

Ascerta

Landscape, Arboricultural & Ecological Solutions
for the Built Environment

Arboricultural Impact Assessment

The site of Tetrosyl Ltd
Walmersley Old Road
Bury
BL9 6SA

Ref: P.956.17

June 2019

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Ascerta

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EXECUTIVE SUMMARY

A survey of the existing trees on and adjacent the site of Tetrosyl Ltd, Walmersley Old Road, Bury, BL9 6SA has been carried out by a suitably qualified and competent Arboriculturist in accordance with British Standard 5837: 2012 *Trees in relation to design, demolition and construction – Recommendations*.

The purpose of the survey and of this report is to identify the impact of the proposed development of the site on trees, both within and immediately adjacent the site, in accordance with the provisions of BS5837: 2012.

The development of the site will involve the construction of 268 residential dwellings, which will require the removal of a number of existing trees and which, in the absence of suitable controls, has the potential to have an indirect impact on a number of the trees proposed for retention.

Mitigation for the impact of the development can be provided in the form of the following:

- The erection of protective fencing in advance of the commencement of the development to safeguard the root systems of retained trees; and
- The agreement, in advance of the commencement of the development, together with the implementation during the construction phase, of a methodology for the protection of retained trees.

Compensation for the impact of the development, together with landscape and biodiversity enhancements can be achieved by way of the following:

- The planting of trees and shrubs as part of a comprehensive landscape scheme to replace any trees lost and to integrate the development into the wider landscape;
- The planting of native hedges where possible to provide linear habitats that link to habitats located off site; and
- The use of a mixture of native and ornamental species within planting schemes, where those species are suited to the site and local landscape.

1.0 Introduction

- 1.1** Ascerta has been instructed by Barrett Homes to carry out a survey of the trees within and immediately adjacent the site of Tetrosyl Ltd, Walmersley Old Road, Bury, BL9 6SA, and to assess the potential impact of the development as proposed on trees within / adjacent the site in accordance with British Standard 5837: 2012 *Trees in relation to design, demolition and construction – Recommendations*.
- 1.2** The site was visited on 6th December 2017 by Robert Armitage BSc (Hons) MArborA, a competent and qualified arboriculturist with experience of the UK and European arboricultural and landscape industries within the context of the planning system. During the site visit, a survey was carried out of the trees growing both on and immediately adjacent the site to the standards contained within BS5837: 2012. This report presents the results of the survey, provides an assessment of the impact of the development and includes recommendations for further actions, where applicable, in order to mitigate any potentially negative effects of the development on tree cover within the local landscape.

2.0 Objectives

- 2.1** Our client's objective is to develop the site by the construction of 268 residential dwellings.
- 2.2** Our objectives are as follows:
- Identify what arboricultural features exist presently within and adjacent the site and to record and categorise them in a manner consistent with BS5837: 2012;
 - Identify which trees will need to be removed directly as a result of the proposed development of the site;
 - Identify any indirect impact from the proposed development on trees proposed for retention;
 - Provide an indication of what protection measures can be implemented as part of the development of the site to ensure the physical protection of retained trees;
 - Provide recommendations for mitigation and compensation in terms of new planting or enhancement of existing features of arboricultural, landscape or ecological interest or importance; and
 - Provide any other recommendations to assist our clients in achieving their objectives whilst satisfying current legislation or policy guidance in relation to the woody vegetation on site.

3.0 Planning Policy & Relevant Legislation

3.1 The revised National Planning Policy Framework, updated on 19th February 2019, sets out the government's planning policies for England and how these are expected to be applied. This revised Framework replaces the previous National Planning Policy Framework published in March 2012, and revised in July 2018. It provides a Framework within which locally-prepared plans for housing and other development can be designed and produced.

3.2 The purpose of the planning system is to contribute to the achievement of sustainable development. At a very high level, the objective of sustainable development can be summarised as meeting the needs of the present without compromising the ability of future generations to meet their own needs.

Achieving sustainable development means that the planning system has three overarching objectives, which are interdependent and need to be pursued in mutually supportive ways (so that opportunities can be taken to secure net gains across each of the different objectives):

a) **an economic objective-** to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right types is available in the right places and at the right time to support growth, innovation and improved productivity; and by identifying and coordinating the provision of infrastructure;

b) **a social objective-** to support strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and by fostering a well-designed and safe built environment, with accessible services and open spaces that reflect current and future needs and support communities' health, social and cultural well-being; and

c) **an environmental objective-** to contribute to protecting and enhancing our natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.

These objectives should be delivered through the preparation and implementation of plans and the application of the policies in this Framework; they are not criteria against which every decision can or should be judged. Planning policies and decisions should play an active role in guiding development towards sustainable solutions, but in doing so should take local circumstances into account, to reflect the character, needs and opportunities of each area. into account, to reflect the character, needs and opportunities of each area.

3.3 The site lies within the Bury Metropolitan Borough Council (Bury MBC) administrative area and is subject to the policies contained within its Local Plan. These have been taken into account when writing this report.

3.0 Planning Policy & Relevant Legislation (Continued)

- 3.4** Checks made with Bury MBC on 9th October 2018 via online mapping software indicate that trees located within W1 and two Norway Maple trees within G11 of our survey, as indicated on drawing P.956.17.01 *Tree Survey*, are subject to Tree Preservation Orders TPO106 (G1) and TPO276 (T3 and T4) respectively and therefore have the benefit of statutory control. No other trees within or immediately adjacent the site are statutorily protected by Tree Preservation Orders or by location within a Conservation Area. In advance of the commencement of any works to trees within or adjacent the site, those instructing and proposing to carry out such works should satisfy themselves that all appropriate consents are in place to prevent potential breach of legislation.
- 3.5** British Standard 5837: 2012 *Trees in relation to design, demolition and construction – Recommendations* provides current recommendations and guidance on the relationship between trees and design, demolition and the construction processes. It sets out the principles and procedures to be applied to achieve a harmonious and sustainable relationship between trees and structures.
- 3.6** Notwithstanding the policies and legislation within Bury MBC Local Plan, consideration should also be given to any impacts from the proposed development in respect of the Hedgerow Regulations 1997 and the Forestry Act 1967 (and specifically the potential need for a felling licence), as well as existing UK and European legislation relating to wildlife and nature conservation.

4.0 Survey & Survey Methodology

- 4.1** We have been supplied with a digital copy of the topographical survey for the site, which satisfies the relevant part of section 4.2 of BS5837: 2012. Features of arboricultural or landscape interest that have been excluded from the original plan (for example trees on or located off site but within a distance from the boundary of the site equal to or less than 12 times the stem diameter of that tree) have been added to the plan manually.
- 4.2** Our assessment of the soils within the site, based on local site conditions, geography, available soil maps and our own experience of soils across the United Kingdom, indicates that the soils on site are likely to contain a clay element, and that this will have a plasticity index in the low/medium range. Any further details or confirmation of the exact nature of soil conditions on site will require further, more rigorous sampling and analysis. It is not however anticipated that the clay content will cause specific issues relating to retention of trees given the impact of the development proposals, providing that consideration is given to this aspect in advance of and during the construction phase of the development. Further details are provided throughout this report and final details can be secured via planning condition.
- 4.3** Our survey of the trees within and adjacent the site was carried out by a qualified and competent arboriculturist in accordance with sections 4.4 and 4.5 of BS5837: 2012 on 6th December 2017 during cold and dry weather conditions. Those trees surveyed have been numbered sequentially, although for the purposes of this project they have not been tagged. The trees have also been categorised in accordance with section 4.5 and Table 1 of the Standard.
- 4.4** Where relevant and where the quality of shrub masses and hedges justifies recording, details have been recorded to the tree survey plan and tree data tables.
- 4.5** Where trees are surveyed that require immediate attention, for example to abate a nuisance, prevent a serious hazard to life or property, or are affected by a pathogen or pest that could cause widespread damage unless it is controlled, notification will be issued to the relevant person or organisation such that appropriate action can be taken.
- 4.6** Root Protection Areas for those trees surveyed have been calculated in accordance with the formulas within section 4.6 and Annex C of the Standard and can be found within the tree data tables that accompany this report. The tree data tables also contain a key to abbreviations used and the rationale for determining Root Protection Areas for groups of trees and woodlands (where applicable).

5.0 Survey Results & Impact Assessment

- 5.1 Existing Tree Cover:** Five individual trees, twelve groups of trees and one woodland were recorded during our survey, the details of which can be found within Appendix 1 to this report, including tree quality categories in accordance with BS:5837:2012 and details of Tree Preservation Orders. This information is also available at 3.4 of this report. The tree numbering system is to be cross referenced with drawing P.956.17.01 *Tree Survey* appended to this report.
- 5.2 Direct Impact on Trees:** The development of the site as proposed will directly require the removal of G1, T1-T4, G2, T5, G3, G4, G6, G7 (in part), G8, G9 (in part), G10 (in part), G11 (in part) and G12. Compensation for the loss of trees and the impact on canopy cover can be provided by way of planting new trees at the landscape stage of the project. Given the nature of the proposals, the context of the site in the local landscape and the opportunities for new planting and landscaping, it is considered that in terms of canopy cover, the medium to long term impact of the development will be neutral.
- 5.3 Indirect Impact on Trees:** In the absence of suitable controls, the development may well have an indirect impact on a number of trees on and adjacent the site. Measures are therefore required during the construction phase, as described throughout this report, in order to safeguard retained trees for the long-term benefit of the landscape.
- 5.4 Hedgerows:** In accordance with the Hedgerow Regulations 1997, 'important' hedgerows (in the context of the Regulations) should not be removed without a Hedgerow Removal Notice issued by the relevant Local Authority, unless that removal is subject to an appropriate consent under the Town and Country Planning Act 1990. In this instance however, no hedgerows are proposed for removal to accommodate the development proposals, therefore there are no arboricultural implications associated with such work.
- 5.5 Potential Mitigation for Development Impacts:** Mitigation of the direct impacts from the development of the site can be provided in the form of the erection of protective fencing as indicated on the attached drawings and the use of site specific actions adopting modern methods of construction as agreed and documented within an appropriate Arboricultural Method Statement.

5.0 Survey Results & Impact Assessment (Continued)

- 5.6 Potential for Shading & Nuisance:** Mature trees in urban and suburban areas add significant value and environmental benefits to properties; however, it is acknowledged that some land / property owners are averse to retaining trees close to buildings and areas of public use because of shading and other potential nuisances (leaf / fruit drop for example). Whilst efforts can be made to minimise the impact from shading by trees, it is almost inevitable that in some situations, whether in the short term from existing trees or in the long term from new trees, trees will cast shade on parts of properties, whether that be buildings, garden / open space or other areas of general use during part of the day. Generally, any shade cast from trees will be for relatively short periods and entirely acceptable given the accepted co-existence of large trees in an urban context. The acceptability or otherwise of shade is a somewhat subjective issue driven largely by land or property owner / occupier perceptions and in the majority of cases is not necessarily something that should be determined by a local planning authority. We do not consider in this case that shade will be excessive, or that any other ordinary circumstance arising from the presence of trees, for example from leaf or fruit drop, will constitute an unacceptable nuisance.
- 5.7 Boundary Screening:** Trees located adjacent to the boundaries of the site make a welcome contribution to the screening of views and can be complemented by the planting of new trees and shrubs such as to filter views and integrate the development into the surrounding landscape. The absence of trees along parts of the site boundary, particularly to the east, creates an opportunity for new planting where, if required from a landscape perspective, can be addressed by a suitable mixture of trees, shrubs and where appropriate hedging to soften the hard edges of the built environment, filter views in and out of the site and generally integrate the development into the surrounding landscape.
- 5.8 Long Term Spatial Constraints:** The proposed layout has been designed to meet the standards set by the local planning authority and is such that, where applicable, there should generally be adequate space between new buildings and trees to limit the potential for future pressure to remove trees. Whilst it is not possible to predict what actions future occupiers will seek to take in respect of trees within or adjacent properties, the existing layout is considered acceptable from a design perspective and contributes to a balanced landscape.
- 5.9 Existing Areas of Hard Standing:** As part of the development of the site, Mill Road is to be upgraded and part of the road is located within the root protection area of a Norway Maple located within G11 subject to TPO276. Excavations to remove the footpath and road have the potential to damage roots which could result in reduced longevity and structural instability. We therefore advise that excavations are only permitted to the depth of the existing sub-base and that all works in this vicinity are carried out under the supervision of the project arboriculturist to ensure any exposed roots are pruned cleanly back to the soil surface as promptly as possible. This element of the remediation phase should be detailed within an Arboricultural Method Statement. Our preliminary details to suitably protect the tree are marked on Drawing P.956.17.02 *Tree Constraints & Draft Protection Drawing* appended to this report.

5.0 Survey Results & Impact Assessment (Continued)

- 5.10 Existing buildings/structures to be removed:** All retained trees are located around the periphery of the site and therefore the demolition of the existing buildings, which are located away from the trees, will have no arboricultural implications.
- 5.11 Proposed Areas of Hard Standing:** The construction of the upgraded Mill Road and a section of footpath towards the northern end of the development area have the potential to adversely impact adjacent retained trees during construction; however, in both instances, we do not consider there will be a need for specialised construction methodologies as careful construction works with an element of root pruning should provide suitable protection. The road re-surfacing and upgrade works to Mill Road within the root protection area of the protected Norway Maple should have no more of a detrimental impact on the roots of the tree than that which already exists providing construction works as described within 5.9 are implemented effectively. The area of encroachment into G1 towards the north of the site is small enough to be considered negligible.
- 5.12 Proposed Buildings Located Adjacent / Within Root Protection Areas:** Apartment block 231-236 is located marginally within the RPA of a protected 10m Norway Maple tree within G11 and therefore there is the potential for root damage during foundation excavations. To avoid this, it is advised that the tree protection fencing is attached to the scaffolding of the nearest elevation and all excavations are supervised by the project arboriculturist to ensure any exposed roots are dealt with appropriately.
- 5.13 Proposed Drainage & Domestic Services:** The proposed culvert along the eastern boundary is located within the root protection area of retained trees within G7 at its northern end. Excavations in this area should be carried out carefully, with roots pruned cleanly back to the soil surface as promptly as possible. During the installation process, general guidance can be obtained from the National Joint Utilities Group Publication *Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees – Volume 4* such as to minimise the impact of works on retained trees.
- 5.14 Working Space During the Construction Phase:** The site is of a size such that there will be adequate working space throughout the construction phase, with little if any potential impact on retained trees. However, it is essential that construction exclusion zones created to safeguard retained trees are not breached without prior consideration and implementation of control measures to limit any potentially negative impacts on trees. Recommendations regarding access facilitation pruning should also be strictly followed in order to ensure suitable clearance of canopies where trees are located close to areas proposed for intense development activity.
- 5.15 Access Facilitation Pruning:** There may be a limited number of areas within the site where an element of access facilitation pruning may be required as annotated on the attached drawings. Providing that these works are controlled and carried out to a minimum of the standards as contained within BS3998: 2010 *Tree work – Recommendations*, then the visual impact of the work will be minimal and will not detract from the overall landscape value of the site. Our preliminary recommendations for arboricultural works are stated within the Tree Data Tables at Appendix 1.

5.0 Survey Results & Impact Assessment (Continued)

- 5.16 Protection of Planting Areas:** It is often desirable to fence off areas that are to be newly planted to protect the soil structure; however, in this instance, areas of the site that can be planted up at the landscaping stage of the project are effectively excluded from the impacts of the construction phase by the tree protection fencing and there is therefore no need to erect additional fencing to protect the soil.
- 5.17 Requirement for an Arboricultural Method Statement:** It would be beneficial to agree and implement an Arboricultural Method Statement ensure that retained trees are adequately protected from the outset and that no unnecessary harm occurs during the construction phase. Section 6 of this report contains further details of the aspects of the development that could successfully be controlled, which can in turn be subject to a suitably worded planning condition.
- 5.18 Planning for New Landscaping:** If not considered carefully at the design stage, new planting and landscaping can have an adverse impact on existing trees and cause long term problems for the built environment. Care should be taken in the design of new landscapes to prevent physical damage to retained trees during the planting process, and to ensure that schemes are designed to survive and thrive rather than compete for resources. Similarly, new trees and shrubs should not be planted where they will cause damage to structures, either directly or indirectly in the future. Table A1 at Annex A of the Standard gives advice on minimum distances for new trees from structures to avoid direct damage from future tree growth. Further advice should be sought from the project arboriculturist and a suitably qualified and experienced engineer as to the potential indirect impact of trees on structures in the long term (from clay shrinkage subsidence).

6.0 Tree Protection Measures

6.1 On the basis of the proposed layout and those trees proposed for retention, drawing P.956.17.02 *Tree Constraints & Draft Protection Drawing* shows our preliminary recommendations for the physical protection of retained trees throughout the construction phase. The plan indicates the location of protective barriers, as well as the specification for construction of the protective fencing in accordance with Figures 2 & 3 of the Standard. These barriers will form a construction exclusion zone around the retained trees.

6.2 In addition to the erection of protective fencing, drawing P.956.17.02 *Tree Constraints & Draft Protection Drawing* shows areas where it would be beneficial to agree an Arboricultural Method Statement between the project arboriculturist, design & construction teams and the local planning authority tree officer. The Arboricultural Method Statement will need to address and make allowance for the following:

- All forms of access required to the site;
- Site cabins and storage areas;
- Proposed parking for site personnel;
- Phasing of works;
- Space required for excavations (including foundation excavations);
- Any required special construction techniques (for example provision of porous surfaces);
- The location and construction methodology for installation of services in close proximity to retained trees & hedges;
- Any changes in ground levels and any resulting requirement for retaining structures;
- Proposed root zone enhancement measures;
- Working space for cranes, plant and scaffolding; and
- Management of waste products within the site.

6.3 Over and above the physical tree protection measures that should form the basis of the Arboricultural Method Statement, the following details should be provided:

- Protection of the soil structure within the proposed planted areas (where applicable);
- Planting operations within the root protection areas of retained trees;
- Any required / additional precautions outside of construction exclusion zones in relation to the treatment & landscaping of garden or open space areas;
- System of arboricultural site monitoring / schedule of site visits and resulting actions.

7.0 Summary of Impacts & Potential Mitigation Factors

- 7.1** Table 1 below summarises the impacts of the development as proposed on tree cover within and immediately adjacent the site. Comments are also provided on potential mitigation, compensation or special measures required in order to minimise the impact of the development and safeguard trees proposed for retention.

Table 1: Summary of the impacts of the development on trees within / adjacent the site.

Issue	Affecting	Mitigation / Compensation / Special Procedures
Trees / hedges to be removed	G1, T1-T4, G2, T5, G3, G4, G6, G7 (in part), G8, G9 (in part), G10 (in part), G11 (in part) and G12	Appropriate compensation can be provided by way of new / replacement planting at the landscape stage of the project. Biodiversity enhancements can also be achieved through the landscape proposals.
Indirect physical impact on retained trees	Retained trees	Tree protection fencing should be erected to an agreed specification in advance of the commencement of the development. Key areas where works are proposed within or immediately adjacent root protection areas of retained trees should be subject to an arboricultural method statement, agreed in advance as a condition of planning consent.
Removal of existing hard standing	G11	Existing hard standing should be removed with care and no excavations permitted deeper than existing sub-base without adequate precautionary measures to prevent unnecessary damage to retained trees.
Provision of new hard surfaces	G7 and G11	Careful excavations will be required with an element of root pruning when necessary. Works in this area to be overseen by project arboriculturist.
Construction of new buildings/structures	G11	Location of protection fencing to be strictly followed. No excavations permitted beyond line of fence. Canopies pruned back in advance of construction works to allow suitable clearance.
Access Facilitation Pruning	G7 and G11	All pruning works should be carried out to a minimum of the standards contained within BS3998: 2010 <i>Tree work – Recommendations</i> .
Protective Fencing	To be erected to an agreed specification in advance of the commencement of the development and retained in-situ throughout the course of the construction phase.	

- 7.2** On the basis of the above and the contents of this report, it is considered appropriate that an Arboricultural Method Statement be prepared as a condition of planning consent to demonstrate how trees proposed for retention can be suitably safeguarded. The Arboricultural Method Statement should be adopted as a control document by site personnel.

8.0 Conclusions & Recommendations

- 8.1** The direct and indirect impacts on tree cover as a result of the development proposals are outlined within this report and mitigation proposed accordingly that seeks where possible to satisfy local and national planning guidance and policy. Where trees are proposed for removal, replacement planting should be undertaken as part of a landscape strategy for the site in line with local plan requirements and to integrate the development into the surrounding landscape. Arrangements for the safeguarding and physical protection of retained trees should be agreed and implemented in a manner consistent with current arboricultural management practices to minimise any potentially negative effects on long term tree cover.
- 8.2** We recommend that a landscape proposal be prepared for the site, to include where feasible provision for the planting of a mixture of native, as well as ornamental trees, shrubs and hedges, and implemented as a condition of planning consent. We also recommend that tree protection measures are implemented in accordance with an Arboricultural Method Statement, to be prepared and implemented as a condition of planning consent for the development.

9.0 References

Department for Communities and Local Government (March 2012) *National Planning Policy Framework*;

British Standard 5837: 2012 *Trees in relation to design, demolition and construction – Recommendations*;

National Joint Utilities Group Publication *Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees – Volume 4*.

Appendix 1

Site:	The site of Tetrosyl Ltd, Bury, BL9 6RE	Surveyor:	Robert Armitage	 Landscape Trees Ecology
Client:	Barratt Homes	Survey Date:	6 th December 2017	
Brief:	Tree Survey to BS5837:2012	Survey Conditions:	Cold and cloudy	

T. No	Species	Ht (m)	Stem DBH (mm)	RPA Radius (m)	Branch Spread				Ht Crown Clearance (m)	Age Class	P Condition	Structural Condition & General Comments	Preliminary	Est. (yrs)	Cat
					N	S	E	W					Recommendations		Grade
G1	Poplar	27	760 540 ave	6.48	6	6	6	6	1.5	EM	F	Linear group of trees providing good screening. Trees spaced approximately 2m apart. Appear in reasonable health and condition. There is a small retaining wall and boundary metal fence positioned approximately 1m from the trees.	Remove and replace for development.	20+	B2
T1	Birch	6	210	2.52	2.5	2.5	2.5	2.5	1.5	Y/EM	F	Minor dead wood. Pendulous form.	Remove and replace for development.	30+	B2
T2	Weeping Ash	5	240	2.88	3.5	3.5	4	3.5	1.5	Y/EM	F	Attractive appearance. Appears to be regularly pruned to maintain form.	Remove and replace for development.	30+	B2
T3	Birch	4	130	1.56	2	2	2	2	1	Y	F	Some branch deformation and stem wounding. Strimmer damage to the base of the stem.	Remove and replace for development.	20	C2
T4	Sycamore	12.5	530	6.36	4	4	4	4	3	Y/EM	F	Two co-dominant stems from 0.4m. Large bark included union.	Remove and replace for development.	20	B2/C2
G2	Sycamore, Goat Willow, Elder	17	#500 ave	6.00	7	7	7	7	1.5	EM	F	Multi-stemmed, ivy colonised trees located between the road side retaining wall and the metal site boundary fence. Low value trees.	Remove and replace for development.	20+	C2
T5	Cherry	8.5	360	4.32	5	5	5	5	2	EM	P	Large wounds on several main branches. Strimmer damage to base with a small fruiting body of <i>Ganoderma</i> spp. Canopy appears in poor condition indicative of low vigour.	Remove and replace for development.	10	C1/U

NOTE: The Category Grade applied to trees surveyed is consistent with the recommendations within Table 1 of BS5837: 2012, however this does not necessarily correlate with the visual importance of a tree within the wider landscape, nor does it dictate which trees should be retained at the cost of quality development. Where trees are to be lost to accommodate a development, recommendations will be made such as to provide suitable mitigation and compensation, and to integrate the development into the wider landscape.

Key to Abbreviations & Headings

T. No.: Tree number (T = Tree, G – Group, W = Woodland, H = Hedge, Cpt. = Compartment)
Stem DBH (Diameter at Breast Height): Measured at 1.5m above ground level*
Ht Crown Clearance: Canopy ground clearance
Structural Condition: Description of any observed defects
Cat. Grade: Tree quality assessment in accordance with BS5837: 2012

Species: Common name used
Root Protection Area Radius: Root Protection Area as per BS5837: 2012
Age Class: Y = Young, EM = Early Mature, M = Mature, OM = Over mature, D = Dead
Preliminary Recommendations: Made in respect of known / intended use of the site
* For groups of trees, the stem diameter of the largest tree in the group is generally used
Denotes estimated DBH where access was not possible

Ht: Approximate height of tree from ground level in metres
Branch Spread: Extent of canopy spread in metres to each of the four cardinal points
P (Physiological) Condition: G = Good, F = Fair, P = Poor, D = Dead
Est. (yrs): Estimated remaining contribution in years

Site:	The site of Tetrosyl Ltd, Bury, BL9 6RE	Surveyor:	Robert Armitage	 Landscape Trees Ecology
Client:	Barratt Homes	Survey Date:	6 th December 2017	
Brief:	Tree Survey to BS5837:2012	Survey Conditions:	Cold and cloudy	

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T. No	Species	Ht (m)	Stem DBH (mm)	RPA Radius (m)	Branch Spread				Ht Crown Clearance (m)	Age Class	P Condition	Structural Condition & General Comments	Preliminary	Est. (yrs)	Cat
					N	S	E	W					Recommendations		Grade
G3	Field Maple, Aspen, Bird Cherry, Alder, Goat Willow	15	360 ave	4.32	4.5	4.5	4.5	4.5	2.5	Y/EM	F	Predominantly consists of planted Cherry trees with emerging Aspen and occasionally Field Maple and Alder. Cherry trees are generally poorly formed and are showing some signs of ill-health and low vigour. Canopies appear sparse and the leaves are somewhat distorted. Aspen in good condition. Hard standing approximately 3m away from nearest stems.	Remove and replace with better condition trees that are more suitable to the nature of the development.	30	C2
G4	Hawthorn, Goat Willow, Birch, Aspen, Grey Willow, Sycamore, White Poplar, Hazel, Cypress, Ash, Lime	18	#250	3.00	4	4	4	4	0	Y/EM	F	Scrubby appearance to the group. Mostly 6-7m scrub, predominantly Willow with occasional taller emerging White Poplar, Aspen and Sycamore. Occasional taller 18m Aspen, majority of group 12-15m.	Remove and replace with better condition trees that are more suitable to the nature of the development.	30+	C2
G5	Aspen, Lime, Goat Willow, Norway Maple, Birch	10	#400	4.80	5.5	5.5	5.5	5.5	0	Y/EM	F	Self-seeded, dense group predominantly made up of Goat Willow with dogwood understorey in parts. Provides some reasonable screen from adjacent properties, but relatively low retention value as individuals.	No works required at this stage.	30+	C2
G6	Goat Willow, Hawthorn, Cherry, Oak, Pine, Ash, Grey Willow	12	#280	5.76	3	3	3	3	0	Y	F	Self seeded scrub growing between warehouse and hard standing area. Low value trees.	Remove and replace for development.	30	C2

NOTE: The Category Grade applied to trees surveyed is consistent with the recommendations within Table 1 of BS5837: 2012, however this does not necessarily correlate with the visual importance of a tree within the wider landscape, nor does it dictate which trees should be retained at the cost of quality development. Where trees are to be lost to accommodate a development, recommendations will be made such as to provide suitable mitigation and compensation, and to integrate the development into the wider landscape.

Key to Abbreviations & Headings

T. No.: Tree number (T = Tree, G – Group, W = Woodland, H = Hedge, Cpt. = Compartment)

Stem DBH (Diameter at Breast Height): Measured at 1.5m above ground level*

Ht Crown Clearance: Canopy ground clearance

Structural Condition: Description of any observed defects

Cat. Grade: Tree quality assessment in accordance with BS5837: 2012

Species: Common name used

Root Protection Area Radius: Root Protection Area as per BS5837: 2012

Age Class: Y = Young, EM = Early Mature, M = Mature, OM = Over mature, D = Dead

Preliminary Recommendations: Made in respect of known / intended use of the site

* For groups of trees, the stem diameter of the largest tree in the group is generally used

Denotes estimated DBH where access was not possible

Ht: Approximate height of tree from ground level in metres

Branch Spread: Extent of canopy spread in metres to each of the four cardinal points

P (Physiological) Condition: G = Good, F = Fair, P = Poor, D = Dead

Est. (yrs): Estimated remaining contribution in years

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Site:	The site of Tetrosyl Ltd, Bury, BL9 6RE	Surveyor:	Robert Armitage	 Landscape Trees Ecology
Client:	Barratt Homes	Survey Date:	6 th December 2017	
Brief:	Tree Survey to BS5837:2012	Survey Conditions:	Cold and cloudy	

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T. No	Species	Ht (m)	Stem DBH (mm)	RPA Radius (m)	Branch Spread				Ht Crown Clearance (m)	Age Class	P Condition	Structural Condition & General Comments	Preliminary	Est. (yrs)	Cat
					N	S	E	W					Recommendations		Grade
G7	Oak, Grey Willow, Goat Willow, Elder, Sycamore, Rowan	11	#350	4.20	5	5	5	5	0	Y/EM/M	F	Generally self seeded scrub group of low value, young trees. However, occasionally contains mature Oak trees of good condition. Trees located near to an old dry stone wall.	Remove specified sections for development and proposed culvert. Plant replacement trees elsewhere on site.	30+	B2
W1	Oak, Rhododendron, Elder	15	680	8.16	6	6	6	6	0	Y/EM/M	F/G	Oak woodland with understorey of predominantly Elder and Rhododendron. Dense ground flora of fern. Good quality, trees. Subject to TPO106.	No works required at this stage.	40+	B1
G8	Alder, Grey Willow, Goat Willow	6	240	2.88	2	2	2	2	0	Y/EM	F	Self seeded, low quality trees growing around the perimeter of the lake.	Remove and replace for development.	20+	C2
G9	Lombardy Poplar, White Poplar, Sycamore, Grey Willow, Birch, Goat Willow, Oak	22	500	6.00	3	3	3	3	0	Y/EM	F	7m understorey below taller emerging Lombardy Poplars. Most DBHs around 200mm. Trees growing on raised embankment above existing car park. Stems approximately 3m away from adjacent hard standing. Oak and <i>Cornus</i> spp in understorey. Becomes low value, young self-seeded Goat Willow on embankment, with occasional emerging Sycamore and one 13m Oak towards bottom of slope.	Remove specified sections for development. Plant replacement trees elsewhere on site.	20+	B2/C2
G10	Sycamore	17	430	5.16	4	4	4	4	0	EM	F	Off-site. Growing on embankment well above site. Low value.	Remove on site trees to accommodate development. Plant replacement trees elsewhere on site.	20+	B2/C2

NOTE: The Category Grade applied to trees surveyed is consistent with the recommendations within Table 1 of BS5837: 2012, however this does not necessarily correlate with the visual importance of a tree within the wider landscape, nor does it dictate which trees should be retained at the cost of quality development. Where trees are to be lost to accommodate a development, recommendations will be made such as to provide suitable mitigation and compensation, and to integrate the development into the wider landscape.

Key to Abbreviations & Headings

T. No.: Tree number (T = Tree, G – Group, W = Woodland, H = Hedge, Cpt. = Compartment)
Stem DBH (Diameter at Breast Height): Measured at 1.5m above ground level*
Ht Crown Clearance: Canopy ground clearance
Structural Condition: Description of any observed defects
Cat. Grade: Tree quality assessment in accordance with BS5837: 2012

Species: Common name used
Root Protection Area Radius: Root Protection Area as per BS5837: 2012
Age Class: Y = Young, EM = Early Mature, M = Mature, OM = Over mature, D = Dead
Preliminary Recommendations: Made in respect of known / intended use of the site
* For groups of trees, the stem diameter of the largest tree in the group is generally used
Denotes estimated DBH where access was not possible

Ht: Approximate height of tree from ground level in metres
Branch Spread: Extent of canopy spread in metres to each of the four cardinal points
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Est. (yrs): Estimated remaining contribution in years

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Site:	The site of Tetrosyl Ltd, Bury, BL9 6RE	Surveyor:	Robert Armitage	 Landscape Trees Ecology
Client:	Barratt Homes	Survey Date:	6 th December 2017	
Brief:	Tree Survey to BS5837:2012	Survey Conditions:	Cold and cloudy	

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T. No	Species	Ht (m)	Stem DBH (mm)	RPA Radius (m)	Branch Spread				Ht Crown Clearance (m)	Age Class	P Condition	Structural Condition & General Comments	Preliminary	Est. (yrs)	Cat
				(m)	N	S	E	W					Recommendations		Grade
G11	Norway Maple, Birch, Grey Willow, Goat Ash	8	#180	2.16	3	3	3	3	0	Y	F	Low value trees. Poorly formed, mature, multi stemmed Goat Willow. Two Norway Maples subject to TPO276.	Remove as specified. Agree removal of off-site low value trees at western end of group. Plant replacement trees elsewhere on site.	20+	C2
G12	Holly, Sycamore, Hawthorn, Grey Willow	9	#200	2.40	4	4	4	4	0	Y/EM	F	Self seeded, low value scrub growing adjacent the road.	Remove and replace for development.	30+	C2

NOTE: The Category Grade applied to trees surveyed is consistent with the recommendations within Table 1 of BS5837: 2012, however this does not necessarily correlate with the visual importance of a tree within the wider landscape, nor does it dictate which trees should be retained at the cost of quality development. Where trees are to be lost to accommodate a development, recommendations will be made such as to provide suitable mitigation and compensation, and to integrate the development into the wider landscape.

Key to Abbreviations & Headings

T. No.: Tree number (T = Tree, G – Group, W = Woodland, H = Hedge, Cpt. = Compartment)
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Species: Common name used
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Age Class: Y = Young, EM =Early Mature, M = Mature, OM = Over mature, D = Dead
Preliminary Recommendations: Made in respect of known / intended use of the site
* For groups of trees, the stem diameter of the largest tree in the group is generally used
Denotes estimated DBH where access was not possible

Ht: Approximate height of tree from ground level in metres
Branch Spread: Extent of canopy spread in metres to each of the four cardinal points
P (Physiological) Condition: G = Good, F = Fair, P = Poor, D = Dead
Est. (yrs): Estimated remaining contribution in years

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Appendix 2

CLIENT:
Bellway Homes Ltd

PROJECT:
Tetrosyl, Walmersley Old Road, Bury

DRAWING TITLE:
Tree Survey

SCALE: 1:500 @A0
DATE: 06/12/2017
DRAWN BY: CP
CHECKED BY: RA
DRAWING No: P.956.17.01
REV: C

KEY

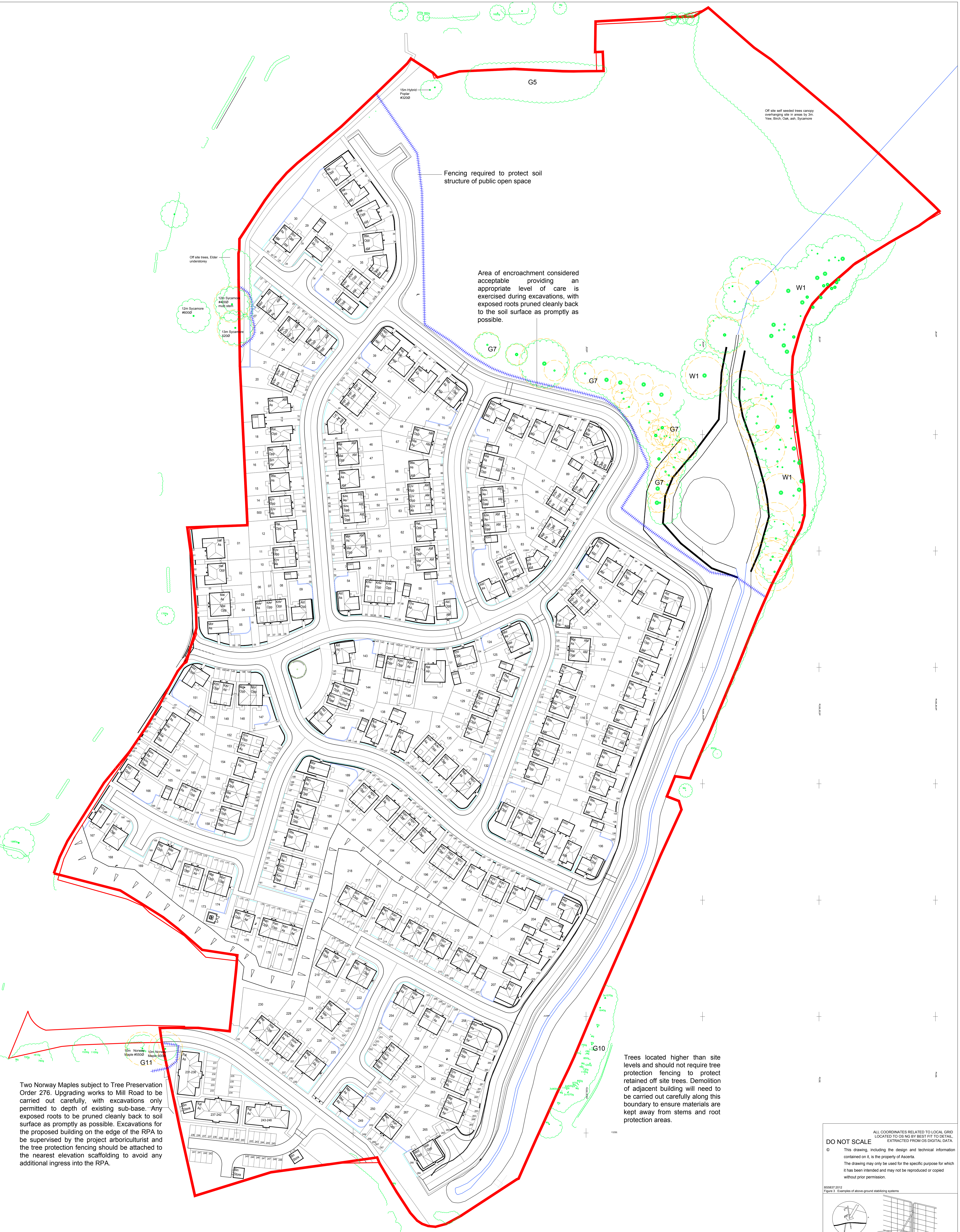
- Existing tree to be retained
- Existing tree to be removed

REV	DESCRIPTION	DATE
A	General updates	30/05/18
B	General updates	09/10/18
C	General updates	03/06/19

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ALL COORDINATES RELATED TO LOCAL GRID LOCATED TO OS NG BY BEST FIT TO DETAIL, EXTRACTED FROM OS DIGITAL DATA.



Two Norway Maples subject to Tree Preservation Order 276. Upgrading works to Mill Road to be carried out carefully, with excavations only permitted to depth of existing sub-base. Any exposed roots to be pruned cleanly back to soil surface as promptly as possible. Excavations for the proposed building on the edge of the RPA to be supervised by the project arboriculturist and the tree protection fencing should be attached to the nearest elevation scaffolding to avoid any additional ingress into the RPA.

Trees located higher than site levels and should not require tree protection fencing to protect retained off site trees. Demolition of adjacent building will need to be carried out carefully along this boundary to ensure materials are kept away from stems and root protection areas.

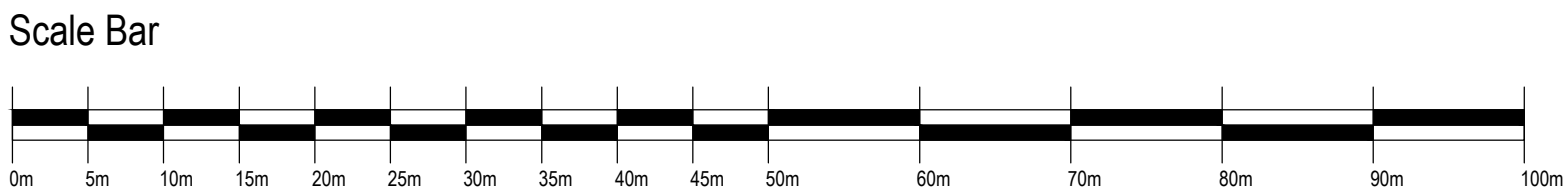
Ascerta
Landscape | Trees | Ecology

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Web: www.landscapetreeseecology.com

CLIENT:
Bellway Homes Ltd
PROJECT:
Tetrosyl, Walmersley Old Road, Bury
DRAWING TITLE:
Tree Constraints & Draft Protection Drawing
SCALE: 1:500 @A0
DATE: 06/12/2017
DRAWN BY: CP
CHECKED BY: RA
DRAWING No: P.956.17.02
REV: F

- KEY
- Existing tree to be retained
 - Extent of Root Protection Area for retained trees in accordance with BS5837: 2012 Trees in relation to design, demolition and construction - Recommendations
 - Proposed location of protective fencing - see inset for type / construction detail

REV	DESCRIPTION	DATE
A	General updates	30/05/18
B	General updates	09/10/18
C	General updates	12/11/18
D	General updates	08/05/19
E	updated to "WIP_35M - 456_P_FL02_Tetrosyl_Planning Layout_D"	03/06/19
F	updated to "456_P_FL02_Tetrosyl_Planning Layout_E"	29/07/19



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BS5837:2012
Figure 3. Examples of above-ground stabilizing systems

