

Knolle Park -AIA

# **Document Control Sheet**

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Document Author:	Matthew Ha	atthew Harmsworth, tech.arbor.a, DipRS, RPQ-s								
Project Manager:	Matthew Ha	armsworth								
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Date: 15th May 2015

FAO. Sam Beilin St. Gabriels (Liverpool) Limited c/o Richard Gee, Director Roman Summer Associates Ltd Suite 2, Hurstwood House, Station Court New Hall Hey Road Rawtenstall BB4 6AJ

Tel: 01706 550 505 email: richard@romansummer.com

#### Arboricultural implications assessment to BS 5837 of trees at: St. Gabriel's Convent, Liverpool.

### 1. Scope

- 1.1 We have recently been instructed to undertake an appraisal of trees at St. Gabriel's Convent, Liverpool ahead of a planning application submission, the client is keen for the data within this report to be used to design a layout that retains the majority of the tree population.
- 1.2 The data was collected to the British Standard BS5837 'Trees in Relation to Design, Demolition and Construction Recommendations' 2012.
- 1.3 The survey has been commissioned to offer support to a planning application for redevelopment of the existing site. Formal proposals have been appended to this report.
- 1.4 The trees were inspected on the 7th May 2015, following the guidance in the British Standard by Matthew Harmsworth. The crowns and stems were inspected from the ground using the 'Visual Tree Assessment (VTA)' method; no invasive techniques were used at this stage.
- 1.5 The instruction encompassed updating a previous tree survey undertaken before the standard changed in 2012. As such we have endeavoured so far as practicable to follow the same route around the site. Decline or improvement in the recorded trees can be seen by comparing the two sets of data tables.
- 1.5 Twenty individual trees, nine groups and one woodland block were surveyed. The weather was dry and hot with light vehicular and pedestrian movement in around the locality.

### 2. Site conditions / Site surroundings

2.1 The site is situated in the local authority control area of Liverpool City Council. St. Gabriel's Convent is located southeast of Liverpool City Centre in the Woolton District. The site is accessed from Beaconsfield Road with Church Road forming the eastern boundary.



Photograph showing mature tree cover and dense non-native understory within group G25

- 2.2 The site is home to a large detached Grade II Listed Villa that has seen various phases of re-development and adaption over the years. The main house is located toward the centre of the site with additional detached buildings on the extreme west of the site. The site is served by an infrastructure of tarmac roads and pathways although many of these have become overgrown since the former care home closed some 13-years ago.
- 2.3 The site is currently disused and occupied by a skeleton staff. The former care home has expansive grounds with a range of native and non-native tree and shrub cover. Much of the shrub and tree cover is extending into the built-footprint as a result of a lack of management in recent years.
- 2.4 A desktop assessment of the locality has indicated that it is not located within a conservation area and does not appear to have any tree preservation orders. However located southeast of the convent is the Woolton Conservation Area. This is sufficient distance from the project to be disregarded as a constraint.

Addendum 1st June 2015 - An email has been received from the Local Authority that confirms an area tree preservation order covers the convent and its grounds.

2.5 All land designations where searched and validated during a desktop assessment at the Liverpool .GOV website on Monday 18th May 2015. Any delay in the submission of the planning application will necessitate a further check for Tree Preservation Orders.

# 3. The Trees

3.1 Tree cover at St. Gabriel's is a mix of remnant, formal planting and self-set natural regeneration dominated by some magnificent mature beech trees to the north of the house. In the wider locality tree cover is predominantly located within residential gardens.



Photograph showing the outstanding mature beech trees located to the north of the Villa.

- 3.2 Full details of the surveyed trees and groups is included in the appended arboricultural data tables and summarised in the paragraphs below.
- 3.3 The majority of the tree population is mature in nature, highly visible and of high landscape and amenity value. Tree cover on the periphery of the site is still predominantly mature in nature but dense shrubbery and self-set regeneration is present beneath the canopies.
- 3.4 The mature tree cover located within the grass areas north of the house are of high value and have predominantly been graded A1. These trees should be retained and protected and opportunities exist to prolong their safe useful life expectancy by reducing compaction beneath the crowns.
- 3.5 Many dead dying and dangerous trees are scattered through the grounds, this should be considered when laying out the proposals. Some considerable amount of tree safety work is required bordering Beaconsfield Road and Church Road but this is outside the scope of this report. Individual trees in this area may have been downgraded accordingly as a result of their decline.

## 4. The Proposals

- 4.1 The proposed development comprises the demolition of the existing dilapidated buildings whilst retaining St Gabriel's Convent building. The main convent building is to be converted to apartments, in addition an extension to the Convent will replace the existing German Wing providing further apartments.
- 4.2 The Orangery House is to be converted into a detached house and the Greek Lodge (gate house) will be converted into a detached house. In addition three buildings are to be constructed as villas with a further four detached houses and one semi-detached unit.
- 4.3 From the first instance all new buildings have been designed to avoid the higher quality tree population whilst retaining a parkland feel.

## 5. Recommendations

- 5.1 Full details of suggested pruning works and removals are located within the appended arboricultural data tables.
- 5.2 Trees categorised A1 must be retained and protected, trees categorised B1 should be retained if possible, tree categorised C1 do not form a constraint but if removed replacements should be allowed for.
- 5.3 In general the tree cover is high quality and all mature trees should be retained. Extensive tree safety works are required throughout the site and this should be carried out before any other works commence on site.
- 5.4 Proposed tree removal and tree protection measures should be set down in an arboricultural method statement with a clear and concise tree protection plan suitable for the site manager and contractors to refer to.

## 6. Summary

- 6.1 To summarise, extensive high quality mature trees exist on the site. These trees form a constraint to re-development opportunities if the existing footprint is to be extended.
- 6.2 Tree safety works are required throughout the site and this should be carried out as an initial operation.
- 6.3 Opportunity exists to improve the condition of the mature trees located to the front of the Villa through the use of an improved landscape layout that allows for such operations as the grass height to be increased.
- 6.2 There exists further opportunity to enhance tree cover in the locality by planting new robust and sustainable species throughout the site and clearing out the dense non-native shrub borders.

### 7. Limitations

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provided by those parties from whom it has been requested. ROAVR has not independently verified information obtained from third parties.

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Trees were inspected from ground level only; trees were not climbed or inspected below ground. Inaccessible trees will have best estimates made about location, physical dimensions and characteristics.

Should you require any further information, please do not hesitate to contact us at any time.

# Matthew Harmsworth

Mr. M Harmsworth tech.arbor.a, DipRS Consultant Arborist

Prepared by: Matthew Harmsworth. Checked by: Anne-Marie Harmsworth

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### Attached

Appendix 1 – Site location Appendix 2 – Arboricultural Data Tables Appendix 3 – Tree Constraints Plan

Example of appropriate tree protection fencing and signage.





**APPENDIX 1 - Site Location** 

Aerial photos courtesy of Bing Mapping.

### **APPENDIX 2 - Arboricultural Data Tables**

tree no	species	height	DBH (mm)	RPA (av. radius)	crown spread N- E-S-W	height to 1 <sup>st</sup> significant branch	age class	condition	structural condition	preliminary management recommendations	estimated remaining years	Category grade
							Indivi	dual Trees				
T1	Sweet Chestnut	13	1250	707	7-6-9-5	2 N	V	Fair	Stunted habit. Veteran chestnut, hollow, deadwood present, extensive decay and cavities noted.	Crown lift and remove major deadwood.	20+	B1
T2	Beech	19	1100	547	8-7-5-4	3 N	М	Good	Leaning East. Tree located within hard surface area. Crown distorted due to group pressure.	Remove major deadwood. Prune clear of building.	40+	B1
Т3	Sycamore	16	430	84	2-1-6-3	2 S	EM	Poor	Limited long-term prospects. Low vitality. Declining. Leaning South. Dieback in crown. Low bud/leaf density. Major deadwood in crown. Crown distorted due to group pressure.	Remove tree and root.	<10	U
Т6	Turkey Oak	9	250	28	4-4-4-4	0 W	SM	Fair	Self set on boundary line.	Remove if required to facilitate proposal.	20+	C1
T7	Sycamore	9	280	35	4-4-4-4	0 N	SM	Fair	Self set regeneration located on boundary line.	Remove if required to facilitate proposal.	20+	C1
Т8	Hawthorn	7	180	15	3-3-3-3	1 E	М	Fair	Set regeneration located on boundary line.	Remove if required to facilitate proposal.	20+	C1
T10	Horse Chestnut	18	750	254	5-5-5-5	4 S	М	Fair	Tree located within hard surface area. Epicormics on stem. Exudation on stem. Low branches over road/ footpath. Branches restricting highway light.	Remove major deadwood. Crown lift to 5m.	20+	B1
T11	Beech	23	1300	707	9-10-10-9	5 S	OM	Good	High quality mature specimen. Adaptive growth and structural defects in main fork but most probably superficial.	No works required.	40+	A1

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tree no	species	height	DBH (mm)	RPA (av. radius)	crown spread N- E-S-W	height to 1 <sup>st</sup> significant branch	age class	condition	structural condition	preliminary management recommendations	estimated remaining years	Category grade
T12	Horse Chestnut	18	890	358	8-8-8-9	3 S	ОМ	Fair	Low vitality. Helical growth form. Phytophora noted. Downgraded as a result. Top third of crown thin.	Crown lift to 5m over road.	20+	B1
T13	Horse Chestnut	18	750	254	9-8-8-9	4 W	М	Fair	Tree located within hard surface area. Major bark wounding on stem. Low branches over road/ footpath. Branches restricting highway light. Cavity present in old pruning wound.	Crown lift to 5m over road.	40+	B1
T15	Small-leaved Lime	22	960	417	7-3-5-5	3 N	М	Good	Tree located within hard surface area. Epicormics on stem. Broken branches in crown. Fine tree seen from roadside.	Remove epicomics. Remove major deadwood. Crown lift to 5m.	40+	A1
T17	Beech	23	1170	619	9-12-10-11	3 W	ОМ	Good	Tree located within hard surface area. Stem divides above 1.5m. Included bark present in main fork. High quality prominent tree.	Crown lift to 5m over road.	40+	A1
T18	Beech	21	1200	651	13-10-9-9	6 E	ОМ	Good	Branches encroaching upon building. Large prominent tree, adaptive growth on lower bole.	Prune clear of service wires. Prune clear of building.	40+	A1
T19	Sycamore	17	450	92	2-5-3-6	1 W	М	Poor	Dieback in crown. Low bud/ leaf density. Unbalanced crown shape. Crown distorted due to group pressure. In heavy decline, suspect kretzschmaria present.	Remove tree and root.	<10	U

tree no	species	height	DBH (mm)	RPA (av. radius)	crown spread N- E-S-W	height to 1 <sup>st</sup> significant branch	age class	condition	structural condition	preliminary management recommendations	estimated remaining years	Category grade
T20	Copper Beech	19	980	434	10-10-7-8	3 N	М	Fair	Leaning North. Unbalanced crown shape. Head lean toward entrance road.Adaptive growth noted.	No works required.	20+	B1
T22	Sweet Chestnut	18	1250	707	7-11-9-9	4 N	ОМ	Good	Leaning East. Tree located within hard surface area. Low branches over road/ footpath. Branches restricting highway light. Branches encroaching upon building. Located at site entrance. Seen from roadside.	Remove major deadwood. Crown lift to 3m over footpath. Prune clear of service wires.	40+	A1
T23	Field Maple	12	450	92	5-4-5-5	2 N	М	Good	Stunted habit. Leaning South-East. Low branches over road/footpath. Unusual to see at this age.	Crown lift to 3m.	40+	B1
T24	Field Maple	11	900	366	5-5-5-5	1 W	V	Good	Decay and cavities noted but typical of a tree of this age.	No works required.	40+	A1
T26	Holly	6	220	22	3-3-3-3	1 N	SM	Fair	Limited long-term prospects.	Remove if required to facilitate proposal.	10+	C1
T27	Yew	9	900	366	7-6-8-8	1 E	ОМ	Good	Tree located within hard surface area. Stem divides at ground level. Low branches over road/ footpath. Branches encroaching upon building.	Crown lift to 3m over footpath. Prune clear of building. Fell adjacent dead stem.	40+	A1
Т30	Beech	19	1100	547	8-7-8-6	3 E	М	Fair	Major deadwood in crown. Crown distorted due to group pressure.	No works required.	40+	B1
							G	roups				

tree no	species	height	DBH (mm)	RPA (av. radius)	crown spread N- E-S-W	height to 1 <sup>st</sup> significant branch	age class	condition	structural condition	preliminary management recommendations	estimated remaining years	Category grade
G4	Sweet Chestnut Beech	18	600	163	7-5-6-6	n/a	М	Fair	Group of late mature trees. Excellent habitat value. Beech nearest builtfootprint is collapsing with decay fungus.	If this area is developed tree safety works will be required.	10+	В3
G5	Sycamore	9	300	41	3-3-3-3	0 N	SM	Fair	Multiple stemmed self set regeneration located on boundary.	Remove if required to facilitate proposal.	20+	C3
G9	Sycamore Small-leaved Lime	19	450	92	5-5-5-5	0 N	М	Fair	Tree located within hard surface area. Epicormics on stem. Crown distorted due to group pressure. Low branches over road/ footpath. Group of 3 limes and one sycamore. Sycamore in very poor condition.	Fell sycamore, remove epicormic growth and crown lift to clear road and fence.	20+	B1
G14	Sycamore	14	350	55	5-5-5-5	n/a	М	Poor	Limited long-term prospects. Poor shape & form. Low vitality. Declining. Ivy on stem. Unable to inspect stem due to undergrowth. Dieback in crown. Low bud/ leaf density. Crown distorted due to group pressure. Low branches over road/ footpath. Declining trees, ivy clad adjacent to road.	Remove tree and root.	<10	U

St. Gabriels Convent - Arboricultural Data Tables

tree no	species	height	DBH (mm)	RPA (av. radius)	crown spread N- E-S-W	height to 1 <sup>st</sup> significant branch	age class	condition	structural condition	preliminary management recommendations	estimated remaining years	Category grade
G16	Sycamore	16	350	55	5-5-5-5	n/a	М	Poor	Limited long-term prospects. Low vitality. Declining. Unable to inspect stem due to Ivy. Dieback in crown. Low bud/leaf density. Unbalanced crown shape. Crown distorted due to group pressure. Poor annual extension.	Remove tree and root.	<10	U
G21	Holly	10	280	35	As shown	n/a	М	Good	Group of holly and laburnam. Dense laurel adjacent.	Clear out laurel and retain specimens.	20+	B3
G28	Beech	18	800	290	6-8-8-7	n/a	М	Fair	Prominent trees can be seen from roadside.	No works required.	40+	B2
G29	Beech Holly Small-leaved Lime Sycamore	15	375	64	As shown	n/a	EM	Good	Mixed quality and species, forms useful screen.	Thin to best stems.	40+	C3
G31	Beech Sycamore Common Lime	18	Various	To crown edges	As shown	n/a	М	Fair	Some mature trees in mixed conditions with underplanting of shrubbery. Possible outgrown hedging.	Thin to best stems.	40+	B2
							Wo	odland				
W25	Holly Field Maple Sweet Chestnut Beech	24ma x	Various	To crown edges	As shown	n/a	EM-OM	Fair - Good	Area of woodland dominated by tall beech and lime. Understorey of laurel and holly. Large collapsed dead horse chestnut within. Many stems require tree safety works adjacent to road.	Carryout tree safety works adjacent to road, fell dead horse chestnut, clear out non-natives.	40+	B3
							End o	f Records				

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# Arboricultural Data Tables Terms

Tree Number	Reference number (T1, T2 etc for trees / G1, G2 etc for tree groups / H1, H2 etc for hedgerows)
Species	Common name
Height	Height of tree to the nearest metre
DBH	Diameter of stem (mm) at breast height (1.5 metres above ground)
RPA radius (m)	The radial measurement of the Root Protection Area in metres indicating the minimum distance from the centre of the trees stem to the recommended position of the protective (Heras) fencing.
RPA (m2)	The Root Protection Area, measured in square metres. This measurement is directly proportional to and calculated from the trees DBH measurement as specified in section 4.6 of BS 5837 (2012) Trees in relation to design, demolition and construction – Recommendations.
Crown Spread	The maximum spread of the trees canopy measured from the stem in four directions (North, East, South, West)
Age class	The estimated age class of the tree (relative to species)         O       Y       -       Young         O       SM       -       Semi-mature         O       EM       -       Early-mature         O       M       -       Mature         O       LM       -       Late-mature
Comments	A brief description of the tree which refers to tree form, condition, health and significant defects. Comments regarding environmental conditions affecting the tree (e.g. ground conditions) will also be included where relevant.
Preliminary management recommendations	Recommendations (made with respect to the development proposals if available) for removal, retention and/or remedial arboricultural works.
Estimated remaining years	Estimated safe, usable life expectancy
Category grade	<ul> <li>Tree categorisation based on section 4.5 of BS 5837 (2012) Trees in relation to design, demolition and construction – Recommendations. Four categories are used (A, B, C, U) with categories A, B &amp; C being assigned one of three separate sub categories (1, 2 or 3):</li> <li>A – Trees of high quality with an estimated remaining life expectancy of at least 40 years.</li> <li>B – Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.</li> <li>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</li> <li>Subcategories: 1: Mainly arboricultural &amp; aesthetic qualities</li> <li>2: Mainly landscape qualities</li> <li>3: Mainly cultural values, including conservation</li> <li>U – Trees 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</li> </ul>

### Appendix 3 - Tree Constraints Plan



Bacontial Red Bing see for

G14-U

Private property

G14-U

G14-l

Private property

Mixed vegetation 21

Private property

 $(\mathbf{C})$ 



Notes To be used in conjunction with the the tree data schedule which accompanies this drawing. Do not scale off drawing - refer to the tree data schedule for accurate crown spread measurements.

Depictions of tree canopies are based on measurements taken to four cardinal compass points. All rights reserved.

![](_page_19_Figure_6.jpeg)

ENVIRONMENTAL CONSULTANTS
<b>ROAVR Environmental</b> Finglack Farmhouse, Clava, IV2 5EN.
Office: 0845 265 8307 Mobile: 07545 255827
environmental@roavr.co.uk www.roavr-environmental.co.uk
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