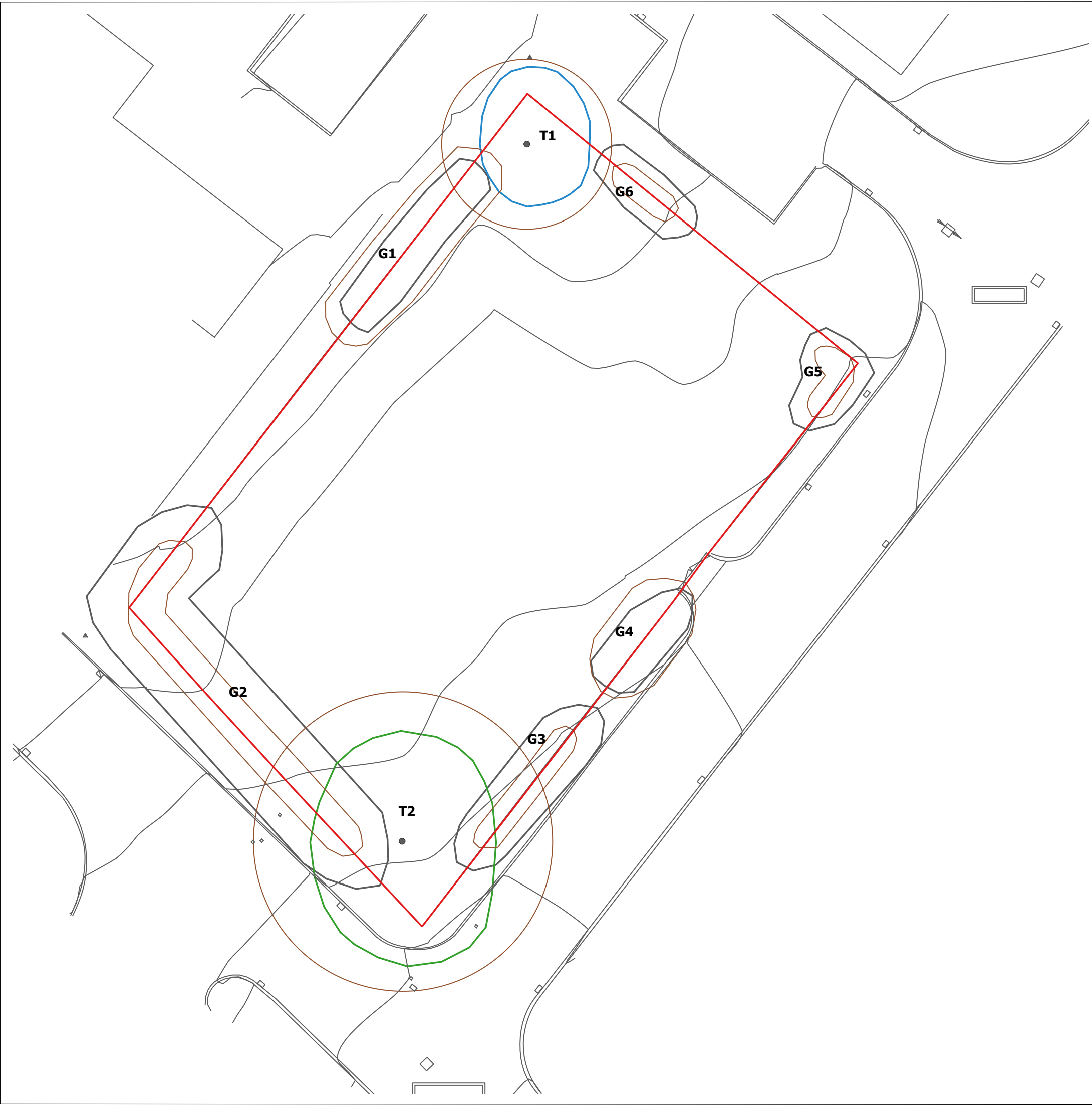
British Standards Institution. (2012) *BS5837:2012 Trees in Relation to Design, Demolition and Construction – Recommendations*.

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Watson, G. and Green, T. (2011) *Fungi on Trees: An Arborist's Field Guide*. The Arboricultural Association.



Legend

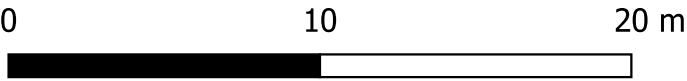
- Tree Location
- Root Protection Area (RPA)
- Site Boundary

Retention Categories

- Category A Tree - Canopy Spread
- Category B Tree - Canopy Spread
- Category C Tree - Canopy Spread

Based on topographical data.

|         |                                          |
|---------|------------------------------------------|
| Project | Land at Lathbury Road, Manchester M9 5GN |
| Title   | F.1 Tree Constraints Plan                |
| Client  | Jigsaw Homes Group                       |
| Date    | July 2023                                |
| Ref     | [LM0117]F.1[REV A]TCP                    |



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## F.2 Photographs

Photographs taken during the site visit.



Photograph 1: Tree T1



Photograph 2: Tree T2



Photograph 3: Tree T2 with groups G2, G3 & G4



Photograph 4: Groups G4, G5 & G6

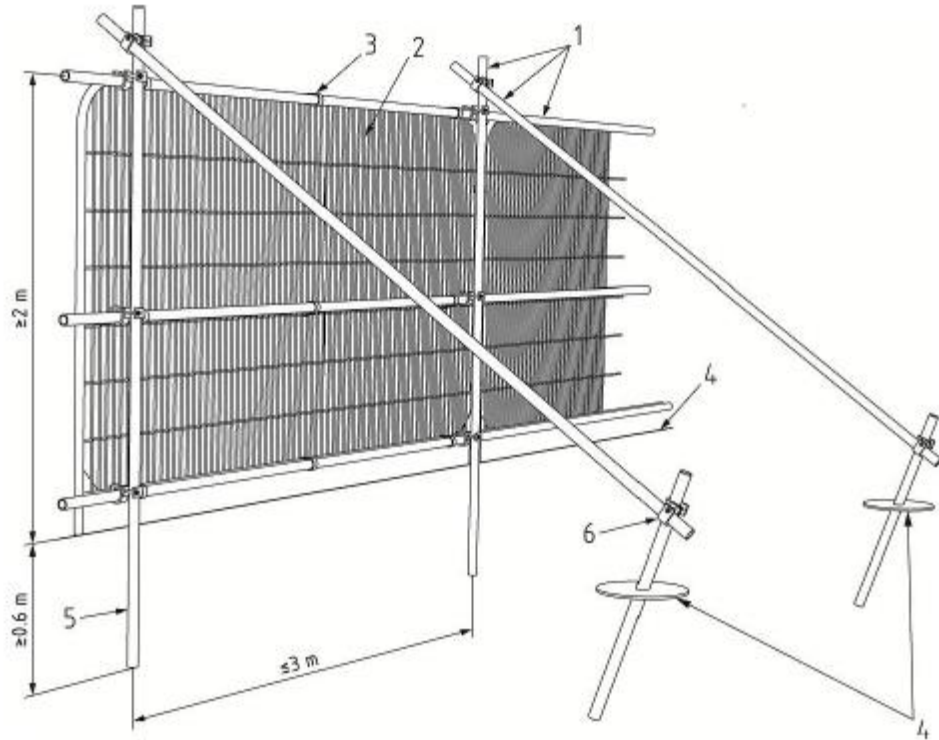


Photograph 5: Group G2



Photograph 6: Group G5

### 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