Stag Brewery, Mortlake

Aboricultural Survey Report and Impact Assessment

For Reselton Properties

July 2020

Client Name:	Reselton Properties Limited
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Quality Assurance – Approval Status

This document has been prepared and checked in accordance with Waterman Group's IMS
Waterman Group's IMS (BS EN ISO 9001: 2015, BS EN ISO 14001: 2015 and BS EN ISO 45001:2018)

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Comments

Final - Amendments to highway works and introduction

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1. Introduction

1.1. This Arboricultural Survey Report and Impact Assessment has been prepared by Waterman Infrastructure & Environment Ltd ('Waterman IE') as a revised submission document to the Arboricultural Survey Report and Impact Assessment (ref. WIE10667-R-3-4-2-ASR&IA dated April 2019) submitted in support of Applications A, B and C (refs. 18/0547/FUL, 18/0548/FUL and 18/0549/FUL) ('the Applications'), in respect of the former Stag Brewery Site in Mortlake ('the Site') within the London Borough of Richmond Upon Thames ('LBRuT'). The Applications are for the comprehensive redevelopment of the Site. This document has been prepared on behalf of Reselton Properties Limited ('the Applicant'). A summary of the Applications is set out below:

a) Application A – hybrid planning application for comprehensive mixed-use redevelopment of the former Stag Brewery site consisting of:

   i. Land to the east of Ship Lane applied for in detail (referred to as 'Development Area 1' throughout); and

   ii. Land to the west of Ship Lane (excluding the school) applied for in outline (referred to as 'Development Area 2' throughout).

b) Application B – detailed planning application for the school (on land to the west of Ship Lane).

c) Application C – detailed planning application for highways and landscape works at Chalkers Corner.

1.2. This document replaces the Arboricultural Survey Report and Impact Assessment (WIE10667-R-3-4-2-ASR&IA) dated April 2019.

1.3. The Applications were submitted in February 2018 to LBRuT. The Applications are related and were proposed to be linked via a Section 106 Agreement. In May 2019, a package of substitutions was submitted to LBRuT for consideration, which sought to address comments raised by consultees during determination. On 29 January 2020, the Applications were heard at LBRuT's Planning Committee with a recommendation for approval. This scheme is thereafter referred to as "the Original Scheme".

1.4. The Committee resolved to grant Applications A and B, and refuse Application C. The granting of Applications A and B was subject to the following:

a) Conditions and informatives as set out in the officer's report, published addendum and agreed verbally at the meeting;

b) Amendments to the Heads of Terms and completion of a Section 106 Legal Agreement which was delegated to the Assistant Director to conclude;

c) No adverse direction from the Greater London Authority ('GLA'); and

d) No call in by the Secretary of State for Housing, Communities and Local Government. The Applications have been referred to the GLA and the Mayor has given a direction that he will

take over the determination of the Applications and act as local planning authority in relation to all three applications.

1.5. The Applications have been referred to the GLA and the Mayor has given a direction that he will take over the determination of the Applications and act as local planning authority in relation to all three applications.

1.6. The Applicant has engaged with the GLA in respect of the proposed amendments to the scheme, referred to throughout this document as the 'Revised Scheme'. As a result of these discussions, a number of changes have been made to the scheme proposals which are summarised as follows:

- Increase in residential unit provision from up to 813 units (this includes the up to 150 flexible assisted living and / or residential units) to up to 1,250 units;
- Increase in affordable housing provision from up to 17% to up to 30%;
- Increase in height for some buildings, of up to three storeys compared to the Original Scheme;
- Change to the layout of Buildings 18 and 19, conversion of Block 20 from a terrace row of housing to two four storey buildings;
- Reduction in the size of the western basement, resulting in an overall reduction in car parking spaces of 186 spaces and introduction of an additional basement storey beneath Building 1 (the cinema);
- Other amendments to the masterplan including amendments to internal layouts, re-location and change to the quantum and mix of uses across the Site, including the removal of the nursing home and assisted living in Development Area 2;
- Landscape amendments, including canopy removal of four trees on the north west corner of the Site; and

1.7. Associated highways works may be carried out on adopted highways land. The submission documents have tested an affordable housing provision of 30%. However, it should be noted that the final affordable housing level is subject to further viability testing and discussions with the GLA.

1.8. Minor amendments have also been made to the road and pedestrian route layouts for the school (Application B). No other amendments are proposed to Application B. No amendments are proposed to the physical works proposed under Application C, although alternative options within the highway boundaries for mitigating the highway impact of the amended proposals have been assessed within the relevant substitution documents for Applications A and B and are the subject of ongoing discussions with the GLA and TfL.

1.9. A more detailed summary is included within the Planning Statement Addendum and the Design and Access Statement Addendum submitted with the Revised Scheme documents.

1.10. These changes are being brought forward as substitutions to Applications A, B, and C (refs. 18/0547/FUL, 18/0548/FUL and 18/0549/FUL), which are related applications (to be linked via a Section 106 Agreement). It is important to note that no changes are proposed to the physical works proposed under Application C – the only change to this application is that the supporting documents (which include all documents submitted under Applications A and B) have been updated in the context of the proposed changes to the scheme as sought under Applications A and B. Application C was resolved to be refused by LBRuT at Committee on 29 January 2020. As a result, whilst the works proposed in Application C are still an available option, the Applicant has

progressed alternative approaches for addressing and mitigating the impacts on surrounding highways, and these have been tested within the relevant substitution documents for Applications A and B. All of these options are subject to ongoing discussions and testing with TfL. They are all within the existing highway boundaries and if agreed would not, in themselves, require planning consent. Accordingly, Application C remains 'live' within this substitution package.

1.11. Four alternative highways options proposed have been discussed with TfL to date. In summary the options are:

- Option 1: Do nothing plus financial contribution for highways (as per the LBRuT Planning Committee Resolution);
- Option 2: Introduce an additional left-hand turning lane on the south side of Lower Richmond Road ('Chalkers Corner light');
- Option 3: Introduce a bus lane along Mortlake High Street; and
- Option 4: Do both Option 2 and 3.

1.12. The physical works at Chalkers Corner have been proposed to mitigate the effects of the re-aligned carriageway and to enhance pedestrian and cyclist facilities. Further details of the proposed Options are set out in the submitted Transport Assessment Addendum, prepared by Stantec. The Development as proposed under Application A would not prejudice the delivery of any of these highways mitigation options. An addendum note to this report (**Appendix G**) summarises the impacts of those works in relation to the original Chalkers Corner mitigation (Application C) as detailed in the original April 2019 ASR&IA as this July 2020 ASR&IA focusses on the above four alternative highways options.

1.13. In order to present an assessment of the likely impacts of the highways works, the Applicant's landscape architect (Gillespies) considered the potential landscape implications of each of the above options. Options 2 and 4 would necessitate the removal of a tree (Category B) from Clifford Avenue but no loss of existing trees or vegetation from Lower Richmond Road. To compensate for the loss of this tree, it is proposed that two new trees could be planted to the north of the stop sign on the pavement to the west of the junction, should these options be progressed. Options 1 and 3 would not require any landscape works and, therefore, none are proposed.

1.14. This report sets out the findings of an arboricultural survey of trees on and directly adjacent to the Site and the s278 works area **(Drawings 1 and 2)**, hereafter referred to as the 'Survey Area'.

1.15. The survey involved collecting data relating to existing trees to assess their condition and relative merit. This report describes the findings of the survey and highlights the above and below ground constraints posed by the canopy shape and rooting area of the surveyed trees. It also considers the Revised Scheme and outlines the resulting implications to trees.

Tree Survey Methodology

1.16. The arboricultural survey is based upon existing topographical information relating to the Survey Area provided by APR services (Job no. 915213, dated July 2015 and 916061, dated February 2017) and was otherwise conducted in accordance with the principles outlined within BS5837:2012 Trees in Relation to Design, Demolition and Construction - Recommendations[1] (BS5837).

1.17. Fieldwork was undertaken on the Stag Brewery component of the Site on 16th and 17th February 2016, and Chalkers Corner and a portion of Mortlake Green on 11th April 2017. During the survey on 11th April 2017, the trees located along the southern bank of the River Thames, adjacent to the

[1] BS5837:2012 Trees in relation to design, demolition and construction – Recommendations, 2012, British Standards Institution.

Stag Brewery component of the Site were re-surveyed to record these features in more detail. Fieldwork comprised a non-intrusive, visual survey undertaken at ground level, during which dimensional data and observational information were collected. A diameter breast height (DBH) tape measure and Leica Disto™ laser distance meter was used in the collection of data presented in this report.

Tree Numbers

1.18. Individual trees surveyed were given the prefix 'T', groups of trees the prefix 'G' and hedges the prefix 'H'. Where sufficiently consistent, tree groups have been categorised and include information relating to species composition, age and condition ranges as appropriate. Within these features, principal trees have been identified, where appropriate.

Species

1.19. Species are listed by their common and Latin names, both in the schedule and in the report text.

Height

1.20. Tree heights are approximate and estimated in metres.

Stem Diameter

1.21. The stem diameter of single stemmed trees is measured at 1.5m above ground level and given in millimetres. The diameter measurement of multi-stemmed trees is taken as a combined measurement of all the major stems. Where stems fork or swell the measurement is taken at the narrowest point below the fork or swelling. Where access to the trunk of a tree is not available, an estimation of the stem diameter is made and identified by '*' on the accompanying tree survey table.

Crown Spread

1.22. Radial crown spread is measured in metres to the nearest decimal (rounded up). These are recorded for each of the four cardinal points where access allows. Where access is not available the spread is estimated and identified by '*' on the accompanying tree survey table. The canopy shape for surveyed trees depicted on the accompanying plans accurately represents the canopy spread as measured on Site.

Height of Crown Clearance and Canopy

1.23. The height of crown clearance is the height above ground in metres of the first significant branch and the direction of growth. The height of canopy is the height above ground in metres of the main canopy. These are measured to the nearest decimal point (rounded up) for dimensions up to 10m and the nearest whole metre for dimensions over 10m.

Age Class

1.24. The age of each tree is defined as follows:

- Young (Y): Within the first 1/4 of useful life expectancy.

- Semi-mature (SM): Within the second 1/4 of useful life expectancy.
- Early Mature (EM): Within the third 1/4 of useful life expectancy.
- Mature (M): Within the fourth 1/4 of useful life expectancy.
- Over Mature (OM): Tree in decline.

Physiological and Structural Condition

1.25. The physiological or structural condition of each tree group is described, highlighting specific features. The survey involved ground level examination of the external features of the trees. Crown density is noted together with the presence of dead branch wood, small branch die-back and fungal fruiting bodies.

1.26. Unless otherwise stated, trees were found to be displaying 'normal' characteristics for their species. The structural or physiological condition for each tree is described as Good (G), Fair (F) or Poor (P). Where appropriate, notes on the structural integrity are provided on form, taper, forking habit, storm damage, decay, fungi, pests, etc. No invasive investigations or climbing inspections were carried out to confirm visual or audible signs of defect or debility and no tissue or soil samples were taken for laboratory analysis. Where identified, signs of substantial defects or debility have been recorded. Where access to a tree was not possible, an estimation of physiological and structural condition has been made.

Estimated Remaining Contribution (ERC) in Years

1.27. The Estimated Remaining Contribution (ERC) for each tree is based on species and existing physiological and structural condition of the tree. The ERC may affect proposed development layout because the longer the tree is likely to live, the greater the contribution it will make and the greater the need for retention.

Category Grading

1.28. Each individual tree was given a Category Grading in accordance with BS5837: 2012 to reflect the overall arboricultural value and retention category. The Category Gradings are defined according to the following criteria, which are further divided into sub-categories based on arboriculture, landscape and/or historic value, as defined within BS5837:2012, contained at **Appendix A**:

- **Category Grading A:** Trees of high quality and value, (with a suggested remaining life expectancy exceeding 40 years);
- **Category Grading B:** Trees of moderate quality and value, (with a suggested remaining life expectancy of at least 20 years);
- **Category Grading C:** Trees of low quality and value, (with a suggested remaining life expectancy exceeding 10 years or young / immature trees which may have the potential to attract a higher Grade as they mature); and
- **Category Grading U:** Trees which are in such a condition that they are unsuitable for retention in the context of the current land use for longer than 10 years.

Preliminary Management Recommendations

1.29. Any recommendations made for management of the existing tree stock, (for example, tree surgery) are not a 'specification' for tree work. These recommendations are instead intended as a preliminary guide to inform future management of tree stock in the current context which should be formalised as a separate management plan. References to habitat value should be taken as comparative observations compared with a baseline situation with no tree present.

1.30. Proposed tree surgery or inspection works should be undertaken by a suitably qualified arboricultural contractor, such as those listed in the Arboricultural Association's Approved Contractors Directory (Ref. www.trees.org.uk). Any work undertaken by the contractor should be in accordance with best practice, such as the European Tree Pruning Guide[2], or required by BS3998: 2010 Tree Work - Recommendations[3].

Limitations

1.31. All trees were visually inspected from ground level with no climbing, boring or sampling undertaken. All measurements are metric and where qualified, approximate. The comments made were based on the conditions and observable factors present at the time of inspection, including weather, seasonality and access.

1.32. This report is intended to assist with the planning and management of construction, refurbishment and / or demolition operations under current best practice.

1.33. The Arboricultural Survey and this report does not constitute a tree risk assessment. This report is not intended to confirm the safety, (or otherwise) of surveyed trees or tree groups. References to defects or potential safety issues are not exhaustive and are intended as a guide only to inform the provision of further resources / more detailed investigations. The person(s) responsible for the management of the trees surveyed within this report are recommended to commission a separate tree condition survey by a suitably qualified and experienced person to manage the Health and Safety aspects of trees under their control and discharge their reasonable Duty of Care under the 'Duty of Care' owed under the Occupiers' Liability Act 1984[4].

Un-assessable Risks

1.34. Owing to the changing nature of trees and other Site circumstances, this report and any recommendations made remains valid for a period of 18 months between authorisation of this report and commencement of the Works. Any alteration to the Site or development proposals could change the current circumstances and may invalidate this report and any recommendations made. An updated survey would therefore be required.

1.35. Unless otherwise stated, trees should be inspected regularly to satisfy the 'Duty of Care' owed under the Occupiers' Liability Act 1984, or directly proceeding heavy storms (i.e. force 6-7 and above on the Beaufort scale). It is recommended that advice from an ecologist is sought prior to carrying out any works to trees, in order to ensure these are carried out in accordance with (in particular) the protection afforded to wild birds and bats under The Wildlife and Countryside Act[5] and The Conservation of Habitats and Species Regulations[6].

[2] European Tree Pruning Guide (2001); 'Arboricultural Association'.
[3] British Standards Institution (2010; 'BS3998:2010 'Treework - Recommendations', 2010, BSI.
[4] HMSO (1984); 'Occupiers' Liability Acts 1957 and 1984'. HMSO.
[5] The Wildlife and Countryside Act 1981 (as amended), OPSI
[6] The Conservation of Habitats and Species Regulations 2017 (as amended), OPSI

Root Protection Area

1.36. The Root Protection Area (RPA) defines the approximate underground area occupied by the tree roots based on a calculation relating to the girth of the tree, point above ground at which the trunk begins to branch out and the number of stems. BS5837 outlines the calculation of RPA as follows:

$$\text{RPA}(\text{m}^2) = \left(\frac{\text{stem diameter (mm) @ 1.5 m} \times 12}{1\ 000}\right)^2 \times \pi\ (3.142)$$

1.37. Trees with more than one stem below 1.5m above ground level are given an aggregate stem diameter using either of the following two calculations as outlined in BS5837. This diameter is then used in the above calculation to estimate RPA:

a) For trees with two to five stems:

$$\sqrt{(\text{stem diameter 1})^2 + (\text{stem diameter 2})^2 \ldots + (\text{stem diameter 5})^2}$$

b) For trees with more than five stems:

$$\sqrt{(\text{mean stem diameter})^2 \times \text{number of stems}}$$

1.38. The RPA of existing tree stock is an important material consideration when considering site constraints and planning development activities.

1.39. Construction activities, materials storage or changes in level should generally be avoided within the RPA of a tree to be retained. This is because these operations have the potential to damage or kill the tree, the safe retention of which may be a condition of planning permission. This is significant when considering construction in proximity to off-Site / third party land. Special construction techniques, i.e. no-dig construction / permeable surfacing may be considered for light loadings, e.g. pedestrian footpaths etc., within the RPA.

1.40. The RPA often varies in size to the physical area occupied by the canopy spread (due to particular tree species or management practices to artificially alter the canopy size). This is of particular importance when integrating new development in proximity of existing trees. Similarly, the canopy heights (as identified in the schedule of existing trees in **Appendix B**) should be considered as the usable space below a low branching tree, which will be severely restricted without specific arboricultural works to raise the canopy (which may not always be appropriate).

1.41. It should also be noted that BS5837 states that although RPAs should be plotted as a circle centred on the base of the stem, pre-existing site conditions or other factors may indicate that rooting has occurred asymmetrically, and so RPAs may instead be represented as a polygon of equivalent area.

2. Fieldwork Observations

2.1. The tree surveys detailed in paragraph 1.10 identified a total of 163 individual trees, 36 tree groups and 1 hedgerow within the Survey Area. However, on the 27th April 2020, Waterman IE visited the site to confirm that the surveyed trees were still present and that their condition had not altered. During that visit it was noted that the following trees T1, T13, T18, T21, T23, T36, T63, T65, T66, T69, T80, T87, T91 and T92 have all been felled and are no longer included in the Tree Survey Schedule contained in **Appendix B**, nor are they included in this impact assessment.

2.2. As a result of that site visit, the categories of trees T33, T35, T43, T44, T45, T46, G101 and T121 were also down-graded due to changes in the structural and / or physiological condition either resulting from recent pruning work or natural causes. Again, this is reflected in **Appendix B** and within this impact assessment.

2.3. Furthermore, 8 trees located within the curtilages of Chertsey Court, adjacent to Chalkers Corner, have also been removed from the assessment as Chertsey Court is no longer affected by the proposals. These are trees T118, T119, T123, T124, T125, T128, T129 and T130. The trees surveyed around the perimeter of Chertsey Court are still included as they have the potential to be impacted by the Chalkers Corner s278 works on account of their crowns and RPAs extending into the s278 area.

2.4. The locations of the remaining trees are shown in **Drawings 1 and 2**. The category grading of each feature is detailed within **Table 1** below;

Table 1: Category Grading of Trees / Groups / Hedge

Category	Quantity	Description
A	13	T3*, T29*, T48*, T49*, T50*, T51*, T52*, T53*, T54*, T55*, T56*, T57*, and G155
B	86	T4*, T5*, T6*, T7*, T8*, T9*, T10*,T11*, T14*, T15*, T25*, T26*, T27*, G42*, G58g**, G58k**, G58l**, G58s**, G58t**, G58u**, G58w**, T64*, T67*, T68*, T70*, T71*, T73*, T74*, T75*, T76*, T77*, T78*, T79*, T82*, T83*, T84*, T85*, T86*, T88*, T90*, T93*, T94*, T95*, T97*, T98*, T99*, T100*, T103, G104, T106, T107, T111, T116, G117 (part removed), T122, G131, T133, T134, T136, T137, T140, T143, T144, T145**, G146**, G148, T149, G150, G151 (part removed), T153, T154, G156, T157, T158, T159, T161, T163, G164, T165, G166, G167, G169, T170, G174, T175 and G176
C	69	T2*, T16*, T17*, T19*, T20*, T22*, T24*, T31*, T32*, T34*, T37*, T38*, T39*, T40*, T41*, T43*, T44*, T45*, T46*, G47 (part removed)*, G58a**, G58b**, G58c**, G58d**, G58e**, G58f**, G58h**, G58i**, G58j**, G58m**, G58n**, G58o**, G58p**, G58q**, G58r**, G58v**, T59**, T60**, T61*, T62*, T72*, T81*, T89*, T96*, G101, H102*, T105, T108, G109, T110, G112, T113, T114, G115, T120, T126, T127, G132, T142, G147**, T152**, T160, G162, T168, T171, G172, T173, G177 and T178
U	10	T12*, T28*, T30*, T33*, T35*, T121, T135, G138, G139 and G141

* indicates trees covered by Tree Preservation Order T0880/2016 and ** indicates trees within Mortlake Conservation Area (see paragraph 2.4 below)

2.5. Trees present within the Site are located both adjacent to its boundaries and within internal areas of the Site (**Photographs 1 and 2**). Trees present at Chalkers Corner are located adjacent to carriageways (**Photograph 3).** Off-Site trees surveyed include those located around the perimeter of Chertsey Court adjacent to Chalkers Corner, trees within a portion of Mortlake Green (**Photograph 4**), trees located along Mortlake High Street and a group bounding the north-eastern boundary of Development Area 2 (G101). The tree stock present within the Survey Area comprises a high proportion of amenity species with London Plane (*Platanus x hispanica)* being common. This species is well-suited to the challenging urban growing conditions including those locally found within the Survey Area.

Photograph 1 (T67 - T82)

Photograph 2 (T8-T11)

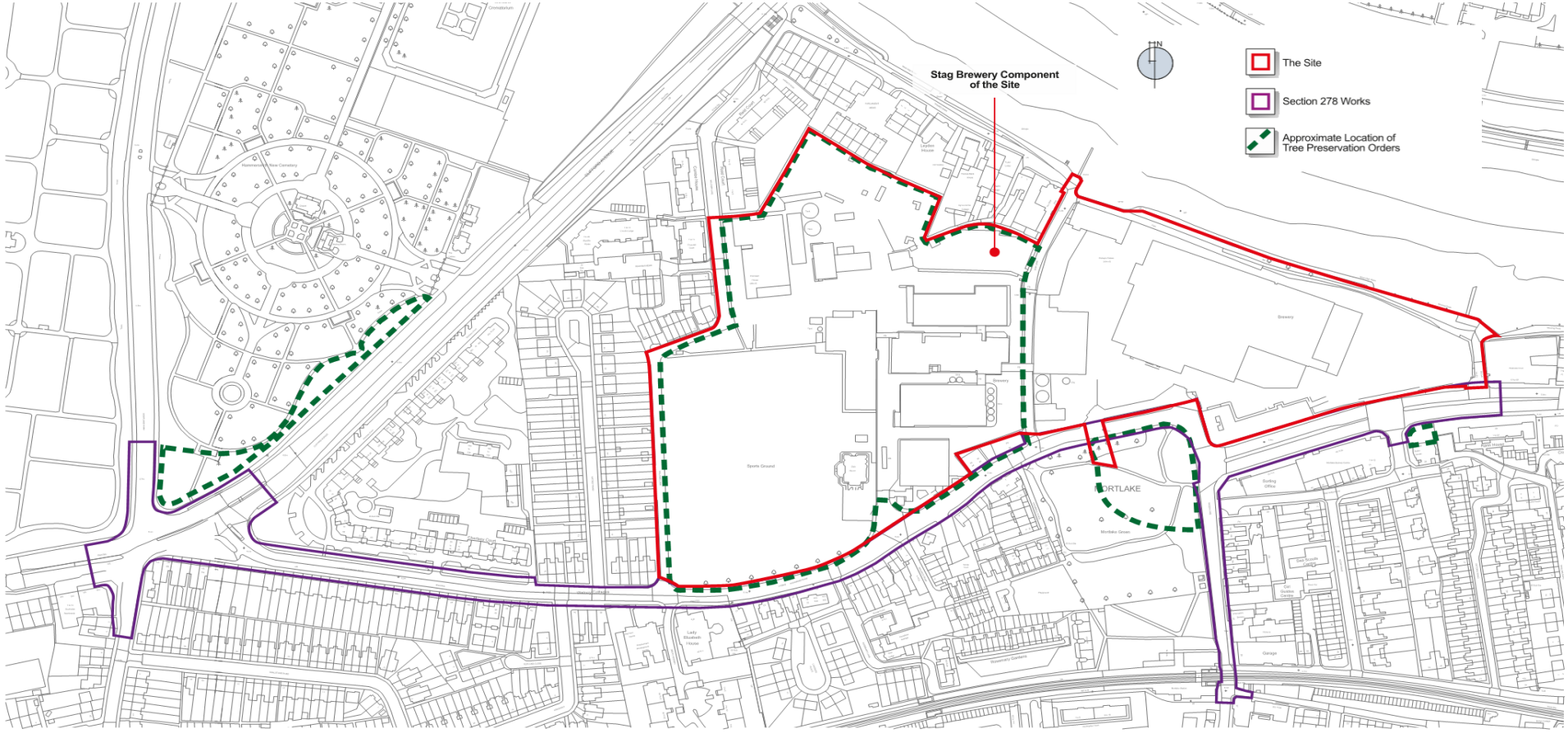
Photograph 3 (T103 - T105)

2.6. The majority of trees within the Site are broadly similar in age and are considered likely to date from the construction of the brewing facilities (circa late 19th and early 20th centuries). Trees at Chalkers Corner are also broadly similar in age and are considered likely to date from the development of this road junction. Three trees within the Stag Brewery component of the Site (T13, T18, both Small-leaved Lime (*Tilia cordata)* and T41 London Plane (*Platanus x hispanica*)) have been felled with subsequent regrowth recorded. A review of historical mapping, suggests these trees may have originated from the residential garden boundaries of Fairfax and Cromwell House, dating back to the late 19th Century. Within **Drawing 2**, the RPAs of these three trees have been calculated using the stem diameter of the remaining stumps.

Photograph 4 – Trees within Mortlake Green (view looking north)

2.7. The western portion of the Site (i.e. to the west of Ship Lane) is covered by an area Tree Preservation Order (TPO) (ref. T0880 dated March 2016). 29 trees / tree groups (G58a-w inclusive, T59, T60, T145, G146, G147 and T152) are also afforded protection due to their location within Mortlake Conservation Area. The location of the TPOs within the Site and surrounding area are shown in **Figure 1** and detailed in **Table 1**.

Figure 1: Tree Preservation Orders within the Site and Surrounding Area



Historic management included general pruning / canopy lifting operations, recent felling of one London Plane (approximately 3-5 years prior to the date of survey, with good regeneration) (T41), lopping and pollarding. Several instances of mechanical damage were noted, likely from vehicular impact , mowing and strimmer damage. Variable degrees of wound wood development were noted, from minimal to complete occlusion. Fallen deadwood and occasional torn branch stubs on some specimens however suggests that management within the Survey Area may have lapsed in recent years. It is understood that G58a-w growing adjacent to the Stag Brewery component of the Site on the south bank of the River Thames (**Photograph 5**) is subject to management by the Port of London Authority (**Photograph 6**). The Port of London Authority publicised planned works to this group in spring 2016 which included increasing heights of canopy clearance, removing overhanging limbs and felling or poisoning of trees which are either diseased or have an impact on the safety of river users, footpath users or are growing in inappropriate locations and causing damage to the adjacent flood defence retaining walls. Several instances of such management (including removal of diseased Elms) was noted during the April 2017 survey.

Photograph 5 (G58a-k)

Photograph 6 (signage pertaining to G58a-w)

2.8. Deflection was locally noted to some areas of hard surfacing and boundary and retaining walls within the Survey Area through natural root development (**Photograph 7**). Shallow / exposed surface roots were also recorded in several specimens located within areas of mown grass (**Photograph 8**).

Photograph 7 (T86)

Photograph 8 (T85)

2.9. Recorded pests and diseases of trees within the Survey Area included Bleeding Canker of Horse Chestnut (BCHC) *Pseudomonas syringae* pv *aesculi* (**Photograph 9)**, specifically within the Horse Chestnut trees adjacent to Lower Richmond Road and within Mortlake Green. BCHC can pose significant health risks to the trees in addition to safety risks where infected trees are located in proximity to persons, property or highways. Birch polypore (*Piptoporus betulinus)* was also noted within the Stag Brewery component of the Site, with further fungi and bracket fungi noted within the trees at Chalkers Corner. Dutch Elm Disease (*Ophiostoma novo-ulmi)* was also noted within G58a-w adjacent to the Stag Brewery component of the Site during the 2016 survey, however tree works by the Port of London Authority as mentioned above appear to have included the removal of infected trees, as these were not visible during the 2017 survey. Symptoms of ash dieback (*Hymenoscyphus fraxineus)* were not recorded within the Survey Area, but this species should be closely monitored to allow prompt recording and management since this pathogen is known to be active and spreading within the local area[7]. Instances of leaf miners, likely the Zeller's midget moth *(Phyllonorycter messaniella),* were recorded within Holm Oak *(Quercus ilex)* trees adjacent to Chalkers Corner (**Photograph 10**), however these pose no real significance to the health of affected trees.

Photograph 9 (T67)

Photograph 10 (from T113)

[7] Forestry Commission. Available online at http://www.forestry.gov.uk/chalara

3. Arboricultural Impact Assessment

Development Proposals

3.1. A number of documents / drawings prepared and submitted in support of the Revised Scheme have been reviewed in the preparation of this impact assessment. This arboricultural impact assessment is indicative for trees located at Chalkers Corner at this stage, given this part of the Site will be revisited in detail as potential highways works , but has been included within this report for completeness. Documents which have been reviewed in the completion of this impact assessment include, *inter alia*;

- **Drawing 3** – Indicative Proposed Landscape Site Wide Landscape GA Plan;
- **Drawing 4** – Chalkers Corner Illustrative General Arrangement
- **Drawing 5** – Lower Richmond Road and Mortlake High Street Scenario 4 – Combined Improvements;
- the Framework Construction Management Plan[8] (produced in conjunction with Waterman's Arboriculturalist);
- Proposed Masterplan Ground Floor Level[9];
- Proposed Development Area 01 Basement Plan[10]; and
- Proposed Development Area 02 Basement Plan[11].

Trees to be Removed

3.2. Based on the Development layout shown in **Drawings 3, 4 and 5**, a number of trees / tree groups will currently need to be removed, as set out within **Drawings 6 and 7** and detailed within **Tables 2 and 3**. These trees require removal to facilitate construction of the Development layout and / or proposed hard and soft landscape design. The Development proposals have sought to retain trees wherever possible, but due to the nature of the proposals and location of trees, some will need to be removed. The design team has actively sought to restrict tree removals to lower quality trees wherever possible and protect high quality and value 'A' grade trees.

3.3. The Revised Scheme for the Site will result in the removal of no additional trees when compared with the Original Scheme, and the total number of trees to be removed is now lower due to tree removals already undertaken at the Site (see paragraph 2.1).

3.4. Only one tree will be removed as a result of the potential alternative highways works at Chalkers Corner compared to 26 trees that were identified for removal in the Original Application C (refer to **Appendix G**). As set out in **Section 1: Introduction** of this report, it should be noted that the removal of this tree would only be required should either Options 2 or 4 of the potential highways works be pursued.

[8] Aecom Construction Services (April 2020). *Stag Brewery, Mortlake, London SW14 – Framework Construction Management Statement.*
[9] Squire and Partners Proposed Masterplan Ground Floor Level Drawing ref. C645_MP_P_00_001 Rev. C
[10] Squire and Partners Proposed Development Area 01 Basement Plan Drawing ref. C645_Z1_P_B1_001 Rev. C
[11] Squire and Partners Proposed Development Area 02 Basement Plan Drawing ref. C645_Z2_P_B1_001 Rev. C

Table 2: Trees to be Removed

Category Grading	Tree/Group		Total no. trees or tree groups by Category Grading (all applications)
	Application A	**Application B**	
A	T29*	-	1
B	T5*, T6*, T7*, T8*, T9*, T10*, T11*, T14*, T15*, T25*, T26*, T27* and G151 (1 tree)	T64*, T88*, T90*, T93*, T94*, T95*, T96*, T97*, T98*, T99* and T100*	24
C	T2*, T16*, T17*, T22*, T24*, T31*, T32*, T34*, T37*, T40*,T45*, T46*, G47 (part), T59**, T60**, T62* and G147 (part)**	T89*	18
U	T12*, T28*, T30*, T33*, T35*,	-	5
Total	**34**	**12**	

Notes;

* Indicates trees covered by area TPO designation T0880/2016. ** Indicates trees covered by Mortlake Conservation Area. Blue bold underlined font indicates trees located within Development Area 2 of Application A (outline application) and are, therefore, subject to confirmation at the reserved matters stage of the application.

3.5. 'B' Category tree (T107), and one tree within 'B' Category group G151, 'C' Category trees T59, T60 and the two westernmost trees in G147 (located along Mortlake High Street) have been identified for removal as part of the indicative Section 278 highway works which are to be undertaken post-planning. As such, their removal has been included and detailed within this report and on **Drawing 7** for completeness.

3.6. The removal of T29, an 'A' Category tree is due to an unavoidable direct conflict with proposed built form in this location.

3.7. The removal of 'B' and 'C' Category trees to facilitate the Development is not considered to be significant to the general amenity and screening of the Site and adjacent land uses. The majority of trees to be removed within the Stag Brewery component of the Site are internal trees which will be removed due to direct conflicts with built form. However, valuable boundary features including the London Plane trees along Ship Lane (T48-T57), trees along Lower Richmond Road (T67-T82) and the off-Site trees bordering the River Thames (G58a-G58w) would be retained and protected during the construction phase as detailed below.

3.8. The removal of the 5 'U' category trees is considered insignificant, due to their poor quality and short remaining life expectancy (i.e. <10years in their current context).

3.9. Several trees proposed for removal are afforded protection by TPO T0880/2016 or Mortlake Conservation Area as indicated within **Table 1** above. These designations prevent pre-emptive works to or removal of these trees without prior permission from LBRuT. In addition, the status of the TPO and Conservation Area are material considerations in planning terms although these need

not preclude the removal of these features if this can be negotiated as part of a Planning Application approval.

3.10. Likewise, whilst the alternative highways works at Chalkers Corner are anticipated to only be in the adopted highways land, the likely impacts to existing trees from the indicative layout shown in **Drawings 4 and 5** have been included within this report and **Drawing 6** for completeness.

3.11. The exact number of trees to be removed within Development Area 2 of Application A (indicated by blue and bold underlined text in **Table 2** above) would be confirmed at the next detailed design stage of development where detailed analysis of existing tree positions relative to proposed buildings, walls, pavements and other elements of hard and soft landscape in this area would be undertaken (i.e. when such detail becomes available).

Proposed New Tree Planting

3.12. Up to 406 new trees will be provided as an integrated part of the Development as shown within the Site Wide Landscape Plan in **Drawing 3**.

3.13. Details of the proposed species mix and sizes are not available at this stage, however, it is understood that there will be a mix of evergreen and deciduous trees, with a number of new trees proposed.

3.14. Species choice will be influenced by those found within the local area in addition to those which grow well in challenging urban environments. New tree planting will include specimen trees, native ornamentals, fruit / nut / berry producing trees, hardy native columnar street trees and courtyard ornamentals. Further details can be found within the Landscape Design and Access Statements prepared by Gillespies LLP submitted with each application.

3.15. The further diversification of species mix and age (light standards to semi-mature trees are proposed) across the Site would enhance the Site with regards to general environmental resilience and would be of assistance in longer term management. Tree planting will add diversification of age / species and support longer term biosecurity and disease resilience on Site.

Trees to be Retained

3.16. All remaining trees can be retained and integrated within the landscape masterplan as part of the Development. This includes the retention of several significant features, including the linear avenue of London Plane trees along Ship Lane (T48-T58), the avenue of trees along Lower Richmond Road (T67-T82), the off-Site trees bordering the River Thames (G58a-G58w) and a number of those along the north-western boundary of the Stag Brewery component of the Site, as discussed below.

3.17. T48-T58 along Ship Lane potentially have a long-life expectancy in this location (perhaps 50-100 years+) and their retention within the Development will maintain the amenity, landscape and screening value these trees offer to this location. The Development will also provide the opportunity to improve both the growing conditions and public amenity value of these trees. This is likely to include the careful removal of some / all of the concrete hardstanding surrounding them and carefully demolishing and removing the existing boundary wall to the east of this line of trees, controlled via the implementation of a Site-specific Arboricultural Method Statement (see below).

3.18. The retention of trees along Lower Richmond Road (T67-T82) will filter views of the proposed built form within the Stag Brewery component of the Site. These trees would benefit from ongoing management including a gradual programme of replacement planting to ensure the integrity of this tree line is maintained.

3.19. The location of the proposed crossing between Mortlake Green and the Stag Brewery component of the Site has been carefully considered to ensure the retention of G155, two 'A' Category trees located within Mortlake Green and at the head of Mortlake High Street (designated as a Conservation Area). Here, the crossing has been re-located further away from its initial proposed position near this corner to avoid the unacceptable removal of these trees to facilitate a highway visibility splay that would have been required as part of a new pedestrian crossing in this initial design location.

3.20. As a result of the Revised Scheme, lateral canopy reductions will be required to trees T3, T4, T19, and T20 in order to provide an approximate clearance of 2m from proposed building facades and / or terraces of buildings 20 and 21 to manage the future relationship between these trees and buildings. Such works would also provide space for construction (including for the erection of scaffolding) and pre-emptively minimises the potential for any mechanical damage to tree canopies or branches during construction.

3.21. The incursion of the footprint of building 20 within the RPA of T3 is equivalent to 3.4% of the total RPA and as such, is not considered to result in a significant impact to this tree given its current location within a small island tree pit. Furthermore, this tree is currently situated within concrete hardstanding and the proposed Development allows for the replacement of a large portion of this with permeable soft landscape. Where new hard surfaces are proposed within the RPAs of these trees, these will be in the footprints of existing hard surface and as such, impacts from new hard surface are considered negligible, subject to the implementation of the protection measures detailed below.

Protection of Existing Trees to be Retained

3.22. Where existing trees are retained in proximity to construction work, tree protection will be required to mitigate for potential above and below ground impacts, and to ensure these trees are retained successfully. The factors which most commonly result in below ground damage affecting oxygen diffusion and availability of water, and which therefore must be avoided, include:

- Compaction of the ground;
- Any change in soil levels (even if temporary), including ground excavation and soil stripping;
- Covering the root zone with impervious surfaces;
- A rise in the water table level or ground saturation; and
- Damage by the direct toxicity of some materials (e.g. petrol, oil and lime in cement can kill underlying roots).

3.23. Tree protection should generally accord with the recommendations contained within BS5837:2012. The area occupied by the canopy spread or RPA, (whichever is the greater) will be secured as a Construction Exclusion Zone (CEZ) where no unauthorised access or construction operations (including Site compounds / facilities / storage of materials) are permitted in order to protect the ground from compaction or excavation and canopies from physical damage. This will be secured by means of temporary protective fencing as shown in **Drawing 7** with weatherproof signage as

per the examples provided within **Appendices C, D** and **E**. Given the urbanised nature of the Site, traditional tree protection fencing will not be a practical solution with regards to certain trees. Instead, temporary tree protection boxes would be installed with weatherproof signage as per the examples provided within **Appendix F** and as shown on **Drawings 6 and 7**. Where construction or soft landscape works are required within the RPA of retained trees, the area within the canopy spread and / or RPA of these trees (whichever is the greater) would become a **Construction Working Area (CWA)**. All demolition and construction works affecting the CWA (which may include removal of existing hard surfacing, construction of new soft/hard landscape, access for piling activities and / or remediation activities (see paragraph 3.25 below)) would be carefully planned and executed via a Site specific Arboricultural Method Statement, secured via Planning Condition, to manage and minimise damage to the retained trees. Most tree roots can be expected to be found within the upper soil horizons (usually the top 600mm of field soil) and soft landscape operations within the CWA will have regard to the potential presence and protection of tree roots within this location.

3.24. Tree protection systems as shown on the Development Area 2 of the Stag Brewery Component of the Site are indicative and will be confirmed at the next detailed design stage.

3.25. The location / extent of individual CWAs will be identified and marked on Site prior to the commencement of any construction operations. In addition to the principles outlined within BS5837:2012, the Works within the CWAs will be planned and developed using the following method statement:

- Select site access routes and construction plant that can safely access the Site given the physical constraints imposed by the height of the existing retained tree canopies;
- For construction purposes, systems for the control and suppression of dust, hydrocarbons, cementitious and other phytotoxic elements will be employed to prevent damage to the adjacent trees;
- Do not store materials or construction plant within the canopy spread or RPA of trees to be retained;
- In order to minimise damage to shallow tree roots, excavation work within the CWA will be minimised to avoid significant harm to retained tree. No-dig systems would be used where possible with regards to required finished levels;
- Where existing surface within the CWA is removed, this area will be protected from excessive compaction from people/plant. This will include the use of temporary ground protection and selection of light, tracked plant over heavier, wheeled alternatives;
- Where paving and surfacing systems are proposed within the RPAs of retained trees, consideration has been given to the use of permeable paving/surfacing systems (including resin-bound gravel) in order to assist with the long-term passive infiltration of air and water into the rootzone. Specialist pavement treatments have been designed within the RPAs of retained trees as detailed within the Design and Access statement submitted with the application. With regards to outline application areas, the use of Cellweb TRP systems or similar 3D cellular confinement systems is recommended;
- Where piling activities are required in proximity to retained trees (i.e. for the construction of basement structures to the west of the canopy spreads/RPAs of T48-57 inclusive along Ship Lane), above and below ground arboreal constraints will be considered and managed within

CWAs. This will include careful equipment selection, use of existing hard surfacing for piling mats and / or load-bearing ground protection systems, and consideration to above ground constraints posed by canopy spreads (which may include localised lateral canopy reduction works where required) in accordance with Section 7.5 of BS5837:2012. As detailed above, all works required within CWAs will be carefully planned and executed via Site specific Arboricultural Method Statements, secured via Planning Condition.

- Where new underground services cannot be routed outside the CWA, excavation for these would be undertaken in line with the principles of Section 7.7 of BS5837:2012, including the use of hand or air-spade to prevent damage to retained tree roots;
- Where tree roots are encountered during essential ground intrusive works, roots exceeding 25mm diameter should remain undamaged, intact and protected by damp hessian/straw to prevent desiccation prior to backfilling with arisings from the original excavation; and
- Where tree roots below 25mm diameter are encountered, and cannot be retained, these can be cut with a single, sharp saw to minimise the cut area and potential for ingress of pathogens or diseases. Any torn/damaged roots should similarly be cut back to sound wood with a clean cut.

3.26. All ground contamination remediation activities will be carefully managed and considered within proximity to retained trees. As detailed within the Framework Construction Management Plan, the intention is to remove contaminated soils as required in all areas apart from RPAs of retained trees. Whilst a detailed remediation strategy is yet to be produced, a range of remediation strategies will be carefully considered where identified as required within RPAs. This will focus on minimising the impact upon existing trees and will be assessed on a tree-by-tree basis by the project Arboriculturalist. It is considered that minor increases in soil levels are unlikely to result in significant harm to retained trees where such trees currently exist within impermeable hard surfaces (i.e. whilst an increase in soil level may result, access to air, water and nutrients in these locations will likely be improved due to the removal of hard surfacing and replacement with permeable soft landscape).

3.27. Should any tree surgery be proposed to retained trees to facilitate construction access, this would be undertaken by an Arboricultural Association Approved Contractor with works compliant with BS3998:2010 and BS5837:2012. Trees to be felled or vegetation to be removed should be clearly marked. Tree work should be timed to avoid the bird nesting season and other potential ecological constraints (e.g. bats), subject to consultation with an ecologist. If required, tree surgery work on trees with deadwood, cavities, split / lifted bark and dense ivy should be carried out under an Ecological Watching Brief. Care should be taken not to damage any surrounding vegetation to be retained.

3.28. The tree protection measures recommended above should be managed through an Arboricultural Method Statement (MS), conditioned as part of Planning Approval, that is bespoke to the Site/each application and activities concerned, including detailed construction proposals and final position of fencing / construction working areas as agreed with the Main Contractor.

4. Summary

4.1. The Site included trees of mostly semi-mature to early-mature age; a number of which are subject to an Area Tree Preservation Order or located within the Mortlake Conservation Area. Trees are largely located along the boundaries of the Site or in the middle of the Site, open green space, the River Thames towpath, streets or Mortlake Green. The tree survey comprised a total of 163 individual trees, 36 tree groups and 1 hedgerow (of which 22 have been removed from this assessment either as result of having already been felled, or no longer being impacted by the works). The remaining 178 arboricultural features are listed in the schedule of existing trees within **Appendix B** and shown on **Drawings 1 and 2**. The trees on Site are mostly similar in age, likely dating to the current 20th Century brewery development, with the exception of three trees (T13, T18 and T41) which although recently felled, show signs of vigorous regeneration and may be derived from a previous phase of residential development on the Site from the late 19th Century. A summary of the remaining trees, and their Category Grading are described in **Table 3**.

Table 3: Category Grading of Trees / Groups / Hedge

Category	Quantity	Description
A	13	T3*, **T29***, T48*, T49*, T50*, T51*, T52*, T53*, T54*, T55*, T56*, T57*, and G155
B	86	T4*, **T5*, T6*, T7*, T8*, T9*, T10***,**T11***, **T14*, T15***, **T25*, T26*, T27***, G42*, G58g**, G58k**, G58l**, G58s**, G58t**, G58u**, G58w**, **T64*,** T67*, T68*, T70*, T71*, T73*, T74*, T75*, T76*, T77*, T78*, T79*, T82*, T83*, T84*, T85*, T86*, **T88*, T90*, T93*, T94*, T95*, T97*, T98*, T99*, T100***, T103, G104, T106, **T107**, T111, T116, G117, T122, G131, T133, T134, T136, T137, T140, T143, T144, T145**, G146**, G148, T149, G150, G151 **(part removed)**, T153, T154, G156, T157, T158, T159, T161, T163, G164, T165, G166, G167, G169, T170, G174, T175 and G176
C	69	**T2*, T16*, T17*,** T19*, T20*, **T22*, T24*, T31*, T32*, , T34***, **, T37*,** T38*, T39*, T40*, T41*, T42, T43*, T44*, **T45*, T46***, G47 **(part removed)***, G58a**, G58b**, G58c**, G58d**, G58e**, G58f**, G58h**, G58i**, G58j**, G58m**, G58n**, G58o**, G58p**, G58q**, G58r**, G58v**, **T59**, T60**,** T61*, **T62*,** T72*, T81*, **T89*, T96*,** G101, H102*, T105, T108, G109, T110, G112, T113, T114, G115, T120, T126, T127, G132, T142, G147**, T152**, T160, G162, T168, T171, G172, T173, G177 and T178
U	10	T12*, T28*, T30*, **T33*, T35*,** T121, T135, G138, G139 and G141

Note**. Bold** denotes trees to be removed. * indicates trees covered by Tree Preservation Order T0880/2016 and ** indicates trees within Mortlake Conservation Area.

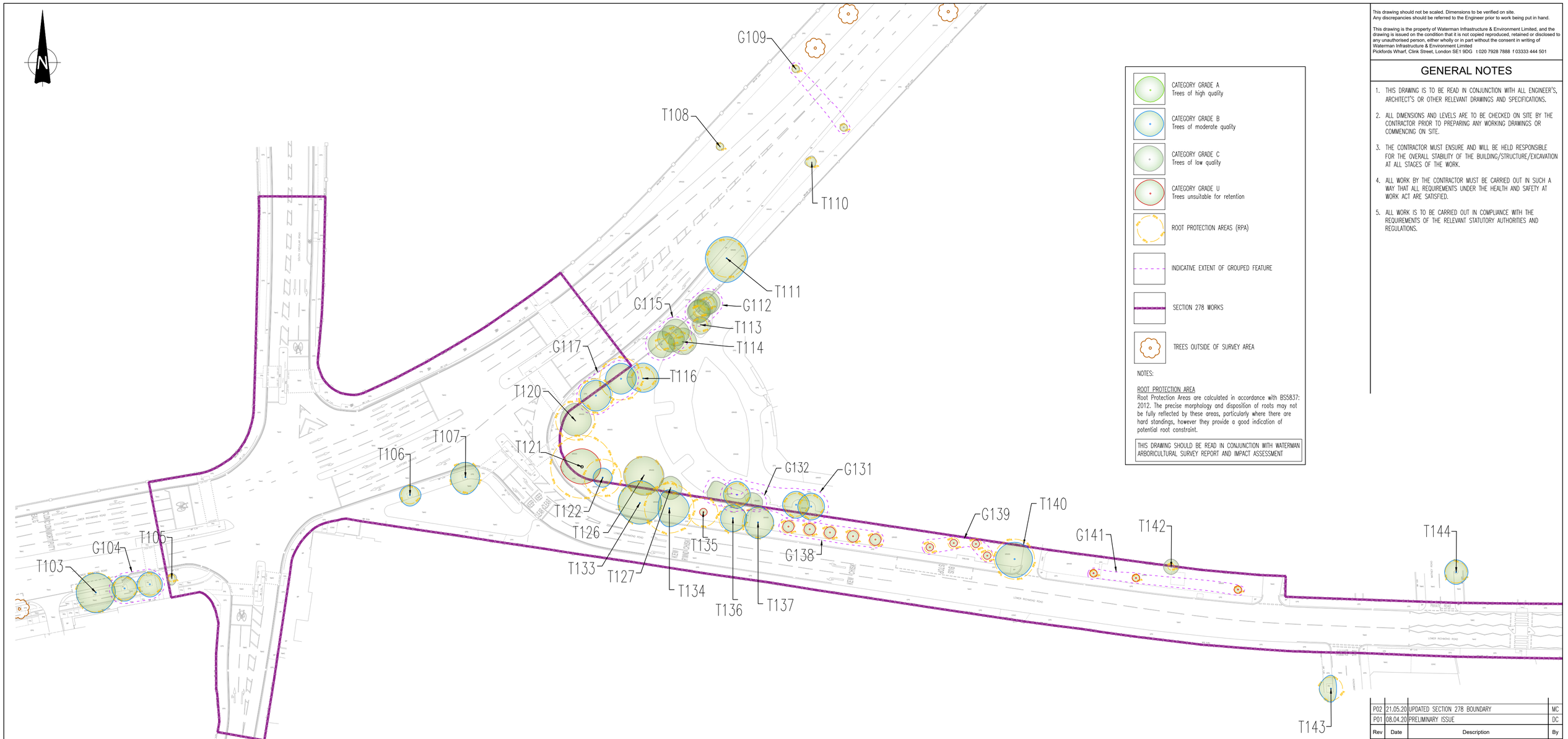
4.2. The 'A' Category trees present on Site are awarded a slightly higher value than might otherwise be afforded due to their strategic screening and amenity value to the Site and adjacent public realm in that they form part of formal / semi-formal groups or are of significant size. Some 'C' Category trees have been graded as such due to their immaturity, however a number of these trees have the potential to increase in value as they mature on Site. The 'U' category trees on Site are either in severe decline, are dead or are considered to be impeding the growth or natural development of adjacent trees of superior quality and / or value and as such their removal in the medium to long term is recommended irrespective of the proposed development.

4.3. Where trees are currently retained within the Site and in the s278 areas, protection measures will be required to mitigate for potential above and below ground impacts and ensure these trees are retained successfully. Although the Development will result in the removal of a number of 'B' Category trees and one 'A' Category tree due to direct conflicts with the proposals, the Development provides an important opportunity to improve the growing conditions of some retained trees within the Site (i.e. the London Plane trees along Ship Lane and T3, T4, T19, T20 and T21). In addition, the further diversification of species mix and age across the Site as a result of mitigatory and new tree planting would enhance the Site with regards to environmental / disease resilience and biosecurity in addition to providing scope for informed management of trees across the Site. The current loss (and replacement) of trees as identified within this report is not considered to significantly affect the screening, amenity and habitat value provided on Site.

4.4. This Tree Survey Report and Impact Assessment should be used to guide the remaining detailed design process of Application A regarding existing arboricultural constraints. Once detailed scheme proposals including soft landscape have been agreed, this report should be updated accordingly.

DRAWINGS

Drawing 1: Baseline Tree Survey (Sheet 1 of 2) (ref. 15582-WIE-ZZ-XX-DR-L-7701)



N

CATEGORY GRADE A
Trees of high quality

CATEGORY GRADE B
Trees of moderate quality

CATEGORY GRADE C
Trees of low quality

CATEGORY GRADE U
Trees unsuitable for retention

ROOT PROTECTION AREAS (RPA)

INDICATIVE EXTENT OF GROUPED FEATURE

SECTION 278 WORKS

TREES OUTSIDE OF SURVEY AREA

NOTES:

ROOT PROTECTION AREA
Root Protection Areas are calculated in accordance with BS5837: 2012. The precise morphology and disposition of roots may not be fully reflected by these areas, particularly where there are hard standings, however they provide a good indication of potential root constraint.

THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH WATERMAN ARBORICULTURAL SURVEY REPORT AND IMPACT ASSESSMENT

GENERAL NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL ENGINEER'S, ARCHITECT'S OR OTHER RELEVANT DRAWINGS AND SPECIFICATIONS.
2. ALL DIMENSIONS AND LEVELS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO PREPARING ANY WORKING DRAWINGS OR COMMENCING ON SITE.
3. THE CONTRACTOR MUST ENSURE AND WILL BE HELD RESPONSIBLE FOR THE OVERALL STABILITY OF THE BUILDING/STRUCTURE/EXCAVATION AT ALL STAGES OF THE WORK.
4. ALL WORK BY THE CONTRACTOR MUST BE CARRIED OUT IN SUCH A WAY THAT ALL REQUIREMENTS UNDER THE HEALTH AND SAFETY AT WORK ACT ARE SATISFIED.
5. ALL WORK IS TO BE CARRIED OUT IN COMPLIANCE WITH THE REQUIREMENTS OF THE RELEVANT STATUTORY AUTHORITIES AND REGULATIONS.

Rev	Date	Description	By
P02	21.05.20	UPDATED SECTION 278 BOUNDARY	MC
P01	08.04.20	PRELIMINARY ISSUE	DC

Amendments

Project
STAG BREWERY

Title
BASELINE TREE SURVEY (SHEET 1 OF 2)

Client
RESELTON PROPERTIES LIMITED

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mail@watermangroup.com www.watermangroup.com

Drawing Status
PRELIMINARY

Designed by	Checked by	Project No
RA	RH	WIE15582
Drawn by	Date	Work Order No
DC	APRIL 2020	100
Scales @ A1 work to figured dimensions only	1:500	

Publisher	Zone	Category	Number	Revision
WIE	ZZ	XX	7701	P02

XREF_917061_2D

Drawing 2: Baseline Tree Survey (Sheet 2 of 2) (ref. 15582-WIE-ZZ-XX-DR-L-7702)

SHEET 2 OF 2

SHEET 1 OF 2

CATEGORY GRADE A
Trees of high quality

CATEGORY GRADE B
Trees of moderate quality

CATEGORY GRADE C
Trees of low quality

CATEGORY GRADE U
Trees unsuitable for retention

ROOT PROTECTION AREAS (RPA)

INDICATIVE EXTENT OF GROUPED FEATURE

SITE BOUNDARY

TREES OUTSIDE OF SURVEY AREA

NOTES:

ROOT PROTECTION AREA
Root Protection Areas are calculated in accordance with BS5837: 2012. The precise morphology and disposition of roots may not be fully reflected by these areas, particularly where there are hard standings, however they provide a good indication of potential root constraint.

THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH WATERMAN ARBORICULTURAL SURVEY REPORT AND IMPACT ASSESSMENT

GENERAL NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL ENGINEER'S, ARCHITECT'S OR OTHER RELEVANT DRAWINGS AND SPECIFICATIONS.
2. ALL DIMENSIONS AND LEVELS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO PREPARING ANY WORKING DRAWINGS OR COMMENCING ON SITE.
3. THE CONTRACTOR MUST ENSURE AND WILL BE HELD RESPONSIBLE FOR THE OVERALL STABILITY OF THE BUILDING/STRUCTURE/EXCAVATION AT ALL STAGES OF THE WORK.
4. ALL WORK BY THE CONTRACTOR MUST BE CARRIED OUT IN SUCH A WAY THAT ALL REQUIREMENTS UNDER THE HEALTH AND SAFETY AT WORK ACT ARE SATISFIED.
5. ALL WORK IS TO BE CARRIED OUT IN COMPLIANCE WITH THE REQUIREMENTS OF THE RELEVANT STATUTORY AUTHORITIES AND REGULATIONS.

Rev	Date	Description	By
P02	21.05.20	UPDATED SECTION 278 BOUNDARY	MC
P01	08.04.20	PRELIMINARY ISSUE	DC

Amendments

Project
STAG BREWERY

Title
BASELINE TREE SURVEY
(SHEET 2 OF 2)

Client
RESELTON PROPERTIES LIMITED

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Drawing Status
PRELIMINARY

Designed by	RA	Checked by	RH
Drawn by	DC	Date	APRIL 2020
Scales @ A1 work to figured dimensions only	1:500		

Project No: WIE15582
Work Order No: 100

Publisher	Zone	Category	Number	Revision
WIE	ZZ	XX	7702	P02

XREF_917061_2D

Drawing 3: Indicative Proposed Landscape Site Wide General Arrangement (Gillespies drawing no. P10736-00-001-101 Revision D10 dated 24.04.2020)


Williams Lane
Lower Richmond Road
Existing granite setts cleaned and retained
Proposed location of the Heritage Interpretation Board
Part of existing riverwall retained with new riverwall built adjacent to it.
Existing vegetation pruned
Existing granite setts cleaned and retained
Existing paving cleaned and retained
Step Access to Towpath
New river wall and 1m high balustrade
Existing Public Draw Dock
Long Stay Cycle Rack Shelter - 20 spaces
Two Tier Cycle Rack Shelter - 60 spaces
Two Tier Cycle Rack Shelter - 60 spaces
Covered Bin Store and Cycle Stands
Stag Brewery Gate 2 Relocated
Stag Brewery Gate 1 Relocated
Half panel of Watneys Brewery Gate Relocated
Half panel of Watneys Brewery Gate Relocated
1m High hedge proposed to match existing
Existing Hedge retained
LEGEND
GENERAL
Site Ownership Boundary
Site Planning Application Boundary
School Planning Application Boundary
Existing Surface Level
Proposed Surface Level
Top of Wall Level
Finished Floor Level (Internal)
Stairs Up
PAVING
Paving Type 1
Stone slabs for footpath
Paving Type 2
Stone paving for shared surface
Paving Type 3
Stone setts for river terrace
Paving Type 4
Stone paving for courtyards
Paving Type 5
Stone flag paving for plazas and entrances
Paving Type 6
Small stone plank paving
Paving Type 7
Large stone plank paving
Paving Type 8
Resin bound gravel
Paving Type 9
Artificial stone flag paving
Paving Type 10
School road asphalt paving
Paving Type 11
Porous Macadam MUGA surfacing
Paving Type 12
3G artificial grass
Paving Type 13
Rubber surfacing for playground
Paving Type 14
Macadam surfacing
Colour light green
STRUCTURES
Fence Type 1
1.2m high fence for school
Fence Type 2
3.0m high fence for school
Fence Type 3
4.5m high twin bar super rebound fence for school
Wall Type 1
Concrete retaining wall
Wall Type 2
Brick retaining wall with balustrade
Wall Type 3
1.1m Private terrace brick wall
New Riverwall
Concrete wall with brick cladding and concrete coping with glass balustrade
Masonry pier
Concrete masonry wall pier with brick cladding and concrete copping
Existing Riverwall Retained
Sections of existing riverwall to match adjacent new riverwall height
Gate Type 1
Double door gate for school
Flood defense line
FURNITURE
Bollard Type 1
Stainless steel bollard
Seat Type 1
Concrete bench
Seat Type 2
Concrete bench with timber top
Cycle Stand Type 1
Sheffield cycle hoop - galvanised steel
Two Tier Cycle Shelter
20 space per module
Handrail Type 1
Stainless Steel handrail
Tree Surround Type 1
Resin bound gravel
Bin Type 1
Stainless steel bin
FEATURE
Metal Railway Track
For towpath to match existing railway track
LIGHTING
Lighting Column
To lighting designer's details
Lighting Column
To lighting designer's details
Bespoke Lighting Mast
With spotlights, gobo projectors, WIFI, CCTV and banners. To lighting designer's details
Bespoke Lighting Mast
With spotlights. To lighting designer's details
Lighting Column
To lighting designer's details
Sports Lighting Column
To lighting designer's details
PLANTING
Short Mown Grass
Planting Mix
Mixed perennial and evergreen planting
Rain Garden Planting
Mixed low shrub planting - 1.2m high
Low Shrub Planting
Mixed low shrub planting - 1.2m high
Hedge Type 1
1.5m high hedge
Existing Hedge
Maintained
Meadow Planting
Mixed meadow planting
Existing Trees to be Retained
Protected during all works
Proposed Trees
PLAY
Doorstep play provision
Local play provision
Neighbourhood play provision
Blended play provision (within school only)
0 5 10 25 50 m
N

rev	details	by	date
D00	Issued for Information	RJ	03.11.2017
D00	Issued for Information	RJ	07.11.2017
D01	Issued for Information	RJ	01.12.2017
D02	Issued for Information	GP	11.01.2018
D03	Issued for Planning	RJ	02.02.2018
D04	Issued for Planning	RJ	09.02.2018
D05	Issued for Planning	RJ	13.02.2018
D06	Planning Substitution	RJ	11.04.2019
D07	Planning Substitution	RJ	24.04.2019
D08	Issued for Planning	JQ	03.12.2019
D09	Issued for Planning	RM	16.12.2019
D10	Issued for Planning	RM	24.04.2020

Notes

1.0 Do not scale from drawing, use figured dimensions only
1.1 All dimensions to be checked onsite
1.2 This drawing to be read in conjunction with all other Gillespies drawings and specifications.
1.3 All works shown outside of the application boundary are presented for illustrative purposes only and subject to further agreement.

Project title
STAG BREWERY

Drawing title
Indicative Proposed Landscape Site Wide General Arrangement

Drawing number
P10736-00-001-101

Drawing Status	Revision
DESIGN	D10

Date	Scale	Drawn	Checked
24.04.2020	1:500 @ A0	RM	CL

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\\lon-svr\projectdata\P10736-00-003 Stag Brewery Enlarged Scheme\Drawings\01 Design\CAD\100 Series\P10736-00-001-101 [GA].dwg

Drawing 4: Chalkers Corner Illustrative General Arrangement (Gillespies drawing no. P10736-00-003-GIL-0111 Revision 02 dated 20.05.2020)

LEGEND

GENERAL

- Indicative boundary of proposed illustrative Section 278 highways works

PAVING

- Paving Type 1 — New paving for footpath
- Paving Type 2 — Tactile paving for crossing
- Paving Type 3 — Existing paving to be retained
- Current road alignment

PLANTING

- Proposed ground cover planting
- Proposed tree
- Existing planting to be retained
- Existing trees to be retained — Protected during all works
- Existing trees to be removed

rev	details	by	date
00	First Issue	RM	07.04.2020
01	Update to redline	RM	20.04.2020
02	Tree planting incorporated	RM	20.05.2020

Notes

1.0 Do not scale from drawing, use figured dimensions only
1.1 All dimensions to be checked onsite
1.2 This drawing to be read in conjunction with all other Gillespies drawings and specifications

N

0 5 10 25m

Project title
STAG BREWERY

Drawing title
Chalkers Corner Illustrative General Arrangement

Drawing number
P10736-00-003-GIL-0111

Drawing Status: DESIGN
Revision: 02

Date	Scale	Drawn	Checked
20.05.2020	1:250 @ A1	RM	CL

Client
DARTMOUTH CAPITAL

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Drawing 5: Lower Richmond Road and Mortlake High Street Scenario 4 - Combined Improvements (Stantec ref.38262/5514/023 dated 22.04.2020)