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ARBORICULTURAL IMPACT ASSESSMENT AND METHOD STATEMENT

172 The Drive Bexley Kent DA5 3BX

Report by

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FdSc. Arboriculture

On the instructions of [redacted] Mcleay

26th April 2021

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1 Report summary

1.1.1 This report has been prepared to accompany the planning application for the site at 172 The Drive, Bexley, DA5 1DJ.

1.1.2 T2 Norway spruce will require cut back by approx. 2.5m in order to accommodate the development.

1.1.3 T3 Whitebeam will require wooden box around the stem to avoid any potential damage by construction activity.

1.1.4 All retained trees require the installation of the tree protection barriers.

1.1.5 Provided precautions to protect the identified trees are specified and implemented through the measures included in this report; the development proposal will have little or negligible impact on the retained trees or their wider contribution to an area amenity and character if the methods detailed in this report will be followed. Introduction and report background

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1.2 Instruction

1.2.1 MMARBORICULTURE LTD have been instructed by [redacted] Mclaey to carry out tree survey and produce the arboricultural report in support of a planning application at 172 The Drive, Bexley, DA5 1DJ.

1.2.2 The purpose of the survey is to cover trees within the site boundary and its immediate curtilage to assess the impact of the development on trees and the impact of retained trees on the development. The Section 5 Arboricultural Method Statement (Section 5 of this report) specifies the principles, which need to be adopted during the demolition and construction of the development. Although any specific activities proposed in RPAs may require agreement by LPA if requested in reserved matters stage. The report produced on the survey data allows the Local Planning Authority (LPA) to assess information about trees as part of the planning submission following principles of British Standard BS5837:2012 Trees in relation to design, demolition and construction – Recommendations.

1.3 Methodology

1.3.1 The methodology of Visual Tree Assessment (VTA), described by Mattheck (2007), was followed. The survey covers trees with a trunk diameter of 75mm or above and any significant vegetation on the development site.

1.3.2 The best intentions were made to produce accurate measurements; however, some dimensions were estimated due to the limitation of the access, dense undergrowth e.g.

1.3.3 Data collected for each tree includes the following information:

- Sequential reference number, i.e. T1, T2, T3 etc.
- Species (Botanical Name in Latin)
- Height (in meters).
- Stem diameter recorded in mm
- Branch Spread, recorded in meters at the extents of the 4 Cardinal Points, i.e. North, East, South & West.
- Ground clearance, representing level of first significant branching or canopy
- Life stage: Y – Young, SM – Semi Mature, M – Mature

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- Condition comment: structural and/or physiological condition.
- Overall condition: Good, Moderate, Poor, In decline
- Estimated remaining contribution: >10 years, 10 + years, 20 + years, 30+ years, 40 + years.
- BS 5837:2012 Category 'U' or 'A' to 'C' grading with the subcategory 1, 2 or 3
- Tree Work recommendations in the context of the site current use, during the development and after the development.

1.3.4 Trees were categorized into 'A', 'B', 'C' and 'U' category graded in the guidance of BS5837: 2012.

- Category A – trees of high quality and value, with an estimated life expectancy of at least 40 years.
- Category B – trees of moderate quality and value. An estimated life expectancy of at least 20 years.
- Category C – trees of lower quality and value. An estimated life expectancy of at least 10 years, and with a stem diameter of up to 150mm measured at 1.5m from ground level.
- Category U – dead, dying or unsuitable for retention. Life expectancy of less than 10 years

1.4 Limitation

1.4.1 The survey was undertaken by third party arboriculturist. The data collected can be found in the tree schedule in Appendix 2.

1.4.2 The tree condition can rapidly change due to unpredictable factors, such as climatic and manmade events. The risk assessment is based on the factors apparent at the time of the site visit. The re-inspection of trees for health and safety condition should be made on an annual basis.

1.4.3 The soil assessment has not been conducted and detailed soil analysis should be undertaken, or data about the soil assessment should be provided.

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2 The site visit and observations

2.1 The site

2.1.1 A site visit was conducted by third party arboriculturist on 21st April 2021.

2.2 Tree population summary

2.2.1 The tree survey identified total of 5 individual trees.

Retention Category	No. trees
C	5
Total	5

2.2.2 All trees were graded in accordance with BS5837:2012 and data are summarized in Appendix 2 and the Tree Protection Plan indicating trees location in Appendix 3.

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3 Arboricultural impact statement

3.1 The proposal

3.1.1 The latest proposal seeks development of the residential dwelling and installation of the driveway. (Figure 1)

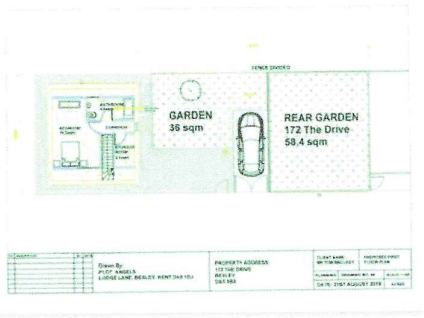

Figure 1 Proposed scheme

3.2 Required tree works

3.2.1 T2 Norway spruce require cut back by approx. 2.5m to accommodate the development..

3.3 Tree protection measures

3.3.1 T3 Whitebeam will require wooden box around the stem to avoid any potential damage by construction activity.

3.3.2 All retained trees will require tree protection barriers.

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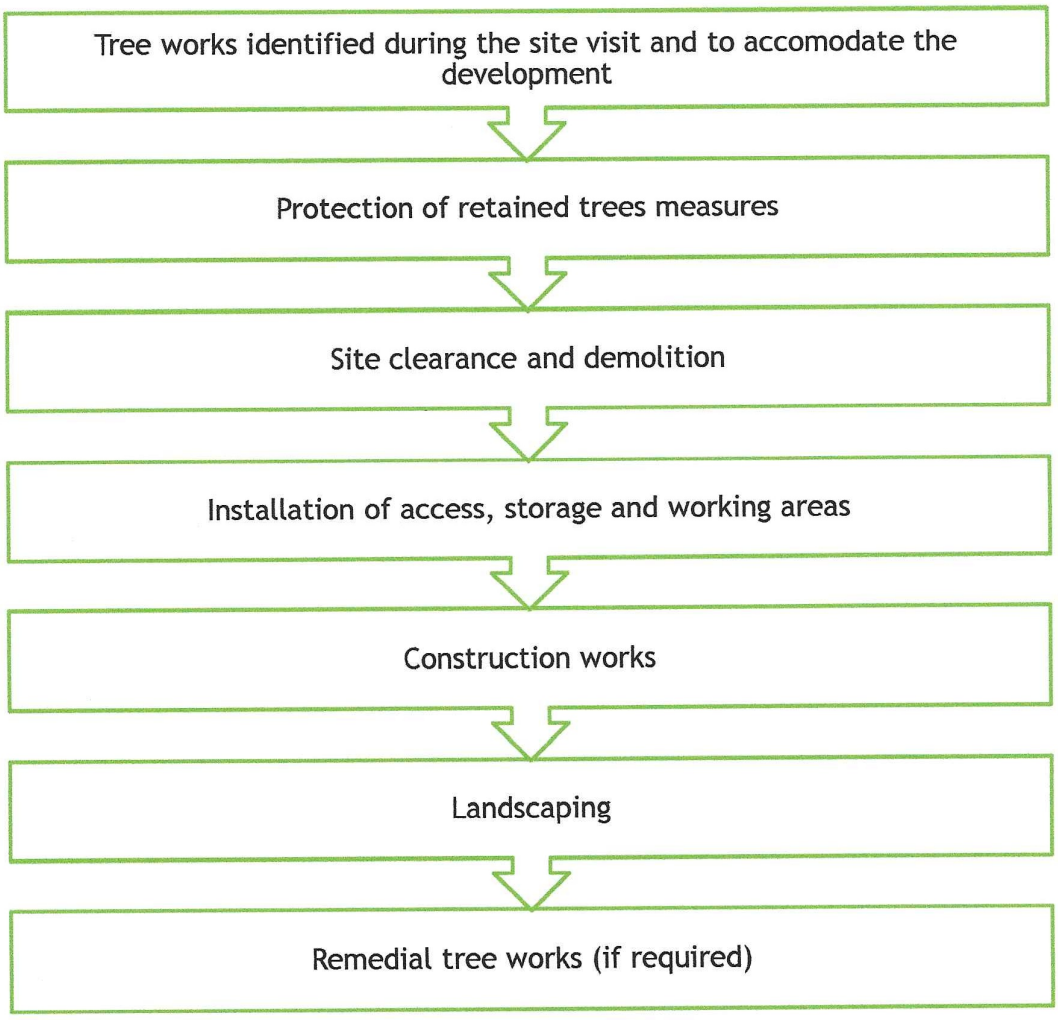
4 Sequence of works



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5 Arboricultural method statement

5.1 Tree Protection Plan

5.1.1 The attached plan (at Appendix 4) is based on the provided information and reflects the measurements and site boundaries. The plan is only relevant for dealing with tree issues. Trees to be retained have coloured centres and outlines, whilst trees removed have dashed hatching.

- The protection barriers placement is shown by dashed line.
- The purple hatching indicates areas of ground protection within RPA.
- The orange hatching indicates areas of specialist construction methods within RPA such as pile and beam foundation, micro drilling, changes of levels e.g. (as per related sections of the report and annotation on the TPP)
- The yellow hatching indicates areas of Construction Exclusion Zone (CEZ), and such any construction activity must be avoided within the zone.

5.2 Tree work

Ref	Species	Proposed Works	Reason
T002	Norway Spruce (Picea abies)	Cut Back by approx. 2.5m	In order to facilitate the development

5.2.1 Proposed tree should be carried out in line with current British Standard BS3998:2010. It is recommended that works are undertaken by the Arboricultural Association approved contractor. A contractor must ensure that all necessary consents have been received from LPA and follow current industry standards and best practice. To minimize damage to retained trees, stumps, shrubs and other vegetation must be removed by hand or using specialized stump grinding machinery. The poisoning of stumps if required must be carried out by trained and qualified operatives.

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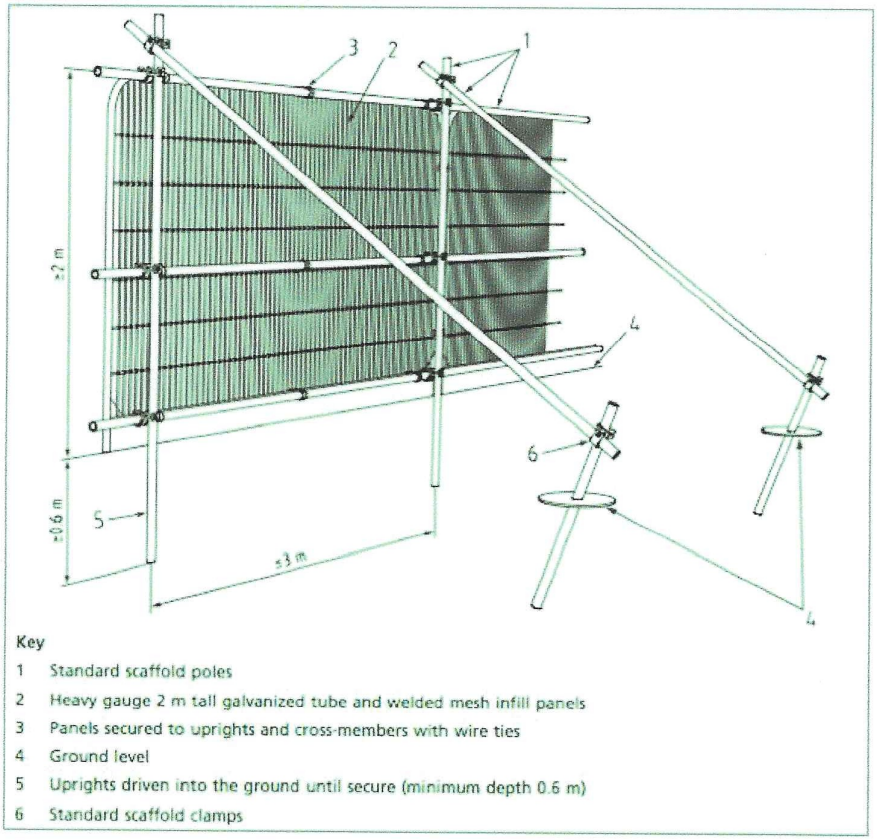
5.3 Tree protection barriers

5.3.1 Tree protection barriers will be required around all retained trees in areas highlighted in Appendix 3 Tree Protection Plan, they shall be minimum of 2m high with vertical and horizontal scaffold frameworks. The vertical tubes should be spaced at least 3 m interval and driven securely into the ground. The welded mesh should be securely fixed on the framework (Figure 3 and Figure 4).

Figure 2 Default specification for protective barrier



Key
1 Standard scaffold poles
2 Heavy gauge 2 m 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 into the ground until secure (minimum depth 0.6 m)
6 Standard scaffold clamps

Figure 2 BS5837: 2012 default specification for barriers type

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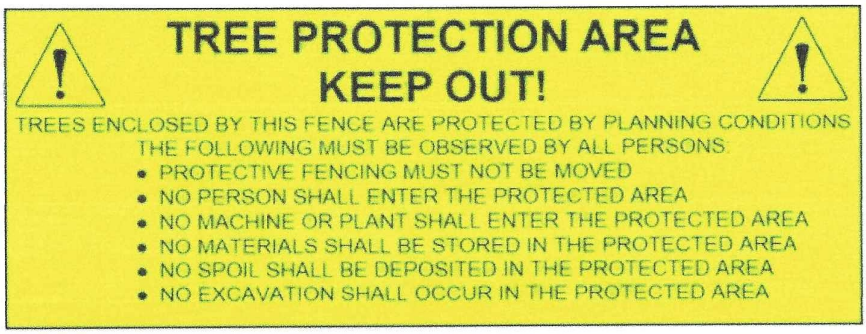

Figure 3 All weather protective sign example

5.3.2 T3 Whitebeam will require wooden box around the stem to avoid any potential damage by construction activity.

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5.4 The site clearance, demolition and pre-construction works

5.4.1 The protective barriers and ground protection must be erected before any work take place including site clearance due to the possibility of causing damage to trees.

5.4.2 The exception to this is vegetation clearance, tree felling, and tree surgery works, which may be necessary prior to protection barriers or ground protection installation. Such works must be carried out with the use of hand tools only (e.g. brush cutters and chainsaws) and without any type of machinery.

5.5 Site set-up, storage and material mixing

5.5.1 Space must be allowed outside of RPAs for site machinery and material storage.

5.5.2 The material must be stored outside the RPAs, which also applies to cement mixing and washing points. The runoff the potential of the contaminants must be considered to avoid incursion to the RPA of retained trees.

5.6 Site monitoring and supervision

5.6.1 The Project Arboricultural Consultant (PAC) shall attend site prior to the commencement of the development to ensure a satisfactory level of protective fencing and ground protection; ground level alternations; construction of walls, installation of new surfaces within RPAs of retained trees and at least every month during the development works. Where agreed with the L.A. it may be acceptable to supply photographs of the fencing to avoid the necessity for a site visit.

5.6.2 All Site monitoring or supervision shall be followed by a report submission with an annotated photographic record and textual commentary on all matters of tree protection to the Local Authority, which by act or omission are in breach of the Arboricultural Method Statement. The initial site visit confirming placement of satisfactory tree protection shall be notified to LA within 5 working days prior to the commencement of the development.

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6 Conclusion and recommendations

6.1.1 T2 Norway spruce will require cut back by approx. 2.5m in order to accommodate the development.

6.1.2 All retained trees require the installation of the tree protection barriers.

6.1.3 The impact on retained trees will be negligible, and the scheme should be achievable in Arboricultural terms if the methods outlined in this report are followed.

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Appendix 1 – References and Copyright

1. British Geological Survey (2014). http://mapapps.bgs.ac.uk/geologyofbritain/home.html. BGS, Keyworth, Nottingham.

2. G. Mercer, A. Reeves & D. O'Callaghan. 'The Relationship between Trees, Distance to Buildings and Subsidence Events on Shrinkable Clay Soil' AB Academic Publishers 2011. Arboricultural Journal, 33, 229-245.

3. BSI (2010) BS 3998:2010 'Tree Work – Recommendations'. British Standards Institute

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Appendix 2: Tree Schedule

Date: 21/04/2021

Ref	Species	Full Structure	Measurements	Spread	General Observations	Retention Category	RPA	Measurements2
T001	Apple (Malus sp.)	Tree	Height (m): 2.5 Stem Diam (mm): 190 Spread (m): 1.5N, 1.5E, 1.5S, 1.5W Crown Clearance (m): 2 Lowest Branch (m): 2(NE) Life Stage: Early Mature Rem. Contrib.: 20+ Years	N:1.5 E:1.5 S:1.5 W:1.5	Leaning stem, formally maintained	C1,3	Radius: 2.3m. Area: 17 sq m.	Other Reference: Distance1: 10.4 Distance2: 6.5 Physiological Cond: Fair Structural Cond: Fair
T002	Norway Spruce (Picea abies)	Tree	Height (m): 9 Stem Diam (mm): 190 Spread (m): 3N, 3E, 3S, 3W Crown Clearance (m): 2 Lowest Branch (m): 2(S) Life Stage: Early Mature Rem. Contrib.: 30+ Years	N:3 E:3 S:3 W:3	On the neighbouring property behind perimeter fence, access restricted data estimated, crown conflict with the structure, sparse crown	C1,3	Radius: 2.3m. Area: 17 sq m.	Other Reference: Distance1: 20.3 Distance2: 4.2 Physiological Cond: Fair Structural Cond: Fair
T003	Whitebeam (Sorbus aria)	Tree	Height (m): 5 Stem Diam (mm): 220 Spread (m): 2.5N, 2.5E, 2.5S, 2.5W Crown Clearance (m): 2 Lowest Branch (m): 2 Life Stage: Early Mature Rem. Contrib.: 20+ Years	N:2.5 E:2.5 S:2.5 W:2.5	Street tree, weak unions	C1,3	Radius: 2.6m. Area: 21 sq m.	Other Reference: Distance1: 15 Distance2: 4.1 Physiological Cond: Good Structural Cond: Good
T004	Blackthorn (Prunus spinosa)	Tree	Height (m): 3 Stem Diam (mm): 140 Spread (m): 2N, 1.5E, 1S, 1.5W Crown Clearance (m): 0 Lowest Branch (m): 0 Life Stage: Semi Mature Rem. Contrib.: 20+ Years	N:2 E:1.5 S:1 W:1.5	On the neighbouring property behind perimeter fence, access restricted data estimated,	C3	Radius: 1.7m. Area: 9 sq m.	Other Reference: Distance1: Distance2: Physiological Cond: Fair Structural Cond: Fair

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T005	Paperbark Cherry (Prunus serrula)	Tree	Height (m): 5.5 Stem Diam (mm): 110 Spread (m): 2N, 2E, 2S, 2W Crown Clearance (m): 1 Lowest Branch (m): 1 Life Stage: Early Mature Rem. Contrib.: 20+ Years	N:2 E:2 S:2 W:2	Street tree, Epicormic growth on stem	C1,3	Radius: 1.3m. Area: 5 sq m.	Other Reference: Distance1: Distance2: Physiological Cond: Good Structural Cond: Good

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Appendix 3: Tree protection plan

Site
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Client
Thomas Mcleay

Drawing title
Tree Survey & Protection Plan

Drawing no.	Scale	Date
1 of 1	1:250@A3	26.04.2021

Key

- Category A — trees of high quality and value
- Category B — trees of moderate quality and value
- Category C — trees of low quality and value
- Category U — trees of unsuitable for retention
- Group of trees / hedgerows
- Root protection area
- Trees to be removed
- Tree protective barriers
- Ground Root Protection
- Specialists Construction Methods
- Construction Exclusion Zone

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