Arboricultural Impact Assessment



The Christie Advanced Imaging and Screening Centre Development

14th September 2023

Tyler Grange

TG Report No. 16076_R04_WS_BV

Report No:	Date	Revision	Author	Checked	Approved
16076_R04	14th September 2023		Wilson Scott BSc (Hons) FdSc MArborA	Ben VauseBSc (Hons) TechArborA	Wilson Scott BSc (Hons) FdSc MArborA

Disclosure:

This report, all plans, illustrations, and other associated material remains the property of Tyler Grange Group Ltd until paid for in full. Copyright and intellectual property rights remain with Tyler Grange Group Ltd.

The contents of this report are valid at the time of writing. Tyler Grange shall not be liable for any use of this report other than for the purposes for which it was produced. Owing to the dynamic nature of ecological, landscape, and arboricultural resources, if more than twelve months have elapsed since the date of this report, further advice must be taken before you rely on the contents of this report. Notwithstanding any provision of the Tyler Grange Group Ltd Terms & Conditions, Tyler Grange Group Ltd shall not be liable for any losses (howsoever incurred) arising as a result of reliance by the client or any third party on this report more than 12 months after the date of this report.

Contents:

Section 1: Introduction 2
Section 2: Arboricultural Baseline 4
Section 3: Arboricultural Impact Assessment 5

Appendices:

Appendix 1: Planning Policy Relating to Trees
Appendix 2: BS 5837:2012 Cascade Chart for Tree Quality Assessment
Appendix 3: Tree Survey Schedule (16076/TSS01)
Appendix 4: Report Limitations

Plans:

Plan 1: Tree Constraints Plan (TCP), (16076/P01)
Plan 2: Tree Retention and Removal Plan (TRRP), (16076/P02)

Section 1: Introduction

Table 1: Overview and Summary

Purpose of report:	Following the recommendations of the British Standard[1], this report includes the necessary arboricultural information to support the planning application. It demonstrates that the impact, both direct and indirect, of the proposal, has been assessed and where appropriate, mitigation and tree protection may be required.
Site description:	The site is centred on national grid reference SJ849925 and the survey extended across the red line boundary as demarked at Figure 1 below. The site is located south of Manchester City Centre and comprises an existing hospital building, with a row of existing landscaping including trees and shrubs abutting the eastern edge of the building. (See Figure 1 overleaf).
Application type and description:	The Proposed Development comprises the demolition of the existing Blocks 19 and 20 (and part of Block 21), building and development of a principally three-storey building, with a level of plant above and additional plant equipment on the roof. A stair core is proposed to the north of the Site rising to five storeys. The upper floors will provide ward accommodation. This new state of the art clinical facility will support the new Radiology and CT Department.
Report prepared on behalf of:	Integrated Health Projects.
Local Planning Authority (LPA):	Manchester City Council (MCC).
Planning policies relating to arboricultural features:	Manchester city's Core Strategy 2021-2027 Policy EN9- Green Infrastructure. Planning policy is further detailed at Appendix 1.. Planning policy is further detailed at Appendix 1.
Report Summary:	A total of 1no. Category C ash tree is proposed for removal as well as seven cherry trees (comprising 2no. Category B and 5no. Category C trees) are proposed for translocating. This tree removal operations are considered the most viable option with respect to optimizing tree retention (as opposed to the removal of all 8 trees), and for safeguarding the tree population at and around the site long-term. The tree removal and transplanting will result in a minor temporary reduction in canopy cover directly at the site, however, this will be re-established at the proposed translocation site on the opposite site of Wilmslow Road. A total of 16no. replacement trees are proposed at the site directly as part of the soft landscaping scheme. Together, the translocated and replacement trees will improve the local tree canopy cover and tree population owing to the new green linkages created, which are consistent with local planning policy EN9 and MCC's tree replacement ratio of 3:1.

[1] BS5837:2012 Trees in relation to design, demolition and construction- Recommendations, London: British Standards Institute



Figure 1: Indicative Survey and Application Boundary (Imagery © Google Maps, 2023).

Section 2: Arboricultural Baseline

Table 2: Survey Summary

Survey approach:	The tree survey was completed by a suitably qualified Arboricultural Surveyor of Tyler Grange in July 2023. The survey was completed in accordance with BS5837. A measured topographical survey was used to identify the location of trees and their surrounding context.
Survey findings:	Findings for each of the trees surveyed are detailed in the Tree Survey Schedule (See Appendix 2). This provides a tabulated record of the trees surveyed, including reference numbers, species composition, tree dimensions, life stage, physiological and structural condition, and the arboricultural value of each survey entry.
Survey mapping:	The distribution of the trees surveyed is illustrated on the Tree Constraints Plan (TCP) together details of their constraints to new development in accordance with BS5837, including, tree quality gradings[2], Root Protection Areas (RPAs)[3], tree canopy spreads[4].

Table 3: Tree related Designations

Designation Type	TG Tree Reference Number(s)
Tree Preservation Order[5]	None.
Conservation Area[6]	None.
Ancient Woodland [7]	None.
Other Woodland Habitat [8]	None.

[2] The arboricultural value of surveyed features under the criteria shown at Appendix 1. Allowing informed decisions to be made concerning which trees should be removed or retained in the event of development occurring.

[3] a layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority.

[4] Dimensions of the trees crown spread and clearance from ground level.

[5] A Tree Preservation Order is an order made by a local planning authority in England to protect specific trees, groups of trees or woodlands in the interests of amenity. An Order prohibits the any works and damage to trees (with some exceptions) without the local planning authority's written consent. More information can be found online https://www.gov.uk/guidance/tree-preservation-orders-and-trees-in-conservation-areas#tree-preservation-orders--general.

[6] Trees in a conservation area that are not protected by an Order are protected by the provisions in section 211 of the Town and Country Planning Act 1990. These provisions require people to notify the local planning authority, using a 'section 211 notice', 6 weeks before carrying out certain work on such trees, unless an exception applies. More information can be found online https://www.gov.uk/guidance/tree-preservation-orders-and-trees-in-conservation-areas#tree-preservation-orders--general.

[7] Ancient woods are areas of woodland that have persisted since 1600 in England and Wales, and 1750 in Scotland. The Magic Maps website https://magic.defra.gov.uk/MagicMap.aspx has been used to search for ancient woodland on or adjacent to a site.

[8] Spatial data of woodlands identified under the Priority Habitat Inventory (England) Published by Natural England. The Magic Maps website https://magic.defra.gov.uk/MagicMap.aspx has been used to search for woodland on or adjacent to a site.

Section 3: Arboricultural Impact Assessment

Tree Retention and Removal

3.1. Trees to be retained and removed are shown on the TRRP. Table 4 below describes the tree losses required to facilitate the development and provides recommendations for compensation.

Table 4: Trees to be Removed or Translocated to Facilitate the Development

Reference Number	**Category Grading**	**Description of Loss/ Translocation.**	**Compensatory Measures**
T1	C	Removal of a single semi mature and low quality ash tree to facilitate the removal of an existing planting bed.	Replacement planting at the site frontage as part of the detailed soft landscaping scheme (CASICD-DAY-XX-00-DR-A-090037-Proposed Landscape Scheme Plan), which includes for 16no. new native and ornamental trees.
T2 – T8	2no. B & 5no. C	It is proposed that 7no. trees located within current hard landscaping at the site frontage are to be translocated to an area of grassland on the eastern side of Wilmslow Road, at the frontage of the Manchester Cancer Research Centre. This land is currently owned by MCC, yet agreements are ongoing for the Christie Hospital to formally adopt this land. This is to facilitate construction access, accommodate new soft landscaping, enable the demolition of existing building, and the construction of new buildings. It is understood that this land is under the curtilage of MCC, therefore the appropriate permissions are to be sought prior to translocating.	

Tree Retention Considerations

3.2. Different methods regarding the various development stages including; demolition, excavation works, sub-terrain services, and construction, have been thoroughly considered, to assess the feasibility and options for retaining some or all of the 8 trees located at the site. The specific considerations are detailed below, collectively leading to recommend the relocation of 7 of the existing trees.

Demolition Activities

3.3. Demolition of the existing building and the removal of the basement structure, would require sufficient tree protection fencing to be installed between the trees and existing building to prevent incurring stem, canopy and RPA damages. However, due to tree proximity, there is insufficient space to accommodate the necessary fencing as well as offer sufficient working area for

completing the demolition activities for most trees, see plan below:

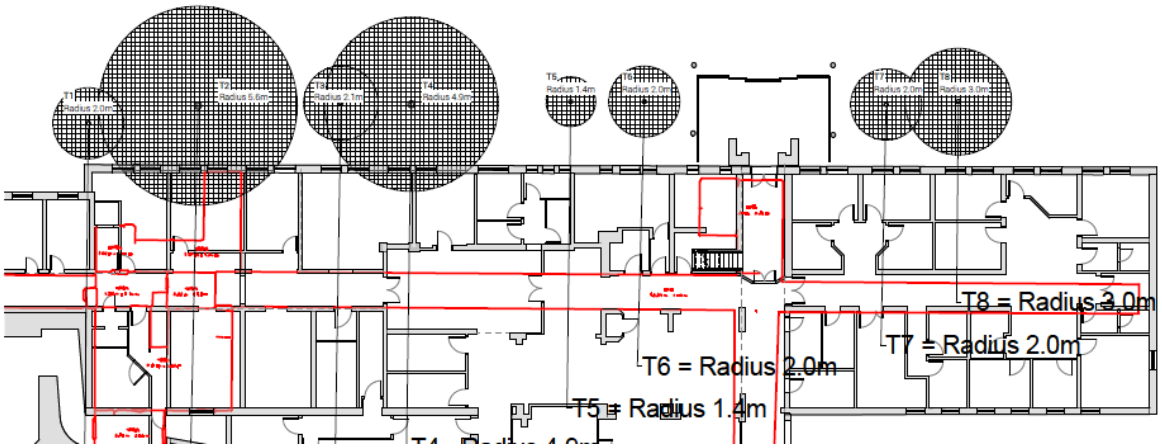


Figure 2: Existing building and Trees Plan

Foundation Works

3.4. The foundations of the new proposed building are a piled solution, it is anticipated that the piling rig would add too great of a load to the RPAs with no options for applying ground protection or working around the trees given their close proximity. Notwithstanding, in order to crop the piles and construct the pile caps safely, excavations impacts on the trees (as if they were proposed for retention) in relation to both battering and retaining wall structure methods have been considered, and both would result in significant RPA impacts (likely acting in >20% of the total rooting area), to all 8 trees. This is shown in the plan and section below and hence the retention of the trees would not be feasible:

3.5. Regardless of the earth retention method used, due to the extent of excavations and disruptive works to occur so close to the tree stems, it is likely this would lead to structural and physiological structure decline possible resulting in premature tree loss.

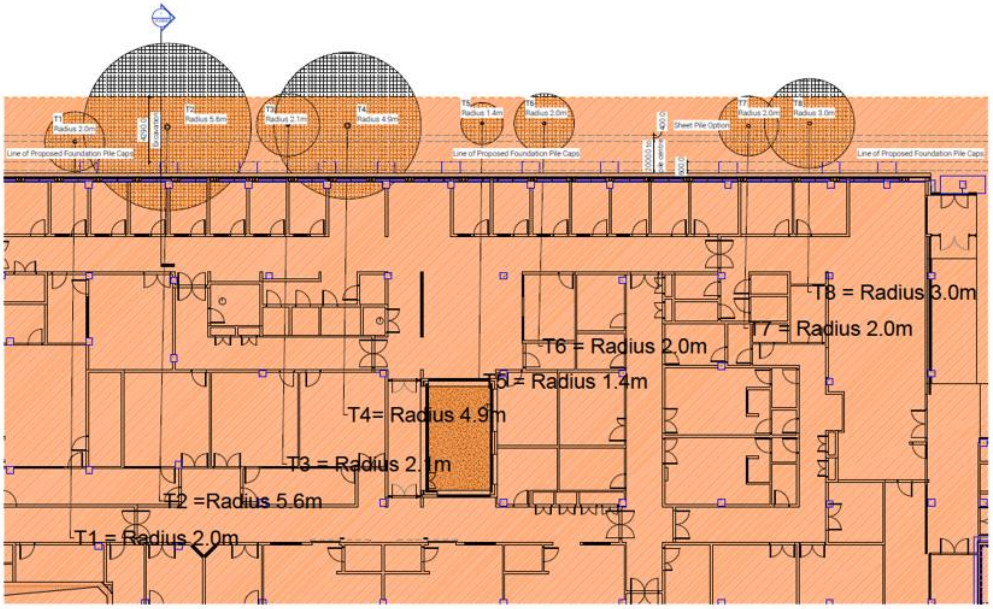


Figure 3: Proposed site plan with existing trees.

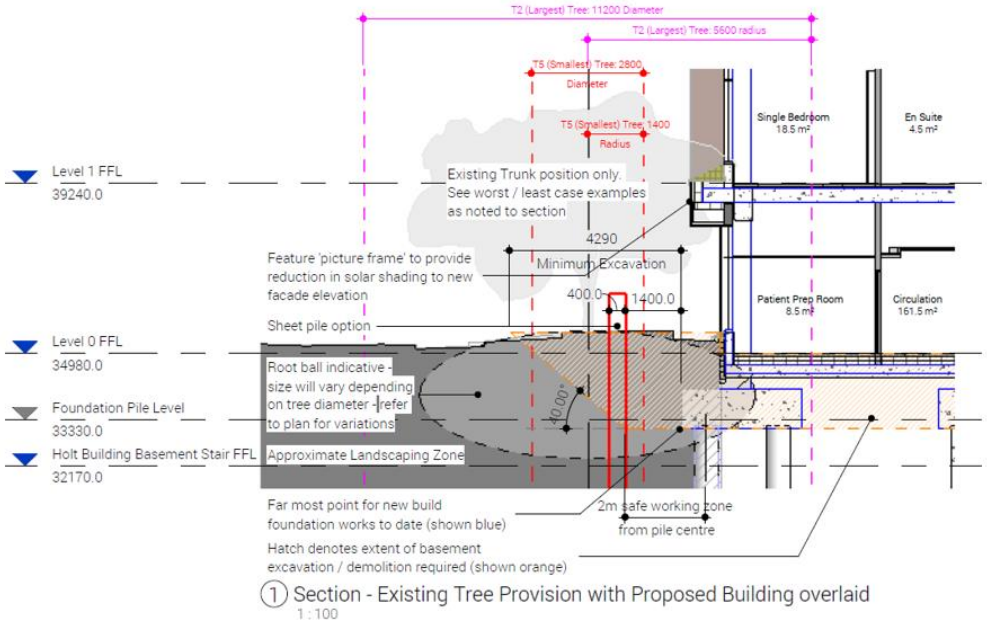


Figure 4: Cross section of site plan with existing trees .

Construction Activities

3.6. The proposed façade works of the new building require a 1.9m wide strip between the trees and the hospital to accommodate scaffolding. This would require pruning of all trees by up to approximately 3m, resulting in trees with significant canopy portions (>20%) removed and possessing unbalanced, unideal crown structures which would not be productive of tree longevity.

3.7. The frame would also present similar challenges to those identified for the foundation works, collectively evidencing that the trees cannot be viably retained subject to the proposed development works.

Translocation of Trees

3.8. The site access requirements, proposed soft landscaping, in addition to the demolition of the existing building necessitates the relocation of the majority existing trees at the site frontage. As mentioned above, one tree will require removal as the stem base has started to occlude the existing brickwork rending it unsuitable for transplanting. (see Figure 2 below).



Figure 2: Stem base of T1, which has begun to occlude brickwork of planter.

3.9. Rather than eradicating the remaining 7no. trees, it is proposed that these are translocated to a grassed area on the eastern side of Wilmslow Road, at the frontage of the Manchester Cancer Research Centre. A proposed soft-landscaping scheme has been prepared and submitted separately as part of the application and includes for 16no. new tree's to be planted within the re-landscaped site frontage and 1No. new native tree to be planted within the Christie Estate – behind the multi-tiered car park.

Conclusion

3.10. It is proposed that the 7no. trees are relocated prior to any demolition works occur on site to ensure they are not harmed during this phase. The ash tree removal should be removed prior as well to ensure sufficient working spaces between the existing building and trees.

3.11. There are no requirements for tree protection measures to be adopted to protect the translocated trees during any development phase due to their proximity away from the development site.

3.12. A proposed soft landscaping scheme includes for 16no. new trees , in addition to the 7no. trees moved are anticipated to provide a net-gain in canopy cover and create better green linkages through the street scene, which remains compliant with MCC's 3:1 tree removal and replacement policy.

Appendix 1: Planning Policy Relating to Trees

Table 5: National and Local Planning Policy Relating to Trees

Policy Document	Policy References	Policy Wording / Description
National Planning Policy Framework (NPPF)	Section 12, paragraph 131	"Trees make an important contribution to the character and quality of urban environments and can also help mitigate and adapt to climate change. Planning policies and decisions should ensure that new streets are tree-lined, that opportunities are taken to incorporate trees elsewhere in developments (such as parks and community orchards), that appropriate measures are in place to secure the long-term maintenance of newly planted trees, and that existing trees are retained wherever possible. Applicants and local planning authorities should work with highways officers and tree officers to ensure that the right trees are planted in the right places, and solutions are found that are compatible with highways standards and the needs of different users."
	Section 15, paragraph 174	"Planning policies and decisions should contribute to and enhance the natural and local environment by:" Subsection B; "recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland."
	Section 15, paragraph 180	"When determining planning applications, local planning authorities should apply the following principles:" Subsection C; "that development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists."
Manchester City Council's Core Strategy 2012-2027	EN9- Green Infrastructure	"New development will be expected to maintain existing green infrastructure in terms of its quantity, quality and multiple function. Where the opportunity arises and in accordance with current Green Infrastructure Strategies the Council will encourage developers to enhance the quality and quantity of green infrastructure, improve the performance of its functions and create and improve linkages to and between areas of green infrastructure. Where the benefits of a proposed development are considered to outweigh the loss of an existing element of green infrastructure, the developer will be required to demonstrate how this loss will be mitigated in terms of quantity, quality, function and future management."

Appendix 2: BS 5837:2012 Cascade Chart for Tree Quality Assessment

TREES FOR REMOVAL				
Category and Definition	Criteria			Identification on Plan
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 • 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. (NOTE: Category U trees can have existing or potential conservation value which it might be desirable to preserve)			DARK RED
TREES TO BE CONSIDERED FOR RETENTION				
Category and Definition	Criteria - Subcategories			Identification on Plan
	1. Mainly Arboricultural Values	2. Mainly Landscape Values	3. Mainly Cultural Values, including Conservation	
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)	LIGHT GREEN
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 remedial 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	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 benefits.	MID BLUE
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 150mm*	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 temporary/transient landscape benefit.	Trees with no material conservation or other cultural value.	GREY

Appendix 3: Tree Survey Schedule (16076/TSS01)

Tree Number	Common Species Name	Height (m)	Trunk Diameter and stem count	Crown Spread (m)				Height of Crown Clearance (m)	Age Class	Physiological Condition	Structural Condition	BS5837 Category	Comments/Preliminary Management Recommendations	RPA Radius (m)	Root Protection Area (m2)
				N	E	S	W								
T1	Ash (Fraxinus excelsior)	8(2)	165(1)	2.50	3.50	3.00	3.00	2.00	Semi Mature	Fair	Fair	C2	Located in an area of hard standing which is likely restricting root growth. Root flare starting to occlude edging. Evidence of uplift present. Minor symptoms of Ash Dieback Disease present. Twin stemmed from a height of approximately 2m	2.0	12
T2	Wild Cherry (Prunus avium)	10.5(3.5)	465(1)	4.00	5.50	5.00	3.50	3.50	Early Mature	Good	Fair	B2	Located in an area of hard standing which is likely restricting root growth. No visible root flare due to excessive mulch. Above ground rooting present. Stem divides into multiple stems at a height of approximately 2m. Stem cavity with decay present on south side of stem at a height of approximately 1.5m. Partially occluded. Stem included Unions present. Minor reduction in vigour, with western canopy regularly pruned to provide clearance form adjacent building.	5.6	98
T3	Wild Cherry (Prunus avium)	9(4)	175(1)	2.00	3.00	3.00	2.50	4.00	Semi Mature	Fair	Fair	C2	Located in an area of hard standing which is likely restricting root growth. No visible root flare due to excessive mulch. Minor reduction in vigour and virtually, likely attributed to root restriction and excessive mulch.	2.1	14
T4	Wild Cherry (Prunus avium)	10.5(4)	410(1)	5.50	5.00	6.00	3.50	4.00	Early Mature	Good	Fair	B2	Located in an area of hard standing which is likely restricting root growth. No visible root flare due to excessive mulch. Above ground rooting present. Stem divides into multiple stems at a height of approximately 2m. Included unions present at stem division. Western canopy regularly pruned to provide clearance form adjacent building.	4.9	76
T5	Wild Cherry (Prunus avium)	7(5)	120(1)	2.50	2.50	2.50	1.00	5.00	Semi Mature	Fair	Fair	C2	Located in an area of hard standing which is likely restricting root growth. Minor reduction in vigour and virtually, likely attributed to root restriction and excessive mulch.	1.4	7

Tree Number	Common Species Name	Height (m)	Trunk Diameter and stem count	Crown Spread (m)				Height of Crown Clearance (m)	Age Class	Physiological Condition	Structural Condition	BS5837 Category	Comments/Preliminary Management Recommendations	RPA Radius (m)	Root Protection Area (m2)
				N	E	S	W								
T6	Wild Cherry (Prunus avium)	8(5)	165(1)	2.50	2.50	2.50	3.00	5.00	Semi Mature	Fair	Fair	C2	Located in an area of hard standing which is likely restricting root growth. Minor reduction in vigour and virtually, likely attributed to root restriction and excessive mulch.	2.0	12
T7	Wild Cherry (Prunus avium)	8.5(5)	170(1)	2.50	4.00	2.50	1.00	5.00	Semi Mature	Fair	Fair	C2	Located in an area of hard standing which is likely restricting root growth. Minor reduction in vigour and virtually, likely attributed to root restriction and excessive mulch. Minor dieback present on western extents of upper canopy.	2.0	13
T8	Wild Cherry (Prunus avium)	8.5(5)	250(1)	2.50	4.00	3.00	3.00	5.00	Semi Mature	Fair	Fair	C2	Located in an area of hard standing which is likely restricting root growth. Minor reduction in vigour and virtually, likely attributed to root restriction and excessive mulch. No visible root flare.	3.0	28

Appendix 4: Report Limitations

Limitations

A3.1. The comments made are based on observable factors present at the time of inspection. Although the health and stability of trees in their current context is an integral part of their suitability for retention, it must be understood that this report is not a tree risk assessment and should not be construed as such. While every attempt has been made to provide a realistic and accurate assessment of the trees' condition at the time of inspection, it may have not been appropriate, or possible, to view all parts or all sides of every tree to fulfil the assessment criteria of a risk assessment.

A3.2. No tree can be considered entirely safe, given the possibility that exceptionally strong winds could damage or uproot even a mechanically 'perfect' specimen. It is therefore usually accepted that hazards are only recognisable from distinct defects or from other failure-prone characteristics of the tree or the site. An assessment of the potential influence of trees upon existing buildings or other structures resulting from the effects of trees upon shrinkable load-bearing soils or the effects of incremental root or branch growth, are specifically excluded from this report.

Un-assessable Risks

A3.3. Any alteration to the application site or development proposals could change the current circumstances and may invalidate this report and any recommendations made.

A3.4. The Wildlife and Countryside Act (WCA) 1981 (as amended) makes it an offence to disturb nesting birds or recklessly endanger a bat or its roost. Bats are also a European protected species and are additionally protected under the Conservation (Habitats & c) Regulations 1994 and 2010 (as amended). The survey findings, constraints, opportunities and design or mitigation recommendations included within that report must be read alongside this document.

A lack of recommended work does not imply that a tree does not pose an unacceptable level of risk and likewise, it should not be implied that a tree will present an acceptable level of risk following the completion of any recommended work.

Plans:

Plan 1: Tree Constraints Plan (TCP), (16076/P01)

Plan 2: Tree Retention and Removal Plan (TRRP), (16076/P02)

Category B - Trees of Moderate Quality and Value

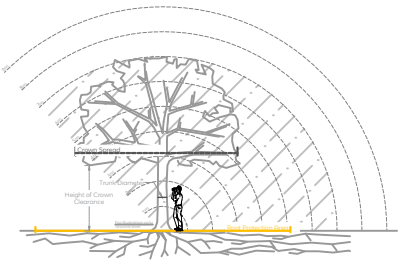
Category C - Trees of Low Quality and Value

Areas of RPA Influenced by Existing Hard Surfacing

Root Protection Areas

Tree Shading Constraints

**Denotes trees and groups not identified on topographical survey. Locations approximated using measurements taken on site.*



T1 - C2
Ash

T2 - B2
Wild Cherry

T3 - C2
Wild Cherry

T4 - B2
Wild Cherry

T5 - C2
Wild Cherry

T6 - C2
Wild Cherry

T7 - C2
Wild Cherry

T8 - C2
Wild Cherry

WILMSLOW ROAD

CHRISTIE HOSPITAL

COTTON LANE

0 10m

North

Tyler Grange

Head Office: Marsden Estate, Rendcomb, Cirencester, Gloucestershire GL7 7EX

E:info@tylergrange.co.uk
W: www.tylergrange.co.uk

This document should not be relied on or used in circumstances other than those for which it was prepared and for which Tyler Grange was appointed.

Tyler Grange accepts no responsibility for this document to any other party other than the person by whom it was appointed.

Tyler Grange Group Limited
Copyright © Tyler Grange Group Limited 2023

Rev	Description	Date
-	-	-

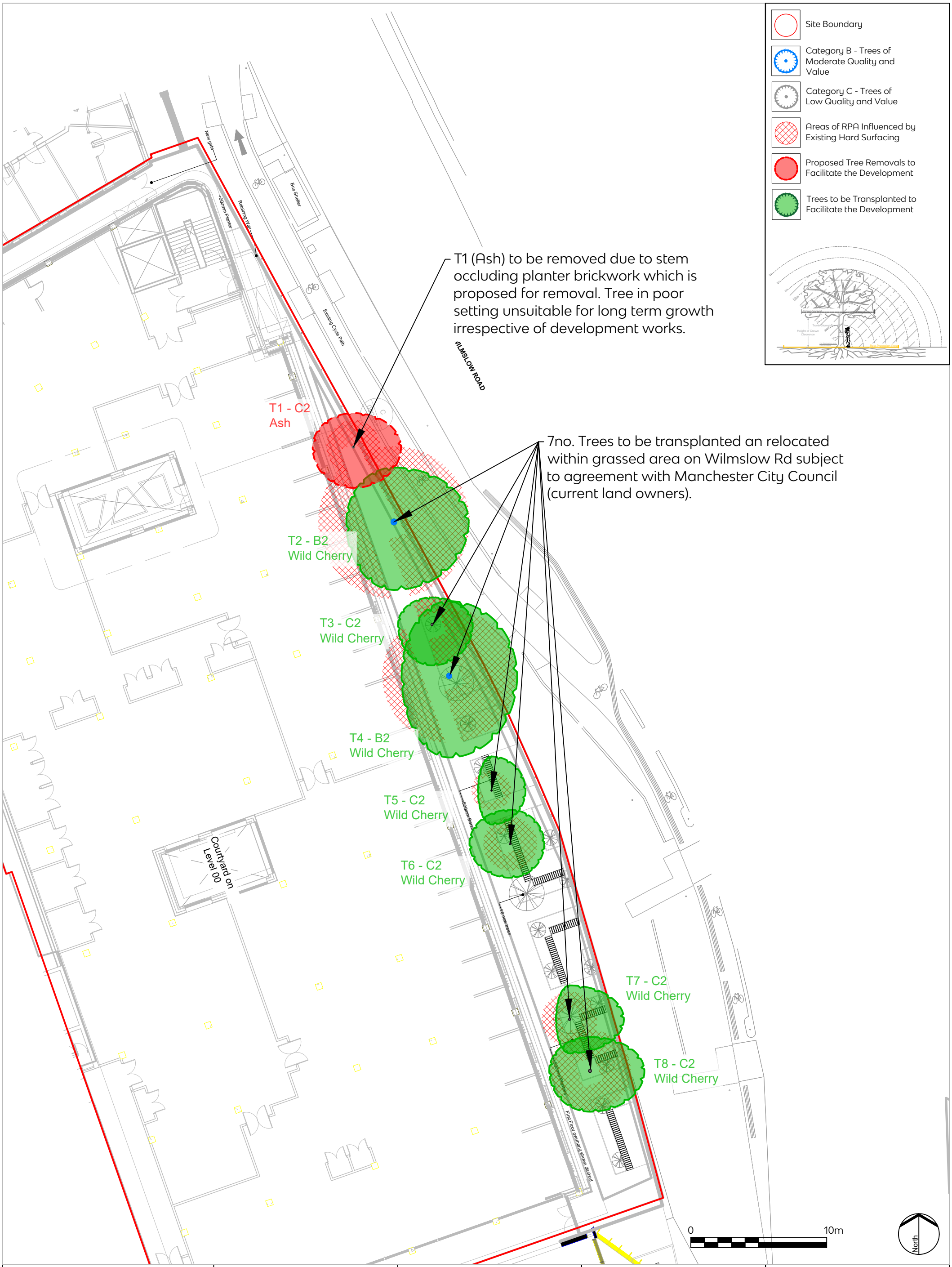
Project title
The Christie, Manchester

Drawing title
Tree Constraints Plan

Scale 1:250 @ A3
Date 13.07.2023
Drawn WS
Checked JP

Drawing number
16076_P01

Revision
-



Tyler Grange
Head Office: Marsden Estate, Rendcomb, Cirencester, Gloucestershire GL7 7EX
E:info@tylergrange.co.uk
W: www.tylergrange.co.uk

This document should not be relied on or used in circumstances other than those for which it was prepared and for which Tyler Grange was appointed.

Tyler Grange accepts no responsibility for this document to any other party other than the person by whom it was appointed.

Tyler Grange Group Limited
Copyright © Tyler Grange Group Limited 2023

Rev	Description	Date
-	-	-

Project title
The Christie, Manchester

Drawing title
Tree Retention and Removal Plan

Scale 1:250 @ A3
Date 22.08.2023
Drawn WS
Checked JP

Drawing number
16076_P02

Revision
-



Tyler Grange

Landscape | Ecology | Arboriculture