TREE SOLUTIONS

Arboricultural Impact Assessment

Land off Southdean Road, Huyton

Prepared for:

BRECK HOMES

Our Ref: 25/AIA/KNOWSLEY/33 (Rev A)

August 2025

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Tree Solutions Ltd • Registration in England & Wales • Company No. 04548951

Contents:

1.0 INSTRUCTION

1.1 We have been instructed by Breck Homes (the applicant) to undertake an Arboricultural Impact Assessment (AIA) to evaluate the proposed development in relation to existing trees on site. This assessment has been carried out in accordance with the principles and guidance set out in British Standard 5837:2012 *'Trees in Relation to Design, Demolition and Construction – Recommendations'*.

1.2 We have been instructed to prepare this report to assist all parties involved in the planning process in making informed and balanced judgements regarding arboricultural features in relation to the proposed development on land off Southdean Road, Huyton. Accordingly, all trees within influencing distance of the proposed works both on-site and on adjacent land have been surveyed. These trees are detailed within the Tree Survey Schedule (Appendix 1) and are plotted on all relevant accompanying plans.

1.3 A Stage 1 tree survey was carried out in July 2025 by Alistair Henderson, Principal Consultant at Tree Solutions Ltd. The appraisal of the mechanical integrity of the trees on site is considered sufficient to inform the current development proposal.

1.3.1 The assessment was conducted from ground level and did not involve any invasive investigations. Consequently, the potential presence of concealed or subsurface defects cannot be fully ruled out. While the primary purpose of the survey was not to assess tree safety, any obvious structural defects considered significant in the context of the existing or proposed land use have been recorded.

1.3.2 It should be noted that detailed tree safety inspections fall outside the scope of this report, unless such assessments were explicitly instructed in writing.

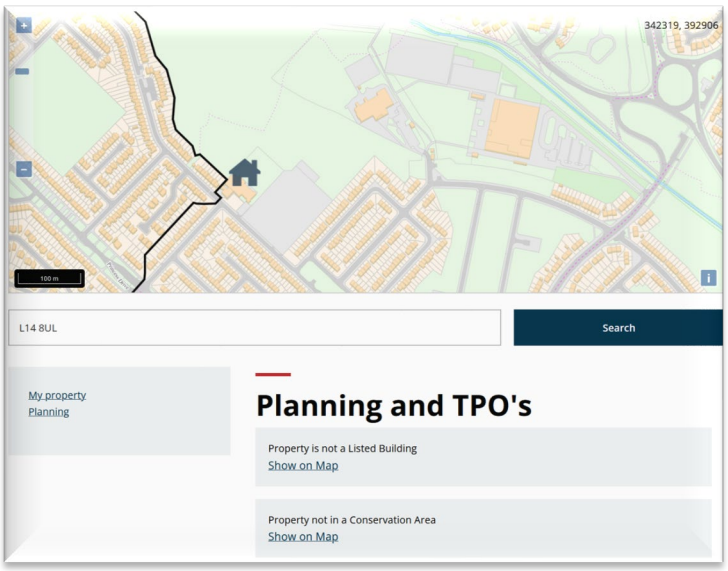
1.4 Seven individual trees (T1-T7) and ten groups (G1-G10) were surveyed and mapped on a Preliminary Tree Constraints & Impact Assessment Plan Ref: 25/AIA/Knowsley/33, Drawing No. 1 & 2 at ***Appendix 2***. All arboricultural information recorded during the survey is presented within a schedule at ***Appendix 1***.

1.5 The Arboricultural Impact Assessment is based on the proposed site layout plan Rev G, provided by Breck Homes.

2.0 STATUTORY CONTROLS & PLANNING POLICY

2.1 A search of Knowsley Council's interactive mapping system confirms that no trees on or adjoining the site are subject to Tree Preservation Order (TPO) or Conservation Area designation. Consequently, statutory consent is not required from the local planning authority before carrying out any of the proposed tree works.

2.1.3 The planning application will be assessed against the policies contained within the Knowsley Council Local Plan, adopted Supplementary Planning Guidance Note Tree & Development, and the National Planning Policy Framework (2024).



P1 – Extract from Knowsley Council interactive map showing no protected trees

2.2 Protected Species

2.2.1 Mature trees often feature cavities, crevices, and hollows that provide potential roosting or nesting sites for protected species, notably bats and barn owls. Both species are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), as well as The Conservation of Habitats and Species Regulations 2017 (as amended), which incorporates the provisions of the former 2007 Regulations. Any works affecting such trees must be preceded by appropriate ecological surveys and, if necessary, mitigation measures to ensure legal compliance.

2.3 Wildlife Habitats

2.3.1 Trees and hedgerows of various species offer valuable nesting habitat for a wide range of birds. It is likely that nesting birds will be present on site during the breeding season, typically from March to September. As such, any vegetation clearance or tree works during this period should be preceded by a nesting bird check conducted by a suitably qualified ecologist. Works should be delayed if active nests are identified, in line with wildlife protection legislation.

3.0 THE SITE

3.1 The application site formerly accommodated two schools located off Southdean Road and Lordens Road, both of which have long since been demolished. Following demolition, the land off Southdean Road has become naturally colonised with Willow and Birch scrub, while the land to the north has remained as informal open space.

3.2 The only trees that pre-date the demolition and former site use comprise Trees T3, T5 and T7, together with Groups G2, G4 and G5. All other trees now present on the site are young self-set specimens that have established through natural colonisation as a result of the absence of any ongoing site management.

P2 – Aerial of sites former use containing schools (2005)

P3 – Former primary school off Southdean Rd (2008)

P4 – Site viewed off Southdean Rd with naturally colonised scrub

4.0 DEVELOPMENT PROPOSAL

4.1 The development proposal comprises the erection of residential dwellings, together with the formation of a new vehicular access, associated parking provision, and all necessary hard and soft landscaping.

5.0 GENERAL CONSTRAINTS DATA - CONSTRUCTION EXCLUSION ZONES (CEZ's)

5.1 GENERAL

5.1.1 *During the development process, there may be three or even four key constraints to consider in relation to retained trees. These include:*

1. ***Construction Exclusion Zones (CEZ):*** *Areas around retained trees where no construction activity, ground compaction, or material storage is permitted, to protect the root system and overall tree health.*
2. ***Crown Protection Areas (or CEZ 2):*** *Above-ground space required to accommodate the tree's existing and future crown spread, including allowances for safe working distances and potential pruning limits.*
3. ***Root Protection Areas (RPA):*** *Below-ground zones defined to safeguard the tree's root system, as per BS5837:2012 guidelines, where development and soil disturbance are strictly limited.*
4. ***Working Space Buffers (if applicable):*** *Additional space around CEZ or RPA boundaries required to ensure safe access for construction personnel and machinery, without compromising tree protection measures.*

5.2 ROOT PROTECTION AREA (RPA)

5.2.1 The Root Protection Area (RPA), expressed in square metres (m^2), must be protected both prior to and throughout any demolition or construction activities. This protection is essential to ensure the successful retention of trees by safeguarding a sufficient quantity of viable, functioning roots.

The RPA is derived from a radial measurement taken from the centre of the tree stem. For single-stemmed trees, this is calculated by multiplying the stem diameter (measured at 1.5 m above ground level) by a factor of 12. For multi-stemmed trees, the calculation is based on the formula: (mean stem diameter^2) × number of stems**.**

5.2.2 During the Arboricultural Impact Assessment (AIA) process, this radial distance is converted by the Arboriculturalist into an actual area to be protected, considering the specific site conditions and any environmental or developmental influences that may have impacted the tree's rooting pattern.

Initially, the RPA for each tree should be represented as a circle centred on the base of the stem. However, where site conditions suggest asymmetric rooting due to factors such as physical obstructions, topography, or historic ground disturbance a polygon of equivalent area may be substituted. Any deviation from a circular RPA must be underpinned by a robust arboricultural assessment, accurately reflecting the likely distribution of roots.

5.2.3 The Root Protection Area (RPA) must be safeguarded through the installation of appropriate tree protection fencing prior to the commencement of any demolition or construction activities on site. This fencing should remain in place and be respected for the duration of the works.

A strict prohibition on potentially harmful activities within the RPA must be observed. These include, but are not limited to:

- Mechanical excavation
- Soil stripping
- Fire lighting
- Storage of materials, equipment, or waste
- Ground level reduction
- The installation of impermeable or excessively sealed surfaces

Where construction activity is proposed in close proximity to retained trees or within the RPA, additional protective measures may be required. These may include the use of temporary ground protection to prevent soil compaction, or the implementation of special engineering solutions such as elevated surfaces or low-impact foundations designed to minimise disturbance to the rooting environment.

5.3 CEZ 2: TREE CROWN PROTECTION ZONE

5.3.1 This is the area above ground occupied by the crown (branches) of the tree, along with allowances for working space (safe working area) and if appropriate, for future growth. The extent of CEZ 2 is determined by considering the existing and future crown spread of the tree(s), bearing in mind the possibility of this being modified by an acceptable quantum of pruning.

5.3.2 All trees are to be cleared for development except T7 which is located off-site. The canopy of this tree is well clear of any necessary construction area and as such no access facilitation pruning is required.

5.4 CEZ 3: TREE DOMINANCE ZONE

5.4.1 Not applicable, as all existing self-set trees and scrub within the site are proposed to be cleared as part of the redevelopment. The landscape strategy includes new tree planting using species appropriate to the site context and available space. This approach has been designed to avoid future issues associated with excessive shading, overdominance, or post-establishment pressure to prune or remove trees. The proposed planting will deliver a sustainable long-term solution, ensuring a structured, high-quality tree cover across the site well into the future.

5.5 CEZ 4: NEW PLANTING ZONE

5.5.1 Refer to landscape proposals.

6.0 SURVEY METHODOLOGY

6.1 The method used in the preparation of this report is based on the principles of BS 5837: 2012.

1. Tree heights were surveyed to the nearest 1m
2. Trunk diameters were measured by use of forestry girth tape
3. The category assessment (Table 1) on which the trees is based include current and long-term arboricultural, landscape, cultural and conservation values (BS5837: 2012). This table can be found at ***Appendix 1***
4. For clarity, the grading system is summarised from ***Table 2*** of the BS as follows:

U grade – trees for removal, effective for less than 10 years

A grade – trees of high quality and value, effective for more than 40 years

B grade – trees of moderate quality and value, effective for more than 20 years

C grade – trees of low quality and value, effective for 10 years

Note: We have indicated colour coding on the drawing and therefore a monochrome copy should not be relied on.

6.2 SOIL ASSESSMENT

6.2.1 A soil assessment should be undertaken by a competent person to inform decisions relating to:

- the root protection area (RPA)
- tree protection
- new planting design; and
- foundation design to take account of retained, removed and new trees (potential soil subsidence/heave)

Tree Solutions do not undertake soil assessments, and the client is advised to seek specialist advice in this respect.

7.0 JUXTAPOSITION OF TREES AND STRUCTURES

7.1 Below ground constraints

7.1.1 The below ground constraints are generally summarised as the root protection area (RPA). The shape of the RPA and its exact location will depend upon arboricultural considerations including likely tolerance of the tree to root disturbance; morphology and disposition of the roots when known influenced by past or existing site conditions; soil type and structure; and topography and drainage.

7.1.2 The purpose of the Root Protection Areas (RPAs) is to prevent physical damage to tree roots and to prevent damage to the soil structure. Tree roots are damaged by soil compaction, changes in soil levels or soil contamination which could reduce tree health and/or stability.

7.1.3 In accordance with BS 5837:2012, the RPAs have been determined based on stem diameter measurements and adjusted to reflect on-site conditions that are likely to influence root morphology. Root development is affected by both site topography and the physical characteristics of the soil or substrate. Where trees are located adjacent to existing hard surfaces or below-ground obstructions, lateral root spread may be constrained due to compacted subgrades and structural barriers.

7.1.4 The RPA of all trees have been plotted as standard circular radii from the base of each tree, as there is no evidence of subsurface constraints or barriers that would inhibit typical radial root development.

7.2 Underground Services

7.2.1 Not applicable, as all existing trees and scrub within the site boundary are to be removed as part of the site clearance works. Any future underground service routes will be coordinated as part of the detailed design phase, in conjunction with the proposed new planting, to ensure there are no conflicts with replacement tree planting.

8.1 Arboricultural Impact Assessment Summary

8.1.1 A detailed tree survey was undertaken by Tree Solutions Ltd in accordance with the methodology set out in *BS 5837:2012 – Trees in Relation to Design, Demolition and Construction – Recommendations*. All arboricultural features within and immediately adjacent to the application site were recorded, including species, dimensions, physiological and structural condition, and categorisation in accordance with the standard's classification criteria (Table 1). Root Protection Areas (RPAs) were calculated for each relevant tree and plotted on a Tree Constraints Plan to inform the early stages of site design. This was subsequently developed into a Tree Constraints and Impact Assessment Plan to assess the arboricultural implications of the proposed development.

8.1.2 To facilitate the proposed development, the removal of all existing on-site trees will be required. The site has been unmanaged for an extended period, resulting in colonisation by self-seeded trees and scrub of low arboricultural value. The few remaining original trees are of poor quality (Category C and U) and are visually screened from outside the site by dense secondary growth. None of the trees identified for removal meet the criteria for retention, and their loss has been carefully weighed against the significant planning benefits of delivering much-needed affordable housing on this previously developed brownfield site.

8.1.3 Given that no statutory designations apply to the site and that no trees meet the threshold for protection under a Tree Preservation Order, the proposed removals do not present a material constraint to development. The landscape proposals include a structured programme of new tree planting, which will secure a net gain in canopy cover, amenity value and biodiversity over the medium to long term.

P5 – Self-set scrub on site frontage with Southdean Rd

P6 – Naturally regenerated scrub growing through boundary palisade fence

P7 – T4 & G6

P8 – T7 & G9

9.0 PROPOSED REVISIONS TO THE SCHEME

9.1 We advise that all proposed revisions having implications for trees should be referred to us for review.

10.0 CONCLUSIONS

10.1 BS 5837:2012 provides clear and current best practice recommendations for the assessment, retention, and protection of trees on development sites. The proposed development has adhered to this guidance by:

- Seeking arboricultural advice and commissioning a Phase 1 Preliminary Tree Survey to inform the site layout and design.
- Respecting the constraints imposed by high and moderate quality trees, ensuring they are retained and appropriately integrated into the proposal.
- No trees of any outstanding merit on site
- Incorporating arboricultural input throughout the design process to achieve a balanced scheme that meets both site objectives and long-term tree requirements.
- No adverse impact to retained trees
- Committing to detailed tree protection measures during the development

Considering the above, we consider there to be no valid arboricultural grounds for refusal of the application.

11.0 LIMITING CONDITIONS

Unless stated otherwise, the following conditions apply:

- The information contained in this report pertains only to the trees that were inspected and reflects their condition at the time of the survey.
- The findings and recommendations within this report are considered valid for a period of two years from the date of inspection.
- The inspection was limited to a visual assessment from ground level only. No invasive investigations—such as dissection, excavation, probing, or coring—were undertaken. As such, no warranty or guarantee, express or implied, is offered that undetected issues may not arise in the future.
- This report has been prepared solely for the use and benefit of the client. Tree Solutions Ltd accepts no liability or responsibility to any third party.
- This report may not be reproduced, in whole or in part, without the prior written consent of Tree Solutions Ltd.

Appendix One

Tree Survey Schedule

TREE SURVEY SCHEDULE (BS5837: 2012)

TREE SOLUTIONS

Site	LAND OFF SOUTHDEAN ROAD, HUYTON	**Surveyor**	ALISTAIR HENDERSON		
Client	BRECK HOMES	**Assessment Dates**	Jul-25		
Brief	ARBORICULTURAL IMPACT ASSESSMENT	**Viewing Conditions**	CLEAR		
		Job Reference	25/AIA/KNOWSLEY/33		

Tree Number	Name	Age	Height (m)	Crown clear	North	South	East	West	Diameter (mm)	Vitality	Comments	E.R.C	Management	Category	RPA (m)	RPA (m^2)
T1	Cherry	EM	7	1	3	3	2.5	2.5	210	Good	Tree of no particular merit as unseen from any location beyond site boundary Remnant from former school grounds Easily replaced with new planting	10	Remove for development	C1	2.5	20
T2	Birch, Sycamore, Hawthorn,	EM	9	1	1	2	1.5	1.5	200	Good	As T1	10	Remove for development	C1	2.5	18
T3	Contorted Willow	M	14	1	3	5	3.5	3	300 320 (439)	Good	Twin stem tree located between 2 Goat Willow (G5) No significant defects noted	20	Remove for development	B2	5	90
T4	Goat Willow	EM	13	0	4.5	4.5	6	5	500	Good	Unremarkable tree of little existing or future value/viability & easily relaced with better quality and more appropriate planting	10	Remove for development	C3	6	115
T5	Cherry	M	9	1	5	4	3	4.5	360	Good	Unremarkable tree in centre of mass area of Cherry suckers (G6) and as such not visible	10	Remove for development	C1	4.5	60
T6	Goat Willow	M	13	0	4	4	5	5	100x8 (283)	Good	Lapsed coppice	<10	Remove for development	C1	3.5	35
T7	Sycamore	EM	15	1	3	3	4	3.5	500	Good	Located off-site within adjoining residential garden with no access to survey	20	3rd party tree no works	B2	6	115
G1	White Poplar, Goat Willow, Birch	Y/SM	≤10	0					≤100	Good	Mass of naturally colonised scrub of no existing of future value/viability	0	Remove	C1 & 3	1	4.5
G2	White Poplar	EM	≤15	1	1.5	1.5	1.5	1.5	≤150	Good	Linear closed canopy group No access to survey as beyond palisade fence	10	Remove for development	C2	2	10
G3	Goat Willow, Birch, White Poplar	Y	≤5	0					≤50	Good	Young naturally regenerated scrub due to lack of site management	0	Remove for development	C1 & 3	0.5	1
G4	Oak, Field Maple	SM	≤7	1	2	2.5	3	3	≤250	Good	Insignificant trees in centre of site - no long term viability	10	Remove for development	C1 & 3	3	30
G5	Goat Willow	EM	≤13	1E	3	3	6	2	≤290	Good	Topped at 2m in past with secondary crown formed above Not visually prominent and would require re-topping irrespective of development proposal	10	Remove for development	C1 & 3	3.5	40
G6	Cherry	Y	≤8	0	2	2	2	2	≤150	Good	Mass of sucker growth	0	Remove	C3	2	10
G7	Willow Hawthorn	EM	≤7	0	2	2	2	2	≤80	Good	Scrub on boundary - provides screening	10	Off-site, no works	C2	1	3

HEADINGS & ABBREVIATIONS

SPECIES:	COMMON NAME (LATIN NAMES AVAILABLE ON REQUEST)
AGE RANGE/LIFE STAGE:	Y = YOUNG, SM = SEMI MATURE, EM = EARLY MATURE, M = MATURE, PM = POST MATURE
HEIGHT:	ESTIMATED AND RECORDED IN METRES. APPROXIMATELY 1 IN 10 TREES ARE Measured USING A CLINOMETER AND THE REMAINDER ESTIMATED AGAINST THE MEASURED TREES
CROWN SPREAD:	MAXIMUM CROWN RADIUS MEASURED TO THE FOUR CARDINAL COMPASS POINTS FOR SINGLE SPECIMENS ONLY (MEASUREMENT FOR TREE GROUPS - MAXIMUM RADIUS OF THE GROUP)
CROWN CLEARANCE & DIRECTION OF GROWTH:	HEIGHT IN METERS OF CROWN CLEARANCE ABOVE ADJACENT GROUND LEVEL (TO INFORM ON GROUND CLEARANCE, CROWN/STEM RATIO AND SHADING)
STEM DIA/MULTI-STEM DIA:	STEM DIAMETER - MEASURED AT APPROXIMATELY 1.5 METRES ABOVE GROUND LEVEL OR A COMBINATION OF STEMS FOR MULTI-STEMMED TREES
VITALITY:	A MEASURE OF PHYSIOLOGICAL CONDITION. D = DEAD, MD = MORIBUND, P = POOR, M = MODERATE, G = GOOD
E.R.C. = ESTIMATED REMAINING CONTRIBUTION:	RELATIVE USEFUL LIFE EXPECTANCY (YEARS
BS 5837CATEGORY & SUB-CATEGORY GRADING	A = HIGH QUALITY AND VALUE, B = MODERATE QUALITY AND VALUE, C = LOW QUALITY AND VALUE, U = UNSUITABLE FOR RETENTION (SUB-CATEGORY REFERS TO ARBORICULTURAL , LANDSCAPE AND CULTURAL/CONSERVATION VALUES)
BS 5837 RADIUS & BS 5837 RPA:	PROTECTIVE DISTANCE - RADIUS FROM THE CENTRE OF THE STEM TO THE LINE OF TREE PROTECTION (CONSTRUCTION EXCLUSION ZONE - CEZ) AND PROTECTIVE BARRIER ROOT PROTECTION AREA - BS 5837 (2012) ANNEX D (THE RECOMMENDATIONS STATE THAT THE RPA SHOULD BE CAPPED AT 707 M^2) NOTE – ALL CALCULATIONS ROUNDED TO NEAREST DECIMAL

TREE SURVEY SCHEDULE (BS5837: 2012)

TREE SOLUTIONS

Site	LAND OFF SOUTHDEAN ROAD, HUYTON	**Surveyor**	ALISTAIR HENDERSON	Page 2 of 2	
Client	BRECK HOMES	**Assessment Dates**	Jul-25		
Brief	ARBORICULTURAL IMPACT ASSESSMENT	**Viewing Conditions**	CLEAR		
		Job Reference	25/AIA/KNOWSLEY/33		

Tree Number	Name	Age	Height (m)	Crown clear	North	East	South	West	Diameter (mm)	Vitality	Comments	E.R.C	Management	Category	RPA (m)	RPA (m^2)
G8	Crack Willow	SM	≤7	0					≤80	Poor	Low quality trees starting to crack & fall	0	Remove section adjacent to site	C1	1	3
G9	Sycamore, Elder	SM	≤9	0					≤150	Good	Linear group of self-set trees along boundary - no long-term value	10	Remove for development	C3	2	10
G10	Goat Willow, Birch	Y	≤2	0					≤20	Good	Naturally regenerated scrub of no value	0	Remove for development	C3	0.2	0.2

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 *NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see **4.5.7**.*			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 Two

Preliminary Tree Constraints Plan

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W E

S

5m 10m 20m 30m 40m 50m

Legend

Root Protection Area Modified to Account for Site Features

Category
Root Protection Area
Crown Spread
Tree Number

- Category A (High Quality)
- Category B (Moderate Quality)
- Category C (Low Quality)
- Category U (Dead/Dying/In Decline)

NOTE: Tree/group numbers marked with an * have approximate locations.

Client: Breck Homes	
Project: Land off Southdean Road, Huyton	
Title: Preliminary Tree Constraints Plan	
Scale: 1:500 @ A1	Date: August 2025
Drawn By: NB	Revision: A
Job Ref: 25/AIa/KNOWSLEY/33	Drawing No: 01

TREE SOLUTIONS

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Appendix Three

Impact Assessment Plan


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"Potential New Link Road"
Link Road
ASHBURY ROAD
SAXBY ROAD
SOUTHDEAN ROAD
St Dominic RC Church
New Sub-Station
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