



Vinci Construction

Bury Market

Stage 1 and 2 Arboricultural Impact Assessment Report.

2484105

JULY 2023

RSK GENERAL NOTES

Project No.: 2484015

Title: Bury Market

Client: Vinci Construction

Date: 31 July 2023

Status: Final – Rev. 1

Author Robert Fear

Signature

Date:



31.07.23

Technical reviewer James Butler

Signature

Date:



31.07.23

Project manager James Butler

Signature

Date:



31.07.23

Quality reviewer Ruth Morton

Signature

Date:



31.07.23

RSK Biocensus Ltd (RSK) has prepared this report for the sole use of the client, showing reasonable skill and care, for the intended purposes as stated in the agreement under which this work was completed. The report may not be relied upon by any other party without the express agreement of the client and RSK. No other warranty, expressed or implied, is made as to the professional advice included in this report.

Where any data supplied by the client or from other sources have been used, it has been assumed that the information is correct. No responsibility can be accepted by RSK for inaccuracies in the data supplied by any other party. The conclusions and recommendations in this report are based on the assumption that all relevant information has been supplied by those bodies from whom it was requested.

No part of this report may be copied or duplicated without the express permission of RSK and the party for whom it was prepared.

Where field investigations have been carried out, these have been restricted to a level of detail required to achieve the stated objectives of the work.

This work has been undertaken in accordance with the quality management system of RSK Biocensus Ltd.

CONTENTS

1	INTRODUCTION	1
1.1	General	1
1.2	Purpose of the Report	1
1.3	Site Context	1
1.3.1	General	1
1.3.2	Soil	1
1.3.3	Protected Species	2
1.4	Statutory Designations	2
1.5	Root Protection Area (RPA)	2
1.6	Supplied Documents	3
2	METHOD	4
2.1	General	4
2.2	Tree Categorisation	4
2.3	Distinction Between Individual Trees and Tree Groups	4
2.4	Constraints and Limitations	5
3	RESULTS	6
3.1	Summary	6
3.2	General Observations	6
4	PROPOSALS AND IMPACTS	8
4.1	Development Proposal	8
4.2	Tree Removals	8
4.3	Retained Trees	8
4.3.1	General	8
4.3.2	Root Protection Areas (RPA)	8
4.3.3	Facilitation Pruning	9
4.3.4	Post-development Pressure	9
4.4	Impact Assessment Summary	9
5	GENERAL MITIGATION MEASURES	10
5.1	Pre-construction	10
5.1.1	Tree Works	10
5.1.2	Protective Fencing	10
5.1.3	Arboricultural Method Statement (Stage 3)	10
5.2	Post-construction	11
5.2.1	Planting	11
6	APPENDICES	12
	TABLE 1 TREE DATA TABLE	13
	APPENDIX 1: METHOD	14
	APPENDIX 2: BS5837:2012 CASCADE CHART	16
	APPENDIX 3: FIGURE 1 TREE CONSTRAINTS PLAN	17
	APPENDIX 4: FIGURE 2 TREE RETENTION PLAN	18

1 INTRODUCTION

1.1 General

This report describes the results of a survey of trees at Bury market and the surrounding area. The work was commissioned by Vinci Construction in July 2022 and carried out by Rob Fear on behalf of RSK, in July 2022 with report amendments in July 2023.

1.2 Purpose of the Report

The survey was carried out in connection with proposed development, in accordance with criteria outlined in the British Standard BS5837:2012¹. The aim was to:

- identify the quality and value of the trees;
- categorise them in respect of their suitability for retention; and
- identify the impacts of the development on the arboricultural features present.

This report is principally concerned with trees in relation to the proposed development. Although obvious structural defects and the condition of trees have been noted, this survey was not undertaken with health and safety in mind, and a detailed hazard assessment was not carried out.

1.3 Site Context

1.3.1 General

The survey covered a portion of the wider shopping area centred on Bury Market, Hilton Road, and Murray Road, located to the north of the A58 Angouleme Way and to the south of Mill Gate Shopping centre.

1.3.2 Soil

The underlying soil types will affect structural aspects of building designs and foundation depths, and this will need to be considered in relation to existing, proposed and removed trees. To avoid conflicts between trees and built structures, engineering advice will be required, and foundations will need to be designed with due regard for trees and the shrinkable soils.

British Geological Society data indicates that the survey area may be sited on Pennine Lower Coal Measures Formation, mudstone, siltstone and sandstone. with Glaciofluvial superficial deposits of Devensian sand and gravel recorded². This is only a best estimate as no soil samples were taken or lab analysis carried out for the purpose of this report.

¹ British Standards Institute (2012) *BS5837:2012 Trees in Relation to Design, Demolition and Construction-Recommendations*. British Standards Publications Ltd.

² <http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html>

Because shrinkable clays may be present, foundation design will need to take into account mature tree heights of existing and proposed trees.

1.3.3 Protected Species

Mature trees can be used by birds and bats. All species of bat and nesting birds are protected in the UK by The Wildlife and Countryside Act 1981 (as amended), extended by the Countryside and Rights of Way Act 2000, and (for bats) the Conservation of Habitats and Species Regulations 2017 (as amended). If the presence of a legally protected species is suspected while undertaking any tree work, then the task should be halted immediately, and appropriate advice should be obtained from an ecologist.

1.4 Statutory Designations

Trees can be given statutory protection in a number of ways, including:

- tree preservation orders;
- planning conditions;
- felling licences; and
- location within a designated conservation area.

Protected trees can only be removed or pruned if permission is granted, either as part of a planning permission or in response to a separate application to the local authority (or the Forestry Commission).

The existence of a tree preservation order or conservation area does not automatically mean that a tree deserves to be a material constraint in a planning context. A formally protected tree can be in poor physiological or structural condition, making it unsuitable for retention. In that case it is inappropriate that it should influence the future use of a site.

However, as a preservation order can be made at any time, it is always prudent to check with the council tree department prior to any tree removals or works.

Bury council online mapping was checked (20/07/22) and it showed no TPO's within the survey area. It shows Bury Town Centre Conservation Area located just to the north west and outside of the survey area.

(<https://maps.bury.gov.uk/externalwebmap/Map.aspx?MapName=PA>)

1.5 Root Protection Area (RPA)

To ensure that a tree is not harmed by development activities, a theoretical root protection area is calculated. The British Standard (BS5837) defines the root protection area as '*the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability*'. It is initially plotted as a simple circle on the tree constraints plan with roots assumed to have colonised the ground around the tree radially.

In some instances, root growth may have been impeded by inhospitable ground conditions and so a simple circular root protection area may not be relevant to its protection. This may apply near roads, building foundations, retaining walls or water

courses and, providing there is suitable rationale, the root protection area can be adjusted to reflect this. A similar overall area should be allocated to the tree so that it can continue to thrive.

Once a design layout has been completed and tree removals agreed, the retained trees should be subject to a fenced zone encompassing the root protection area or tree crown (whichever is larger) for the duration of works. No construction, level changes, installation of services, storage of spoil or materials, discharge of chemicals or any other activity which may affect tree health negatively should take place within this area.

Where sites are heavily constrained by trees which can be embraced into the development, there may be a need to build very close to their root protection area and protective fencing. This often leads to issues at the construction build stage, particularly where extreme changes in levels are required. It is therefore prudent to observe a buffer from the edge of a root protection area to allow for safe working space. A 5-metre buffer is sufficient to avoid conflicts at construction stage.

1.6 Supplied Documents

This report was prepared using data collected on site and the following reports and plans:

- 57968 Topo Survey-2d (Rev A 10-02-22)
- BURMAR-JHA-V6-XX-DR-A-0003 Rev P12 Proposed Site Plan

2 METHOD

2.1 General

All inspected trees and tree groups were categorised using the British Standard BS5837:2012 and the attached tree constraints plan (TCP) (Appendix 3, *Figure 1*) shows tree positions, numbers and retention categories. A schedule of the trees is included in *Section 6, Table 1*, which includes species, physiological and structural condition, age, recommendations and retention values.

The survey followed the method described in *Appendix 1* in accordance with guidance in BS5837:2012. The life expectancy and condition of each tree and tree group informs the estimate of its suitability for retention.

2.2 Tree Categorisation

Trees were categorised in terms of their useful life expectancy and condition as summarised below. Full details of categorisation criteria are given in *Appendix 2*. Each category has three sub-categories relating to arboricultural (1), landscape (2) and cultural and conservation (3) qualities. Trees that have been categorised as A, B or C should be considered in the planning process whereas trees categorised as U are not a consideration in the planning process.

Table 2.1: Tree categorisation

BS5837:2012 Categories	Definitions	Retention implications to a site
Category A (marked light green on the TCP*)	Trees of high quality and value able to make a substantial contribution to the site.	Every effort should be made to retain trees and amendments to a proposed scheme should be identified in preference to tree removal.
Category B (marked mid-blue on the TCP)	Trees of moderate quality and value able to make a significant contribution to the site.	Where possible amendments to a proposed scheme should be considered in preference to tree removal.
Category C (marked in grey on the TCP)	Trees of low quality and value in an adequate condition until new planting can be established, trees with impairments downgrading them from A or B category OR young trees with a stem diameter of less than 150mm.	The retention of trees may be advantageous in the short term, but they should not be seen as a constraint to development.
Category U (marked in dark red on the TCP)	Trees that have limited condition that will fail or die within 10 years and/or should be removed for reasons of arboricultural best practice	Not a material consideration in the planning process but may have other benefits.

* TCP = Tree Constraints Plan – Figure 1

2.3 Distinction Between Individual Trees and Tree Groups

Trees have been recorded as individuals or as groups. BS5837:2012 sets out the description of a group as follows: “*The term “group” is intended to identify trees that*

form cohesive arboricultural features either **aerodynamically** (e.g. trees that provide companion shelter), **visually** (e.g. avenues or screens) or **culturally** including for biodiversity (e.g. parkland or wood pasture), in respect to each of the tree subcategories.”

Where a tree in a group has characteristics that distinguish it from the rest of the group, it is generally recorded as an individual. Such trees may *inter alia* include veteran trees, trees with significant defects, and specimen trees that stand out within the feature.

2.4 Constraints and Limitations

The trees were viewed from ground-level and from within the site boundary only. The trees were inspected using the Visual Tree Assessment method (Mattheck & Breloer 1994³) and guidance given in *Principles of Tree Hazard Assessment* (Lonsdale 2007⁴). Detailed inspections including decay detection, soil assessment or aerial inspections have not been carried out. Inspection was restricted in some instances by dense ivy cover, being within third-party gardens or behind security fencing with restricted access.

Trees are living organisms and their health and condition is not static. Findings and recommendations in this report are therefore only valid for one year. The health and condition of the trees may also change with other factors such as extreme weather or development work.

The presence of shrinkable soils, and their relationship between tree root activity and volumetric changes in soils that may cause structural damage to buildings, is beyond the scope of this report and has not been investigated.

Where all tree positions were not shown on the supplied topographical survey, a note has been made within the tree data tables where trees were plotted without the aid of topographical survey data.

³ Mattheck, C. Breloer, H. (2003) *The Body Language of Trees, A handbook for failure analysis*. The Stationary Office

⁴ Lonsdale, D. (2007) *Principles of Tree Hazard Assessment and Management*. The Stationary Office

3 RESULTS

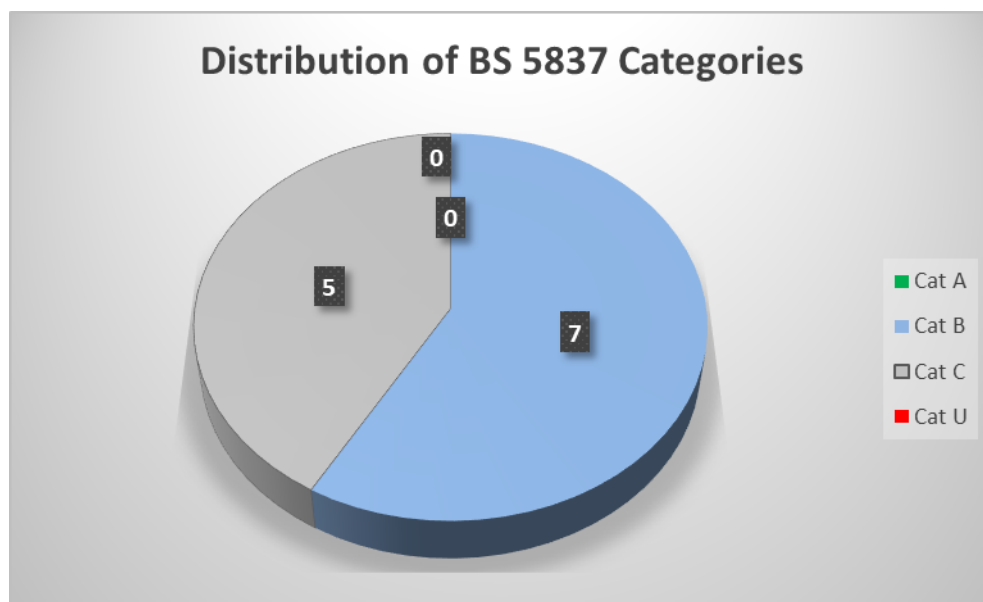
3.1 Summary

A total of ten individual trees and two groups of trees were recorded.

Chart 3.1, below, shows the distribution of BS5837 quality categories recorded on site. Of the twelve features recorded: seven were Category B (trees of moderate quality and value) and five were Category C (trees or groups of low quality or value).

Further details on the individual trees and tree groups can be found in *Section 6, Table 1 - Tree Survey Data*.

Chart 3.1. Distribution of BS 5837 categories recorded.



3.2 General Observations

The survey area encompassed part of a city centre market and shopping area with trees present within a largely hard surface environment.

T1-T4 are an important feature located adjacent to the main A58 trunk road within a raised grass bed with a car park and brick wall immediately to the north and a foot and cycle way immediately south. It forms a notable feature and all four Swedish Whitebeam (*Sorbus intermedia*) trees appear in good condition and form.

G1, G2, T5 and T6 form a belt of Birch (*Betula sp.*) that separates the market from the A58 to the south. The trees have been planted at the top of the bank level with the A58 forming a highly visual feature with screening value. Some of the trees are more mature than others but the linear feature as a whole has moderate value.

T7-T10 are a formally planted group of trees located in the pedestrianised area between market street and Princess Parade. They are comprised of two Norway Maple (*Acer*

platanoides) and two Sycamore (*Acer pseudoplatanus*) of which the Norway Maple are the more dominant and as a result have slightly better form and condition.

However, as a group they form a significant feature that is an important part of the street scene.

4 PROPOSALS AND IMPACTS

4.1 Development Proposal

The proposal involves the construction of a new Flexihall building, new market canopy, new hard surfacing, new landscape layout and a recycling hub.

4.2 Tree Removals

Under the current proposed layout, four trees are required for removal as well as potential for some impacts to RPA's as shown in Table 2.2 (below) and on the tree retention plan (TRP; Appendix 5).

Table 2.2: Tree removals and impacts

Tree id	Species	BS5837:2012 Categories	Reason for removal and impact
T1-4	<i>Sorbus intermedia</i> (Swedish Whitebeam)	B	Conflict with new building proposal and hard surfacing layout. Removal required.
T7-T10	<i>Acer platanoides</i> (Norway Maple), <i>Acer pseudoplatanus</i> 'purpureum' (Sycamore)	B, C	RPA conflict with new hard surfacing layout. Existing levels to be retained for all hard surfacing areas within RPA's and supervision required.

4.3 Retained Trees

4.3.1 General

All trees and groups apart from T1- T4 are able to be retained.

Protective fencing will be required around the retained trees and groups, and this should be to a sufficiently robust specification to ensure protection of its surrounding ground conditions. Site hoarding around the development footprint will provide suitable protection for other trees adjacent the site.

4.3.2 Root Protection Areas (RPA)

T7-T10 are moderate (Cat B) trees where new hard surfacing is proposed. As this is to replace existing hard surfacing that currently covers all of the RPA's, this should be acceptable providing that there are no level changes or excavation within their RPA's.

Details of the above should form part of the Arboricultural Method Statement (AMS).

4.3.3 Facilitation Pruning

No facilitation pruning is expected to be required.

4.3.4 Post-development Pressure

Foundations will need to take account of all trees (including those proposed in landscape schemes) and their mature heights, irrespective of the need to prune, to ensure that risk of below-ground damage is reduced as this may result in pressure to remove trees in the future.

4.4 Impact Assessment Summary

As only four trees are required to be removed and providing that appropriate tree protection measures are implemented for the remaining trees as part of an AMS report, the proposal is considered acceptable from an arboricultural point of view.

New tree planting should aim to enhance the area as well as compensate for the losses. Some larger canopy species (such as a Dutch elm disease-resistant variety of elm, lime, oak, or London plane) should be incorporated into the landscape design and appropriate space afforded them so that mature crowns do not need repeated pruning.

Consideration should also be given to species choice when planting near buildings and the effect the tree may have in maturity to foundations.

Suitable ground conditions and aftercare are vital to the success of new trees, and the recommendations provided in the British Standard, BS 8545⁵ and the Trees and Design Action Group publication – *Trees in the hardscape*⁶ should be followed. This includes ensuring that soils are not compacted prior to planting and that adequate below - ground space is provided with suitable volume requirements and an ability to withstand compaction. Aftercare in the form of watering and sympathetic formative pruning in the first five years after planting will also help to ensure that the replacement trees thrive.

A precautionary approach should be taken to all work near trees T7-T10, and an arboricultural method statement (AMS) should be provided.

⁵ British Standards Institute (2014) *BS 8545:2014 Trees: from nursery to independence in the landscape – Recommendations*. British Standards Publications Ltd.

⁶ Trees and Design Action Group (2014) *Trees in Hard Landscapes: A Guide for Delivery*. TDAG Publication.

5 GENERAL MITIGATION MEASURES

5.1 Pre-construction

5.1.1 Tree Works

Any tree works or tree removals required to facilitate the development should be carried out before construction begins and be in accordance with the British Standard, BS 3998:2010 Tree Work – Recommendations, once planning approval has been granted.

5.1.2 Protective Fencing

Any site offices, welfare units, and storage areas must respect the trees and their root protection areas, shown in purple on the supplied plans. These should be sited outside tree protection areas.

Tree protection fencing should be installed prior to demolition and any construction. This is to avoid damage to trees and preserve soil structure. The default BS5837 specification for fencing should be used for this scale of development.

The fenced area will form a Construction Exclusion Zone and must remain undisturbed for the duration of demolition and construction unless approved works are required within it, such as removal of hard surfaces or installation of boundary treatments under arboricultural supervision and in line with an approved method statement. All site operatives should be made aware of the need to respect the fencing, and signage should be affixed to every third panel to ensure it is not moved.

Service runs and installation of utility cables also need to respect trees and their root protection areas. If any conflicts are highlighted, then the advice of either a consultant arboriculturist or the council Arboricultural Officer should be obtained.

The following precautions should be observed when working near to the Construction Exclusion Zone.

- No fires should be lit on site.
- No spoil, plant, machinery, construction materials or vehicles should track or be stored within the fenced area or leant against the fence panels.
- No fuel, chemical or other contaminated liquids must be discharged in proximity to trees or where it may flow toward tree root protection areas.
- No construction activity of any kind should take place within the fenced areas and fencing must not to be moved.
- No spoil or materials to be stored or leant against fencing.
- Damage to fencing must be reported to the site manager and rectified as soon as possible. All fencing should be maintained so that it is fit for purpose.

5.1.3 Arboricultural Method Statement (Stage 3)

Once the construction details are provided, a detailed arboricultural method statement (AMS) should be compiled detailing the exact location and nature of protective fencing,

tree pruning, signage, timings and methods of works and other protection measures. All site operatives must be made aware of the nature of the protection detailed in the AMS and it should remain in place throughout construction.

5.2 Post-construction

5.2.1 Planting

A suitable landscaping scheme incorporating tree planting will be beneficial. This should aim to integrate trees of differing sizes appropriate for the space afforded to them.

Suitable ground conditions and aftercare are vital to the success of new trees, and the recommendations provided in the British Standard, BS 8545⁷ and the Trees and Design Action Group publication – *Trees in the hardscape*⁸ should be followed. This includes ensuring that soils are not compacted prior to planting and that adequate below ground space is provided with suitable volume requirements to support mature root growth and withstand compaction. Aftercare in the form of watering and sympathetic formative pruning in the first five years after planting will also help to ensure that the replacement trees thrive.

⁷ British Standards Institute (2014) *BS 8545:2014 Trees: from nursery to independence in the landscape – Recommendations*. British Standards Publications Ltd.

⁸ Trees and Design Action Group (2014) *Trees in Hard Landscapes: A Guide for Delivery*. TDAG Publication.

6 APPENDICES

TABLE 1

TREE DATA TABLE

Ref. No.	Species	Mean DBH (mm)	Height m (Lower crown height m)	BS5837 Category	Life Stage	Est. Remaining Years	Condition (Phys/Struc)	Spread (m)				General Observations	RPA Radius	RPA Area M2
								N	S	E	W			
T1	Sorbus intermedia (Swedish Whitebeam)	500	12(1.5)	B1	EM	20+	Good	4	4	5	4	Excellent feature with interconnecting canopies, to be treated as one feature. In raised bed of grass with hard standing on all sides.	6	113.11
T2	Sorbus intermedia (Swedish Whitebeam)	450	12(1.5)	B1	EM	20+	Good	4.5	3	5	3	Excellent feature with interconnecting canopies, to be treated as one feature. In raised bed of grass with hard standing on all sides.	5.4	91.62
T3	Sorbus intermedia (Swedish Whitebeam)	450	12(1.5)	B1	EM	20+	Good	4.5	3	4.5	3	Excellent feature with interconnecting canopies, to be treated as one feature. In raised bed of grass with hard standing on all sides.	5.4	91.62
T4	Sorbus intermedia (Swedish Whitebeam)	450	12(1.5)	B1	EM	20+	Good	4	3	5	5	Excellent feature with interconnecting canopies, to be treated as one feature. In raised bed of grass with hard standing on all sides.	5.4	91.62
G1	Betula pendula (Silver Birch)	200	12(1)	B2	SM	20+	Fair	2	2	2	2	Row of birch along bank with roads on both sides, moderate screening and street scene value. In raised bank of grass with hard standing on all sides.	2.4	18.1
G2	Betula pendula (Silver Birch)	150	10(1)	C1	SM	10+	Fair	1	1	1	1	Younger row of birch along bank with roads on both sides, some screening and street scene value. In raised bank of grass with hard standing on all sides.	1.8	10.18
T5	Betula pendula (Silver Birch)	200	14(1)	C1	SM	10+	Fair	2	2	2	2	Towards end of row two larger birch with larger rooting area perhaps	2.4	18.1
T6	Betula pendula (Silver Birch)	250	12(1)	C1	EM	10+	Fair	3	3	3	2	Leaning North-East. Towards end of row two larger birch with larger rooting area perhaps	3	28.28
T7	Acer platanoides (Norway Maple)	500	13(2)	B2	M	20+	Good	3.5	3.5	4.5	4.5	Crown distorted due to group pressure. More dominant component of this feature. Block pave around stem base with hardstanding beyond. Feature is an important part of street scene.	6	113.11
T8	Acer platanoides (Norway Maple)	500	13(2)	B2	M	20+	Good	3.5	3	2.5	3	Previous pruning wounds present. Crown distorted due to group pressure. More dominant component of this feature. Block pave around stem base with hardstanding beyond. Feature is an important part of street scene.	6	113.11
T9	Acer pseudoplatanus 'purpureum' (Sycamore)	400	13(2)	C1	EM	10+	Fair	2.5	2	2	3.5	Previous pruning wounds present. Historic stem wounds. Localised decay. Crown distorted due to group pressure. Less dominant component of this feature. Block pave around stem base with hardstanding beyond. Feature as a whole is an important part of street scene.	4.8	72.39
T10	Acer pseudoplatanus 'purpureum' (Sycamore)	400	13(2)	C1	EM	10+	Fair	3	3	3.5	2	Previous pruning wounds present. Historic stem wounds. Localised decay. Crown distorted due to group pressure. Less dominant component of this feature. Block pave around stem base with hardstanding beyond. Feature as a whole is an important part of street scene.	4.8	72.39

APPENDIX 1: METHOD

General

On the site data was recorded with a windows mobile data collector and Trimble GPS unit. In instances where trees were not shown on the topographical survey tree positions were estimated.

The data recorded includes:

- Canopy Height - data gathered using a 'tru-pulse laser-ace' digital clinometer or visually estimated to the nearest metre.
- Stem Diameter (DBH) - measurements taken at 1.5 metres above ground level (complying with requirements for BS5837). Girth data was gathered using a metric diameter tape, callipers or estimated when access was restricted.
- Tree crown spread – estimated measurement of the four cardinal points to provide information to be used with the arboricultural constraints plan.
- Tree category - judged using the guidelines produced in the report. The condition is indicated with the appropriate colour on the plan found in the report. (see *Figure 1*)
- Age class - estimated from an examination of the tree in question.

Age Classification

The following classification is employed:

- Y - Young: Saplings and young trees under 10 years of age
- EM – Early Mature: Trees older than 10 years but less than one third of the life expectancy of their species, normally making substantial extension growth.
- SM – Semi Mature: Trees between one third and two thirds of the life expectancy of their species. More or less full Height and large girth, increasing only slowly.
- M – Mature: Trees beyond two thirds of the life expectancy of their species. No significant extension growth.
- V – Veteran: Trees that shows features of biological, cultural or aesthetic value that are characteristic of an individual surviving beyond the typical age range for the species.

Estimated Remaining Contribution in Years

The estimated remaining contribution in years is an estimate based on currently known factors of the possible remaining life of the tree as an asset. Clearly, it is impossible to predict changes in condition which may occur in the future and this reflects what is considered reasonable under existing circumstances, the classification that has been used is in accordance with the British Standard 5837.

The estimated remaining contribution in years will be dependent on the interaction of the typical longevity of the species, its current age and condition with prevailing

environmental factors. The estimated remaining contribution in years also dependent on future tree management that can extend useful life in some instances.

Tree Condition

The tree survey assessed the individual condition of all trees identified on the site. The assessment of condition is based on a visual and professional view.

The categories considered for Physiological Condition are good, fair, poor and dead.

Structural Condition is also commented on and this will include items such as the presence of decay and physical defects.

Trees are living organisms and their condition can change rapidly in response to environmental variables. Condition remarks refer to the date of survey and cannot be assumed to remain unchanged. While there is no such thing as a safe tree, regular inspection of trees is recommended to reduce the foreseeable risks associated with trees. There is currently no published guidance from the UK insurance industry on the frequency of tree inspections. In the German courts a bi-annual routine inspection is normally expected for older street trees, giving an indication of the rapidity of change in condition that can occur.

Preliminary Management Recommendations

Recommendations are given where it is felt by the arboriculturist that further investigations are required due to suspected defects and work recommendations.

Tree Categorisation Using BS 5837 Methodology

The trees surveyed were categorised using the method explained in BS5837 Trees in Relation to Construction 2012. This method categorizes individual trees, groups and woodlands in a systematic way. Groups are identified as those trees forming a single arboricultural feature with trees that provide companion shelter, are avenues or screens or cultural.

Initially the surveyor will determine if the tree should be regarded as a U category tree. U category trees are those that are low value trees that have little future due to physiological and structural condition.

Other trees are graded A, B or C. The initial category should reflex the trees value in making an important contribution to the amenity of the site over a period of time. The higher the tree category the longer the perceived time period.

A subcategory is included 1, 2 or 3. This subcategory reflects the type of value the surveyor feels the tree presents in regards its value to 1 – arboricultural, 2 – landscape, 3 – cultural or conservation.

The cascade chart used is included as *Appendix 3* of this report.

APPENDIX 2: BS5837:2012 CASCADE CHART

BS5837:2012

Table 1 Cascade chart for tree quality assessment

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	- Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) - Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline - Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality <i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</i>			See Table 2
	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation	
Trees to be considered for retention				
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	See Table 2
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	See Table 2
Category C Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	See Table 2

APPENDIX 3: FIGURE 1 TREE CONSTRAINTS PLAN

- Legend**
- Tree Group BS5837 Category A
 - Tree Group BS5837 Category B
 - Tree Group BS5837 Category C
 - Tree Group BS5837 Category U
 - Tree BS5837 Category A
 - Tree BS5837 Category B
 - Tree BS5837 Category C
 - Tree BS5837 Category U
 - Root Protection Area
 - Tree or tree group number
 - Survey boundary
 - Existing Design



Rev	Date	Amendment	Drawn	Chkd	Apd.



Client

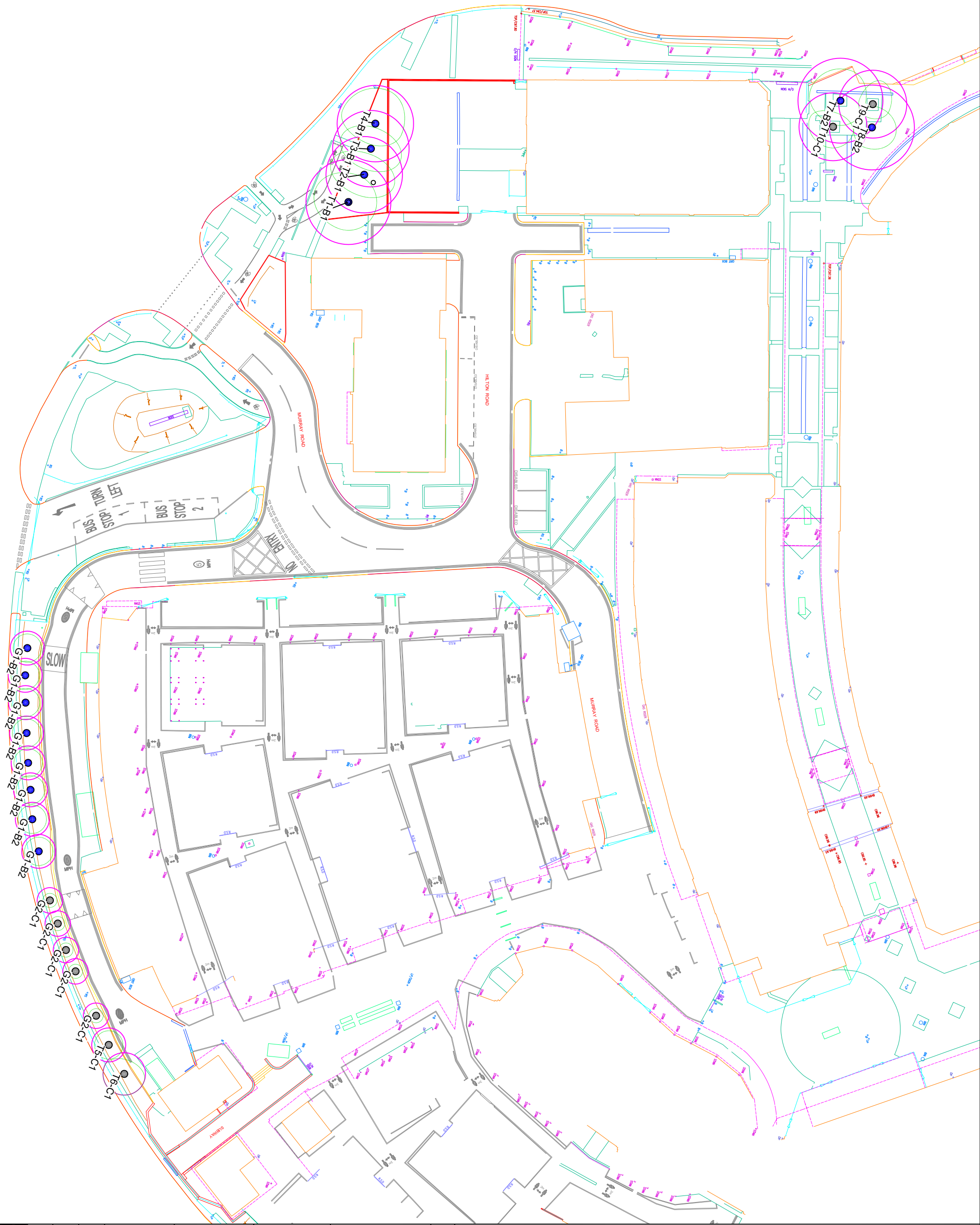
Vinci Construction

Project Title

Bury Market

Tree Constraints Plan

Drawn	Date	Checked	Date	Approved	Date
RF	020822	JB	020822	JB	020822
Scale	1:500	Orig Size	A3	Dimensions	METRES
Project No.	2484105				
Drawing No.	1				
				Rev	0



APPENDIX 4: FIGURE 2 TREE RETENTION PLAN



- Legend**
- Groups Retained
 - Groups Removed
 - Trees Retained
 - Trees Removed
 - Root Protection Area
 - Tree or tree group number



- Tree Planting
- Proposed Design

Rev.	Date	Amendment	Drawn	Chkd.	Appd.



Client
Vinci Construction

Project Title
Bury Market

Drawing Title
TREE RETENTION PLAN

Drawn RF	Date 310723	Checked JB	Date 310723	Approved JB	Date 310723
Scale 1:500	Orig Size A3	Dimensions METRES	Project No. 2484105	Drawing File	
Drawing No. 2					Rev. 1

