

**GALLAGHER ESTATES LTD** 

WYKHAM PARK FARM, OXFORDSHIRE

**Tree Survey** 

**November 2014** 



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**Tree Survey** 

November 2014

PREPARED BY:

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**APPROVED BY:** 

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ENERGY AND CLIMATE CHANGE ENVIRONMENT AND SUSTAINABILITY INFRASTRUCTURE AND UTILITIES



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#### 1 INTRODUCTION

- 1.1.1 Treetec Consultancy Limited (Treetec) has been instructed by consultants Wardell Armstrong LLP, on behalf of Gallagher Estates Limited, to identify and assess the significant trees that may be affected by proposed construction 1.7 kilometres to the south of Banbury town centre in Oxfordshire.
- 1.1.2 It is intended that this report will be used to inform design proposals aimed at minimising, where possible, damage to existing trees identified as being of amenity value and supports the planning application for development of the site.
- 1.1.3 An Arboriculturalist from Treetec visited the site on the 10th October 2012 and surveyed all the significant trees which are at risk of being influenced by the proposed work. In total 13 groups and 49 individual trees fall into this category.
- 1.1.4 A further tree survey was undertaken on the 30th July 2014 to include an additional area added within the red line at the eastern end of the site.
- 1.1.5 The surveys support a planning application that seeks outline planning permission for residential development of the Site, and seeks detailed approval for the roundabout access off Bloxham Road. This survey therefore targets in detail the potential impact on significant trees from the proposed roundabout and also makes reference to the remainder of the site.
- 1.1.6 The weather conditions during the visit were overcast and cold during the initial visit but warm and sunny during the second visit

## 1.2 Scope

- 1.2.1 The survey identifies and reports on the general condition and amenity value of significant trees and vegetation situated within the influence of the proposed development, including any adjacent trees that may be affected.
- 1.2.2 British Standard BS5837:2012 "Trees in Relation to design, demolition and construction-Recommendations" has been used as the basis for the assessment. It is



intended that the information contained in this report will be used to ensure the decisions made in respect of future development proposals take into account the tree resource. Trees worthy of retention that are beneficial to the screening and the softening of the site have been identified. Conversely, less valuable trees, which are of lower importance due to their poor condition or for other reasons, have also been identified; these trees may be considered as suitable candidates for removal.

- 1.2.3 Due to the composition of the trees within and immediately adjacent to the site they have been surveyed as individuals and groups. Where trees are located on third party land or are found to be inaccessible due to ground conditions all measurements are estimated.
- 1.2.4 Guidance as to the stand-off distances required to prevent damage to trees worthy of retention during the construction phases have been calculated and are shown on the Tree Constraints Plan (TCP). These areas are referred to as the Root Protection Areas (RPAs).
- 1.2.5 It is important that prior to any site excavation and construction works commencing an Arboricultural Impact Assessment (AIA) and an Arboricultural Method Statement (AMS) is provided. The main priority being the protection of trees identified within this survey which are considered to be of amenity value or are in third party ownership and where they are found to be designated with a Tree Preservation Order (TPO).
- 1.2.6 In general, only individual trees that are in excess of 150 mm dbh are included in the survey.
- 1.2.7 Trees considered to be outside of the zone of influence of the development, based on the information provided by the client, have not been included in the survey and are not recorded on the associated tree survey plans.

#### 1.3 Ash dieback disease

1.3.1 Following reports of Ash dieback disease *Chalara fraxinea*, concern of the future health of Ash trees in the UK has been raised. Despite this categorisation of ash



trees within this survey are based around the tree condition at the time of the survey and life expectancy in a normal environment.

- 1.3.2 However at the time of inspection where ash trees are found to have the disease they will fall into the C or U categories (refer to Section 2). Trees that are infected will be reported to the Client and to the Forestry Commission.
- 1.3.3 Treetec will continue to monitor the situation and will react according to relevant research as it develops.

#### 1.4 Personnel

1.4.1 This report has been prepared by Mr Alex Finn Tech Cert (Arbor A), Principal Arboriculturalist at Treetec.

#### 1.5 **Brief Site Description**

- 1.5.1 The site, which covers an area of approximately 52 hectares (ha), is located to the east of the A361 Bloxham Road approximately 1.7 kilometres (km) to the south of Banbury town centre and 2km east of the M40 in Oxfordshire. It is located within an area of arable land within the curtilage of Wykham Park Farm.
- 1.5.2 Current access to the site is gained via a farm track from Bloxham Road that leads to Wykham Park Farm Cottages and eventually the farm itself to the south of the site. It is bordered to the west by the heavily tree lined rural road, Bloxham Road (A361) with Crouch Cottages and Wykham Park Lodge. A small, dense, triangular copse is present north of the north western corner of the site. Agricultural land, associated hedgerows and an historic hedged track/green lane known as Salt Way forms the northern boundary of the site with the boundary along the eastern edge comprising of a low field hedge. The southern site boundary comprises a narrow strip of a young plantation and within the boundaries there are 6 relatively large and regularly shaped arable fields, defined by straight hedges and a young woodland strip.
- 1.5.3 The western and majority of the site area is occupied by a plateau at approximately 130m AOD, falling gently south eastwards from a high point of 133m AOD on the



north western corner and steepening towards a low point of approximately 125M AOD on the south eastern corner. The plateau gradients vary broadly between 1: 45 and 1:50, whereas those on the land to the south steepen to 1:8.

#### 1.6 Protective Status of Trees and Hedgerows

- 1.6.1 Trees may be legally protected by either a Tree Preservation Order (TPO) or by the fact that they are located within a Conservation Area.
- 1.6.2 There is a potential for large penalties to be attracted for illegally carrying out works on protected trees without formal permission to do so.
- 1.6.3 It is advised that if there is a requirement to remove or prune any trees before planning consent has been given, that enquiries are made with the LPA to confirm the status of the site.
- 1.6.4 It should be noted that where it is intended to fell in excess of 5 cubic metres of timber in any calendar quarter it will be necessary to obtain a Felling Licence from the Forestry Commission. There are some exemptions to this regarding dead, dying and dangerous trees and this will only be necessary prior to planning consent or where planning consent is given but there is a change in the proposals.
- 1.6.5 Under the 1997 Hedgerow regulations it is against the law to remove most countryside hedgerows without permission (pre planning consent). To obtain permission to remove a hedgerow, you must write to your local planning authority and if the Council decides to prohibit removal of an important hedgerow, it must let you know within 6 weeks. If you remove a hedgerow without permission (whether it is important or not) you may face an unlimited fine. You may also have to replace the hedgerow.



#### 2 METHODOLOGY

- 2.1.1 All of the trees in this report have been assessed from ground level individually with the aid of the Cascade Chart for Tree Quality Assessment BS 5837:2012 (see Appendix 1).
- 2.1.2 Trees that have been recorded have been given a reference number or letter which can be found within the TCP (see Section 3 below).
- 2.1.3 Assessment is based mainly around the useful life expectancy of the tree(s) and their condition and contribution (amenity value) to the area, which has been categorised using four letters (U, A, B and C) and four colours (red, green, blue and grey), the values of which are shown on the Cascade Chart for Tree Quality Assessment (Appendix 1). The letters have then been divided further using one to three subcategories under one of three sub-headings.
- 2.1.4 All the colour categories and reference numbers have been marked onto the TCP.
- 2.1.5 Branch spread in general has been measured on four sides and recorded together with confirmation on which side of the tree the measurement was taken.
- 2.1.6 Stem diameters has been measured at 1.5m above ground level.
- 2.1.7 Current tree heights have been measured using a SUUNTO Height Meter PM-5/1520, serial number 823208, except where trees are inaccessible when estimated measurements will have been recorded.
- 2.1.8 Where due to local constraints i.e. impenetrable vegetation or trees located in private properties, and it is not possible to gain direct access to the trees, field data will have been estimated. These trees can be identified by the use a letter reference rather than a number.
- 2.1.9 Where base topographical plans are not available or additional trees are added, it will sometimes be necessary to calculate the approximate position of these trees. Where this occurs trees will be mark with the letters "AP" (approximate position).



#### 3 DRAWINGS

#### 3.1 Tree Constraints Plan

- 3.1.1 To accompany this report a Tree Constraints Plan (TCP) has been produced. All trees which have been the subject of the survey have been illustrated and colour coded by reference to the Cascade Chart for Tree Quality Assessment, as shown in Appendix 1.
- 3.1.2 Each colour which represents the assigned tree category has been marked onto the plan. This enables the reader to instantly see the trees and areas of highest or lowest merit and where they are located.
- 3.1.3 Where individual trees are not represented on the original topographical base plan, they have been illustrated in their approximate positions and marked "AP".
- 3.1.4 RPAs are calculated by using the tree's trunk diameter measured at 1.5m above ground level. The measurements are multiplied to provide a minimum area around the tree which should be left undisturbed during the development, in order to remove the risk of decline and ensure the survival of the trees.
- 3.1.5 There is also scope to carry out some construction works within the RPA using proven measures; where necessary.. Where these methods are required they will be recommended within an AMS which will be required once the detailed development design has been finalised.
- 3.1.6 Where tree canopies extend further than the RPA, care will be needed not to damage these during construction. Some pruning back may be accommodated where this is an issue. All work, however, should only be carried out after further assessment and advice from the qualified Arboriculturist and in accordance with BS 3998:2010 "Tree work –project Recommendations".
- 3.1.7 All boundaries are assumed.



#### 3.2 Tree Protection Plan

- 3.2.1 A Tree Protection Plan (TPP) has been included with this report which is represented on a separate plan to the TCP. This plan shows the indicativelocation and specification of the erection of protective barriers and any other relevant physical protection measures including ground protection to protect the RPA (construction exclusion zone).
- 3.2.2 Specifications in respect of recommended barrier fencing can be found in Appendix 2 at the end of the survey.

#### 4 PROPOSED WORKS

4.1.1 Up to 1000 dwellings are proposed, together with a local centre, a primary school, green infrastructure including formal and informal open space, amenity space, allotments, retained hedgerows, structural landscaping, supporting infrastructure (including gas, electricity, sewerage, water, telecommunications) sustainable urban drainage systems, new connection to the A361 Bloxham Road, pedestrian and cycling connections to the surrounding footpath and cycle network and any necessary demolition and ground remodelling.



#### **5 OBSERVATIONS**

- 5.1.1 The largest and most dominating trees are found along the western boundary adjacent to Bloxham Road. These consist of mainly category B mixed with a few A category trees of Sycamore *Acer pseudoplatanus*, Lime *Tilia ssp* Oak *Quercus robur* and Beech *Fagus sylvatica*. However two Beech trees at the southern end of this row, adjacent to Wykham Park Lodge, are considered to be unstable and should be removed as a matter of urgency.
- 5.1.2 Located to the south and west of the site are some isolated areas of woodland which have generally been planted within the last 15-20yrs. The only exception to this is a triangle area of mature woodland of Sycamore, Oak and Larch *Larix decidua* located in the north west of the site.
- 5.1.3 Within the site itself the land is divided into a number of field parcels by mature managed hedgerows and hedgerow trees mainly consisting of hawthorn *Crataegus mon*ogyna, field maple Acer campestre, blackthorn Prunus spinosa, elder Sambucus nigra, elm *Ulmus ssp* and hazel *Corylus avellana*.
- 5.1.4 The land is relatively flat but falls away to the south west and beyond the southern boundary. Due to the young plantations and the general trees and hedgerow resource around the boundaries of the site it is fairly well secluded.



## 6 TREE SURVEY

6.1.1 All the site information used for the assessment and grading of the individual trees and groups has been recorded into the following Tree Survey Table using the Cascade Chart for Tree Quality Assessment BS 5837:2012 (Appendix 1) from which the table template has also been taken.



Tree reference number	Species	Latin name	Height (m)	Stem diameter (mm)	No of stems	Canopy Spread N (m)	Canopy Spread E (m)	Canopy Spread S (m)	Canopy Spread W (m)	First Significant branch (m agl)	Age class	Physiological condition	Structural condition	Preliminary management recommendations	Estimated remaining contribution	Category grading
G135	English oak	Quercus robur	13	350	1	5	5	5	5	2	SM	Good	Good	None	20+	B2
G135	Lime	Tilia europaea	13	350	1	5	5	5	5	2	SM	Good	Good	None	20+	B2
G135	Beech	Fagus sylvatica	13	350	1	5	5	5	5	2	SM	Good	Good	None	20+	B2
T136	Sycamore	Acer pseudoplatanus	26	1200	1	12	12	7	10	5	ОМ	Good	Good	None	20+	B2
T137	Lime	Tilia europaea	26	1300	1	6	10	10	9	10	ОМ	Good	Good	None	20+	A2
T138	Sycamore	Acer pseudoplatanus	18	400	1	2.5	7	5	6	4	М	Good	Good	None	20+	C2
T139	Sycamore	Acer pseudoplatanus	22	900	1	9	9	5	9	3	М	Good	Good	None	20+	B2
T140	Lime	Tilia europaea	22	1250	1	7	8	7	8	5	ОМ	Good	Good	None	20+	A2
T141	Sycamore	Acer pseudoplatanus	26	1000	1	6	7	6	8	5	OM	Good	Good	None	20+	A2
T142	Lime	Tilia europaea	24	1300	1	10	9	8	9	5	ОМ	Good	Good	None	20+	A2
T143	Sycamore	Acer pseudoplatanus	22	1000	1	5	14	10	13	5	ОМ	Fair	Good	None	20+	B2
T144	Norway maple	Acer platanoides	24	1000	1	6	10	10	8	5	ОМ	Good	Good	None	20+	B2
T145	Lime	Tilia europaea	20	1000	1	5	7	4	8	2	М	Fair	Good	None	10+	C2
T146	Sycamore	Acer pseudoplatanus	22	1100	1	7	10	10	9	1	ОМ	Good	Good	None	20+	B2
T147	Lime	Tilia europaea	21	800	1	6	6	6	9	5	М	Good	Good	None	20+	B2



Tree reference number	Species	Latin name	Height (m)	Stem diameter (mm)	No of stems	Canopy Spread N (m)	Canopy Spread E (m)	Canopy Spread S (m)	Canopy Spread W (m)	First Significant branch (m agl)	Age class	Physiological condition	Structural condition	Preliminary management recommendations	Estimated remaining contribution	Category grading
T148	Ash	Fraxiinus excelsoir	16	1000	1	4	5	9	4	6	ОМ	Poor	Poor	None	10+	C2
T149	English oak	Quercus robur	18	700	1	7	8	4	4	8	М	Good	Good	None	20+	B2
T150	Sycamore	Acer pseudoplatanus	21	830	1	8	4	6	11	8	М	Good	Good	None	20+	B2
T151	Sycamore	Acer pseudoplatanus	23	400	1	5	7	6	3	3	М	Good	Good	None	20+	C2
T152	Sycamore	Acer pseudoplatanus	23	400	1	5	7	5	10	4	М	Good	Good	None	20+	C2
T153	English oak	Quercus robur	23	900	1	5	7	6	8	5	М	Good	Good	None	20+	C2
T154	Sycamore	Acer pseudoplatanus	23	600	1	6	7	5	10	10	М	Good	Good	None	20+	C2
T155	Beech	Fagus sylvatica	25	900	1	9	11	9	12	10	OM	Good	Very poor	Fell	N/A	U
T156	Beech	Fagus sylvatica	25	1050	1	6	10	12	12	10	ОМ	Good	Poor	Fell	N/A	U
T157	Sycamore	Acer pseudoplatanus	19	470	3	6	5	5	6	2	М	Good	Good	None	20+	B1
G158	Sycamore	Acer pseudoplatanus	21	450	3	3	6	3	5	4	М	Good	Good	None	10+	C2
T159	English oak	Quercus robur	18	700	1	9	9	9	9	3	М	Good	Good	None	20+	B2
T160	English oak	Quercus robur	18	1000	1	6	6	6	6	3	ОМ	Good	Good	None	20-	B2
T161	English oak	Quercus robur	19	1000	1	7	8	9	2	3	ОМ	Good	Good	None	20+	B2



Tree reference number	Species	Latin name	Height (m)	Stem diameter (mm)	No of stems	Canopy Spread N (m)	Canopy Spread E (m)	Canopy Spread S (m)	Canopy Spread W (m)	First Significant branch (m agl)	Age class	Physiological condition	Structural condition	Preliminary management recommendations	Estimated remaining contribution	Category grading
T162	Sycamore	Acer pseudoplatanus	17	600	1	8	5	5	2	2	М	Good	Good	None	20+	B2
T163	Sycamore	Acer pseudoplatanus	18	800	1	5	8	5	7	2	М	Fair	Good	None	20+	B2
T164	Sycamore	Acer pseudoplatanus	18	700	3	6	6	7	5	2	М	Good	Good	None	20+	B2
T165	Sycamore	Acer pseudoplatanus	22	1570	1	10	12	10	7	4	OM	Good	Good	None	40+	A1
G166	Field maple	Acer campestre	10	300	1	2	2	2	2	0.1	Υ	Good	Good	None	20+	C2
G166	English oak	Quercus robur	10	300	1	2	2	2	2	0.1	Υ	Good	Good	None	20+	C2
G166	Cherry	Prunus ssp	10	300	1	2	2	2	2	0.1	Υ	Good	Good	None	20+	C2
G166	Silver birch	Betula pendula	10	300	1	2	2	2	2	0.1	Y	Good	Good	None	20+	C2
G166	Hawthorn	Crataegus monogyna	10	300	1	2	2	2	2	0.1	Υ	Good	Good	None	20+	C2
G166	Ash	Fraxiinus excelsoir	10	300	1	2	2	2	2	0.1	Υ	Good	Good	None	20+	C2
G167	Field maple	Acer campestre	15	650	6	8	6	7	6	2	М	Good	Good	None	20+	B2
T168	English oak	Quercus robur	10	140	1	5	5	4	2	2.5	SM	Good	Good	None	20+	C2
T169	Sycamore	Acer pseudoplatanus	16	430	7	5	5	5	7	4	SM	Good	Good	None	10+	C2
T170	Sycamore	Acer pseudoplatanus	16	390	6	6	6	6	4	3	М	Good	Good	None	10+	C2



Tree reference number	Species	Latin name	Height (m)	Stem diameter (mm)	No of stems	Canopy Spread N (m)	Canopy Spread E (m)	Canopy Spread S (m)	Canopy Spread W (m)	First Significant branch (m agl)	Age class	Physiological condition	Structural condition	Preliminary management recommendations	Estimated remaining contribution	Category grading
T171	Sycamore	Acer pseudoplatanus	15	460	2	3	3	4	3	4	М	Good	Good	None	10+	C2
T172	Sycamore	Acer pseudoplatanus	15	450	1	5	5	5	5	4	SM	Good	Good	None	20+	B2
T173	Sycamore	Acer pseudoplatanus	14	430	2	4	4	2	4	3	SM	Good	Good	None	10+	C2
T174	Ash	Fraxiinus excelsoir	18	600	1	10	15	11	12	3	М	Good	Good	None	10+	B2
T175	Ash	Fraxiinus excelsoir	15	730	1	8	9	8	9	4	М	Fair	Good	None	20+	B1
G176	Ash	Fraxiinus excelsoir	18	450	1	5	5	5	5	0.1	М	Good	Good	None	20+	B2
G176	Field maple	Acer campestre	18	450	1	5	5	5	5	0.1	М	Good	Good	None	20+	B2
G176	English oak	Quercus robur	18	450	1	5	5	5	5	0.1	М	Good	Good	None	20+	B2
G176	Lime	Tilia europaea	18	450	1	5	5	5	5	0.1	М	Good	Good	None	20+	B2
T177	Sycamore	Acer pseudoplatanus	14	650	1	7	7	7	6	4	М	Good	Good	None	20+	B1
G178	Ash	Fraxiinus excelsoir	16	350	1	4	4	4	4	2	М	Good	Good	None	20+	B2
G178	Sycamore	Acer pseudoplatanus	16	350	1	4	4	4	4	2	М	Good	Good	None	20+	B2
T179	Ash	Fraxiinus excelsoir	18	700	1	10	10	10	10	4	ОМ	Good	Good	None	20+	B2
T180	Ash	Fraxiinus excelsoir	19	800	1	13	10	10	8	4	ОМ	Good	Good	None	20+	B2



Tree reference number	Species	Latin name	Height (m)	Stem diameter (mm)	No of stems	Canopy Spread N (m)	Canopy Spread E (m)	Canopy Spread S (m)	Canopy Spread W (m)	First Significant branch (m agl)	Age class	Physiological condition	Structural condition	Preliminary management recommendations	Estimated remaining contribution	Category grading
T181	Sycamore	Acer pseudoplatanus	16	620	5	5	6	7	5	0.1	М	Good	Good	None	20+	B2
T182	Sycamore	Acer pseudoplatanus	16	650	5	6	6	6	6	3	М	Good	Good	None	20+	B2
T183	Sycamore	Acer pseudoplatanus	16	400	1	1	7	7	0.5	3	М	Good	Good	None	20+	B2
G184	Field maple	Acer campestre	10	150	1	2	2	2	2	0.1	Υ	Good	Good	None	20+	B2
G184	Ash	Fraxiinus excelsoir	10	150	1	2	2	2	2	0.1	Υ	Good	Good	None	20+	B2
G184	Cherry	Prunus ssp	10	150	1	2	2	2	2	0.1	Υ	Good	Good	None	20+	B2
G184	Scots pine	Pinus sylvestris	10	150	1	2	2	2	2	0.1	Υ	Good	Good	None	20+	B2
G184	Beech	Fagus sylvatica	10	150	1	2	2	2	2	0.1	Υ	Good	Good	None	20+	B2
G184	European Larch	Larix decidua	10	150	1	2	2	2	2	0.1	Υ	Good	Good	None	20+	B2
G185	Field maple	Acer campestre	14	260	1	6	6	6	6	2	SM	Good	Good	None	20+	B2
G185	English oak	Quercus robur	14	260	1	6	6	6	6	2	SM	Good	Good	None	20+	B2
G185	Hawthorn	Crataegus monogyna	14	260		6	6	6	6	2	SM	Good	Good	None	20+	B2
G185	Ash	Fraxiinus excelsoir	14	260	1	6	6	6	6	2	SM	Good	Good	None	20+	B2
T186	English oak	Quercus robur	14	540	4	7	7	7	7	4	М	Good	Good	None	20+	B1
T187	Ash	Fraxiinus excelsoir	16	700	8	8	7	7	6	4	М	Good	Good	None	20+	B1



Tree reference number	Species	Latin name	Height (m)	Stem diameter (mm)	No of stems	Canopy Spread N (m)	Canopy Spread E (m)	Canopy Spread S (m)	Canopy Spread W (m)	First Significant branch (m agl)	Age class	Physiological condition	Structural condition	Preliminary management recommendations	Estimated remaining contribution	Category grading
T188	Ash	Fraxiinus excelsoir	15	540	9	8	6	6	6	3	М	Good	Good	None	20+	C1
G189	Douglas fir	Pseudotsuga menziesii	15	350	1	5	5	5	5	0.5	М	Good	Good	None	10+	C2
T190	Norway maple	Acer platanoides	11	350	1	5	5	5	5	2.5	SM	Good	Poor	None	10-	C1
T191	English oak	Quercus robur	24	1200	1	10	10	11	9	3	ОМ	Good	Good	None	40+	A1
W192	Ash	Fraxiinus excelsoir	20	600	1	9	9	9	9	5	М	Good	Good	None	20+	B2
W192	Sycamore	Acer pseudoplatanus	20	600	1	9	9	9	9	5	М	Good	Good	None	20+	B2
W192	European Larch	Larix decidua	20	600	1	9	9	9	9	5	М	Good	Good	None	20+	B2
G193	Ash	Fraxiinus excelsoir	12	300	1	3	3	3	3	2	SM	Good	Good	None	20+	B2
W194	Sycamore	Acer pseudoplatanus	24	500	1	10	10	10	10	4	М	Good	Good	None	20+	B2
W194	Horse chestnut	Aesculus hippocastanum	24	500	1	10	10	10	10	4	М	Good	Good	None	20+	B2
W194	Norway maple	Acer platanoides	24	500	1	10	10	10	10	4	М	Good	Good	None	20+	B2
W194	Ash	Fraxiinus excelsoir	24	500	1	10	10	10	10	4	М	Good	Good	None	20+	B2
G195	Sycamore	Acer pseudoplatanus	18	400	1	7	7	7	7	0.1	SM	Good	Good	None	10+	C2
G195	Ash	Fraxiinus excelsoir	18	400	1	7	7	7	7	0.1	SM	Good	Good	None	10+	C2



Tree reference number	Species	Latin name	Height (m)	Stem diameter (mm)	No of stems	Canopy Spread N (m)	Canopy Spread E (m)	Canopy Spread S (m)	Canopy Spread W (m)	First Significant branch (m agl)	Age class	Physiological condition	Structural condition	Preliminary management recommendations	Estimated remaining contribution	Category grading
G195	English oak	Quercus robur	18	400	1	7	7	7	7	0.1	SM	Good	Good	None	10+	C2
G196	Sycamore	Acer platanoides	4	150	1	4	4	4	4	1	SM	Good	Good	None	10+	C2
G196	English oak	Quercus robur	4	150	1	4	4	4	4	1	SM	Good	Good	None	10+	C2



#### 7 ARBORICULTURAL IMPACT ASSESSMENT

- 7.1.1 After identifying the position of the trees and calculating the RPAs, the proposed footprint of the development has been overlaid onto the TCP to enable possible areas of conflict to be identified. Trees which could potentially be impacted upon by the proposed development have been identified using this approach.
- 7.1.2 The majority of the trees that are subject to this report are semi mature or mature and it can generally be considered that the older the tree the more they will be susceptible to disturbance and changes to their environment. Damage can be commonly caused by:
  - Compaction around the trees, causing asphyxiation and a reduction in the availability of water and minerals to the roots;
  - Ground level changes;
  - Physical damage to the roots by cutting and severing or removal of bark;
  - Spillage of contaminants; and
  - Physical damage to the stem and branches.
- 7.1.3 The effects of the damage may not be immediately apparent and often it is the case that the tree does not show any symptoms until after the first year. Such symptoms may range from dieback in the crown, to deterioration and ultimate death, depending upon the severity of the damage and the ability of the roots to recover and regenerate.
- 7.1.4 It is likely that the health of some of a small number of trees to be retained is at risk of being affected by the development proposals due to the following activities:
  - Construction of the new development, roundabout and associated roads;
  - Level changes and earthworks;
  - Canopies that extend into the site; and
  - Installation and route of services.
- 7.1.5 It will therefore be necessary to carry out preventative measures to reduce and mitigate damage which may occur to those trees that are considered to be of value and are deemed practical to be retained.



- 7.1.6 The site falls into two areas these being; the extreme west of the site where detailed approval is sought for site access, with all other matters reserved. Therefore other than the roundabout and feeder roads, the detailed development footprint is indicative and it is not possible, at this stage, to comment in detail regarding the impact of the development, but only to comment generally, based on the areas of development as shown in the Development Framework Plan.
- 7.1.7 It will be necessary to address this area of the site in more detail once the submission of a full planning application is proposed and a final detailed masterplan is available.

#### 7.2 Trees to be removed

- 7.2.1 It is apparent that despite the acknowledgement of the importance of the tree resource within and adjacent to the site at the design stage, a small number of trees will need to be removed on the western boundary to enable the construction of a new roundabout, feeder roads and re alignment of Bloxham Road. These are identified as:
  - Category A Tree 142
  - Category B trees 143, 144, 146, G193 (part) and G135 (part),
  - Category C trees 145 and G189.
- 7.2.2 To the east, subject a detailed finalised masterplan, it is likely it will be necessary to remove the following trees:
  - Category B trees 186,187,188 ,G185 (dependent on final road alignment) and a small section of G184,
  - Category C sections of G196 (dependant on final road alignment and development footprint).
- 7.2.3 Where trees are to be removed great care will be required to avoid unnecessary damage to the retained trees identified as of merit. This will include removal of roots and stumps.



7.2.4 NB It is likely there will be a requirement to remove further sections of the internal tree groups and hedgerows, where this occurs this will be addressed further at the application stage for full planning consent.

#### 7.3 Trees to be retained

- 7.3.1 It is observed the RPA of only one tree (A category T142) located on the western boundary is compromised directly by the development proposals. However due to the minor encroachment, it is considered this tree will not be affected by the works provided suitable protection is implemented to ensure the remainder of the RPA is not compromised further (ref 7.5).
- 7.3.2 Due to the proximity of the proposed development to the remaining trees and groups located on and adjacent to the site, it will be essential they are adequately protected prior to the commencing of works once any tree removal or tree surgery has been completed (ref 7.5,7.6 below). If it is found at a later date that further RPAs are likely to be compromised, then it will be necessary to consult with the project Arboriculturist to detail mitigating construction techniques. Where this is found impractical additional trees will need to be removed.

#### 7.4 Hedgerows to be removed

- 7.4.1 It is likely that the majority of hedgerow H8 (refer to TCP Drawings 2 and 3) will need to be removed. Other small sections of hedgerows may need to be removed however these can only be identified at the detailed design stage.
- 7.4.2 Where hedgerows are to be retained, it will be necessary to ensure they are not damaged by means of a recommended minimum standoff of 3m and should maintained for the duration of the construction period.
- 7.4.3 It is not considered practical or necessary to provide protective fencing for the entire length of the hedges but it is advised where it is proposed to carry out intense development close to the hedges, that temporary protection is considered.



#### 7.5 Utilities

- 7.5.1 The exact location of any associated proposed and existing utilities was not available at the time of this report. It is advised that where possible these are located beyond the RPAs of all trees to be retained.
- 7.5.2 Where it is unavoidable and utilities are proposed to be sited within RPAs of retained trees it will be necessary to consider the effects of the installation may have on their health and only installed where approve mitigation can be adopted.
- 7.5.3 Where existing utilities are found within the RPAs of retained trees and it is required that they are removed, it will be necessary to consult further the project Arboriculturist to prevent damage to the trees.

## 7.6 Tree protection barriers

- 7.6.1 Before any materials or machinery are brought onto site and before any demolition, soil striping or construction work commences, it will be necessary to erect protective fencing (barriers) around the trees adjacent to the development area that are to be retained. The indicative positioning of the fencing (barriers) is shown on the Draft TPPs.
- 7.6.2 Once erected, barriers and any ground protection should not be removed or altered without the prior approval of an Arboriculturist or where appropriate the LPA, except where necessary to facilitate approved development. Where necessary, alternative routing for protective fencing barriers will be submitted.
- 7.6.3 The barrier should remain intact for the duration of the works and should any breaches occur during this period then work must be stopped until repairs can be completed.
- 7.6.4 Once construction has been completed, it will be necessary to temporarily remove barriers in order to facilitate soft landscaping. It is important to ensure that heavy machinery is not used within the RPAs unless suitable ground protection is adopted following further consultation with the project Arboriculturist.



## 7.7 Tree Surgery Work

- 7.7.1 Before construction work commences it will be necessary to produce a schedule which details the tree work that will be required in order to implement the proposed works. This work is likely to consist of the removal of low limbs that overhang the site or protective barrier, if they are found to be at risk of being damaged by machinery during construction works.
- 7.7.2 An assessment of tree work will need to be carried out by the project Arboriculturist, once the type and size of machinery has been confirmed.
- 7.7.3 If work is found to be required, then it will be necessary to inform the tree owner, where trees are located in private properties, and the LPA in writing. No work should be carried out until the LPA have approved the work and/or the owner has given their permission.
- 7.7.4 In certain circumstances it will be necessary to ensure that an ecology survey has been carried out to identify trees or hedgerows that have the potential to provide habitats for wildlife are identified. It is recommended therefore that an ecologist is engaged at an early stage to advise and carry out any survey work found to be necessary.
- 7.7.5 All work must be carried out by a competent tree surgeon to British standard recommendations BS 3998:2010 Tree work-Recommendations or as modified by more recent research. It is advisable to select a contractor from the local authority list and preferably one approved by the Arboricultural Association. Telephone 01242 522152, website <a href="https://www.trees.org.uk/contractors.htm">www.trees.org.uk/contractors.htm</a>. Their Register of Contractors is available free from The Malthouse, Stroud Green, Standish, Stonehouse, Gloucestershire GL10 3DL Telephone 01242 522152 website www.trees.org.uk/contractors.htm

## 7.8 Summary of the identified constraints to be addressed by the AMS

7.8.1 In summary the following constraints should be addressed by an AMS following planning approval:



- Cutting back of tree canopies and tree removal where required.
- Location and installation methods of utilities where required.
- Final positioning and specification of protective fencing (barriers)



#### 8 SCHEDULING OF WORK

- 8.1.1 It is advised that continued consultation with the developer, architects, planners and civil engineers is carried out during the development of the AMS which could form part of a CEMP.
- 8.1.2 It is recommended that pre-commencement meeting is held on site before any of the construction work begins.
- 8.1.3 All tree protection measures detailed in this report must be fully discussed so that all aspects of their implementation and sequencing are understood by all the parties. Any clarification or modifications must be recorded and circulated to all parties in writing. It may be appropriate for the tree surgery contractor to also attend this meeting.
- 8.1.4 It will be necessary thereafter to monitor and assess the development throughout the construction period. Provided the guidelines are followed then it is considered that trees of value around this site should be able to be retained with minimal damage.

Table 1 Proposed scheduling of works in order to protect trees to be retained

Timescale	Task	By whom/responsibility
Post	Submission of and AMS and final TPP as a	To be arranged by the
Planning	condition agreed and approved by the LPA	developer with the planning
Approval		consultant and project
		Arboriculturist
Pre	Pre commencement meeting with all relevant	To be arranged by the
development	parties	developer
	Preliminary tree work specification drawn up	To be arranged by the
	approved and sent for tender.	developer with the project
		Arboriculturist and site
		manager
	Pre-construction tree work including tree	As above
	removal implemented and supervised	



Timescale	Task	By whom/responsibility
	Erection of protective barriers and ground	As above
	protection as agreed and approved	
	Carry out supervisory visits as agreed and report	As above
	findings and recommendations	
During	Carry out supervisory visits as agreed and report	As above
development	findings and recommendations	
Post	Phased removal of protective barriers with soft	As above
development	landscaping	
	Inspect retained trees and carry out remedial	To be arranged by developer
	tree work as necessary	and the project Arboriculturist



#### 9 SUMMARY AND CONCLUSIONS

- 9.1.1 It is proposed to construct 1000 dwellings together with a local centre, a primary school and associated green infrastructure comprising formal and informal open space and sustainable urban drainage systems and associated infrastructure and utility services.
- 9.1.2 Careful planning and continued consultation during the preparation of the tree survey and development framework plan has minimised the need to remove trees of merit. It is therefore unlikely that the small number of trees which are to be removed would significantly change the amenity the area. Further mitigation may also be offered by a robust landscaping scheme.
- 9.1.3 Provided suitable protection is adopted during the construction phases and where RPAs are compromised and mitigation offered by means of an AMS, it is reasonable to conclude the proposed development will have minimal effect on the amenity of the area in respect of loss of trees.



#### 10 CLOSURE

- 10.1.1 This report has been prepared by Treetec with all reasonable skill, care and diligence, and taking account of the manpower and resources devoted to it by agreement with the client. Information reported herein is based on the interpretation of data collected and has been accepted in good faith as being accurate and valid.
- 10.1.2 This report is for the exclusive use of Wardell Armstrong and Gallagher Estates Limited; no warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from Treetec.
- 10.1.3 Treetec disclaims any responsibility to the client and others in respect of any matters outside the agreed scope of the work.



## **APPENDICES**



# APPENDIX 1 Cascade Chart for Tree Quality Assessment BS 5837:2012

# **CASCADE CHART FOR TREE QUALITY ASSESSMENT**

Category and definition	Criteria (including subcategories where a	ppropriate)		Identification on plan
Trees unsuitable for retention	(see Note)			-11000-110-1-1-1-1-1-1-1-1-1-1-1-1-1-1-
Category U Those in such a condition		le, structural defect, such that their early loss viable after removal of other category U trees r cannot be mitigated by pruning)		See Table 2
that they cannot realistically be retained as living trees in		igns of significant, immediate, and irreversible	e overall decline	
the context of the current land use for longer than 10 years		nificance to the health and/or safety of other		
io years	NOTE Category U trees can have existing see 4.5.7.	g or potential conservation value which it mig	ght be desirable to preserve;	
	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation	
Trees to be considered for rete	ention			
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



### BS 5837:2012

### **BRITISH STANDARD**

Table 2 Identification of tree categories

Category (from Table 1)	Colour A)	RGB code A)	
U	Dark red	127-000-000	
A	Light green	000-255-000	
В	Mid blue	000-000-255	
C	Grey	091-091-091	

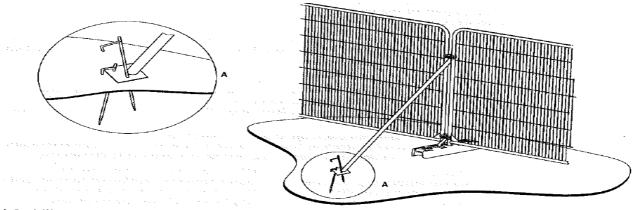
<sup>&</sup>lt;sup>A)</sup> Colours verified against http://safecolours.rigdenage.com/palettefiles.html#files [viewed 2012-03-26].



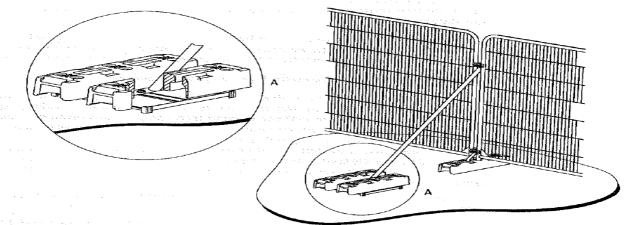
# APPENDIX 2 BS5837 recommended protective barriers



# Fence A-Herras type fence



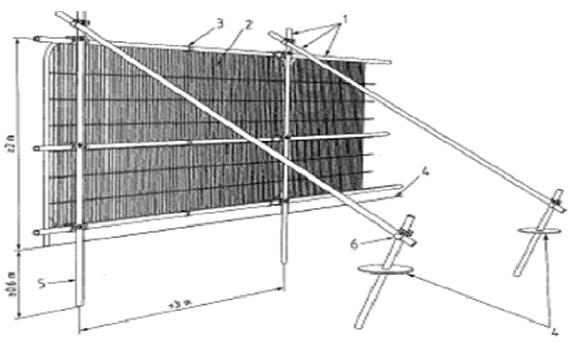
a) Stabilizer strut with base plate secured with ground pins



b) Stabilizer strut mounted on block tray



# Fence B Scaffolding with wire mesh protective fence



#### Key

- Standard scaffold poles
- 2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
- 3 Panels secured to uprights and cross-members with wire ties
- 4 Ground level
- 5 Uprights driven into the ground until secure (minimum depth 0.6 m)
- 6 Standard scaffold clamps



**APPENDIX 3 Glossary of Terms** 



## **GLOSSARY OF TERMS**

**Arboricultural Impact Assessment (AIA)** A study, undertaken by an arboriculturist, to identify, evaluate and possibly mitigate the extent of direct and indirect impacts on existing trees that may arise as a result of the implementation of any site layout proposal.

**Arboricultural Method Statement (AMS)** The methodology for the implementation of any aspect of mitigation where the development has the potential to result in loss of or damage to a tree(s).

**Construction Exclusion Zone** Area based on the RPA (in m<sup>2</sup>), identified by an Arboriculturist, to be protected during development, including demolition and construction work, by the use of barriers and/or ground protection fit for purpose to ensure the successful long-term retention of a tree.

**Crown or Apron clearance** Height or spread in meters of the lowest significant branches above ground level.

Diameter Trunk diameter measured at 1.5 metres above ground level.

**DBH** Diameter at breast height.

**Height** The height of a tree measure using a clinometer.

**Management recommendations** General comments on the condition of the tree, group or woodland and recommendations for future work.

**Pruning** The removal of living or dead parts of a plant or tree. Such parts may be soft growth, branches, limbs or sections of the trunk or stem.

**Root Protection Area (RPA)** Layout design tool indicating the area surrounding a tree that contains sufficient rooting volume to ensure the survival of the tree, shown in plan form in m<sup>2</sup>



**Species** The species is based on visual field observation and lists the common name and the botanical name.

**Spread** Measurement of the largest extent of the trees branch growth.

**Structural condition** Description of any decayed or physical defects.

**Tree Constraints Plan (TCP)** Plan prepared by an Arboriculturist for the purposes of layout design showing the RPA and representing the effect that the mature height and spread of retained trees will have on layouts through shade, dominance, roots etc.

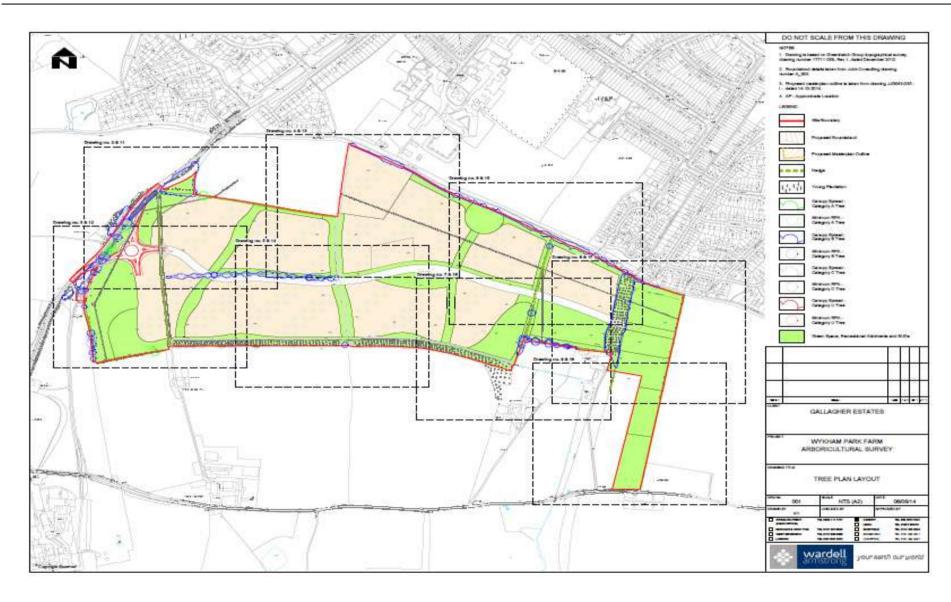
**Tree Protection Plan (TPP)** Scale drawing prepared by an Arboriculturist showing the finalised layout proposals, tree retention and tree and landscape protection measures detailed within the Arboricultural Method Statement (AMS), which can be shown graphically.

**Tree Root Preservation Service (TRPS)** A non-evasive foundation construction system designed to prevent damage to tree roots and adapted for specific site use in conjunction with an arboriculturist



## DRAWINGS Indicative Tree Protection Plans









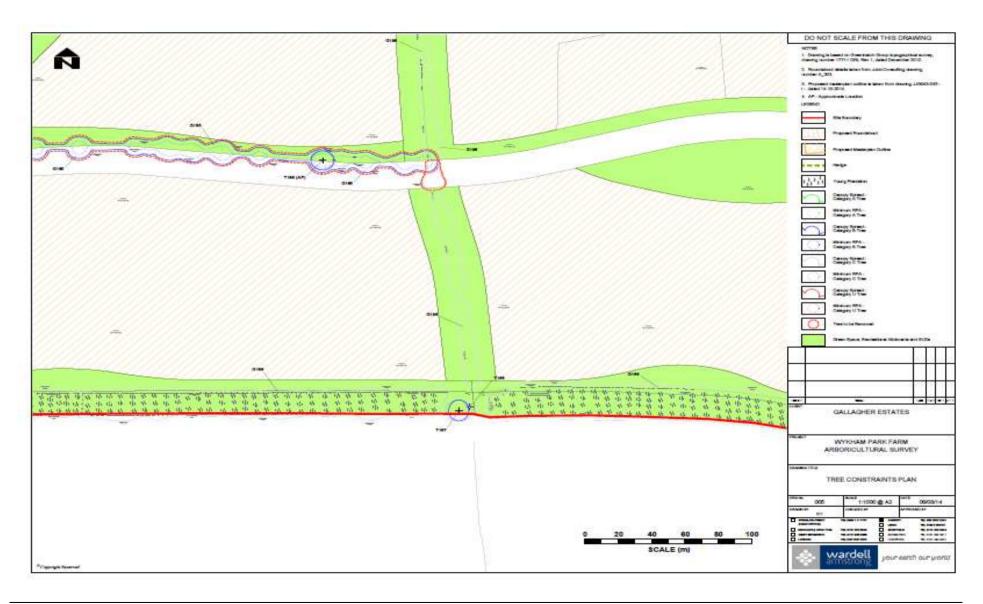




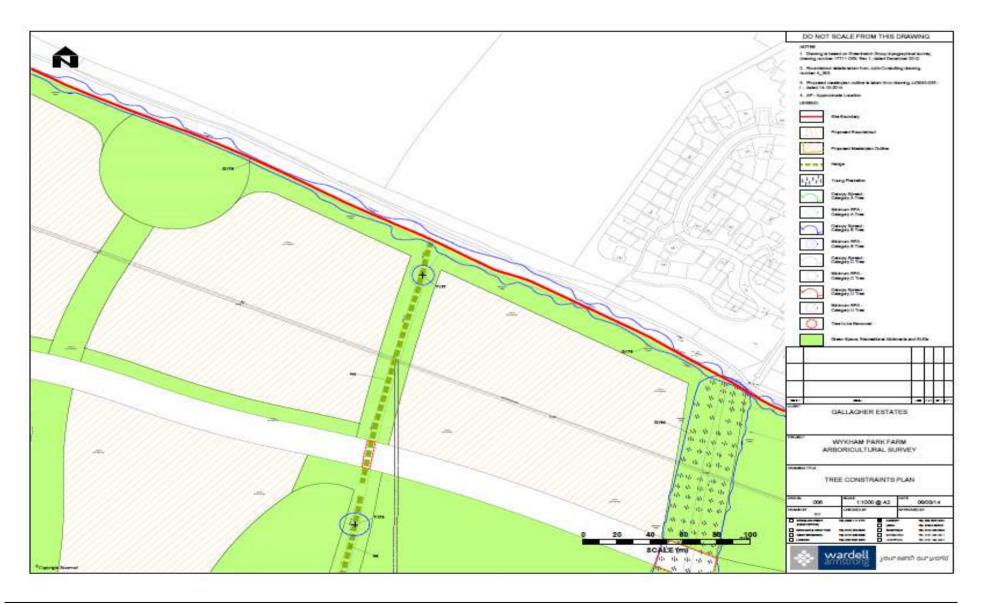












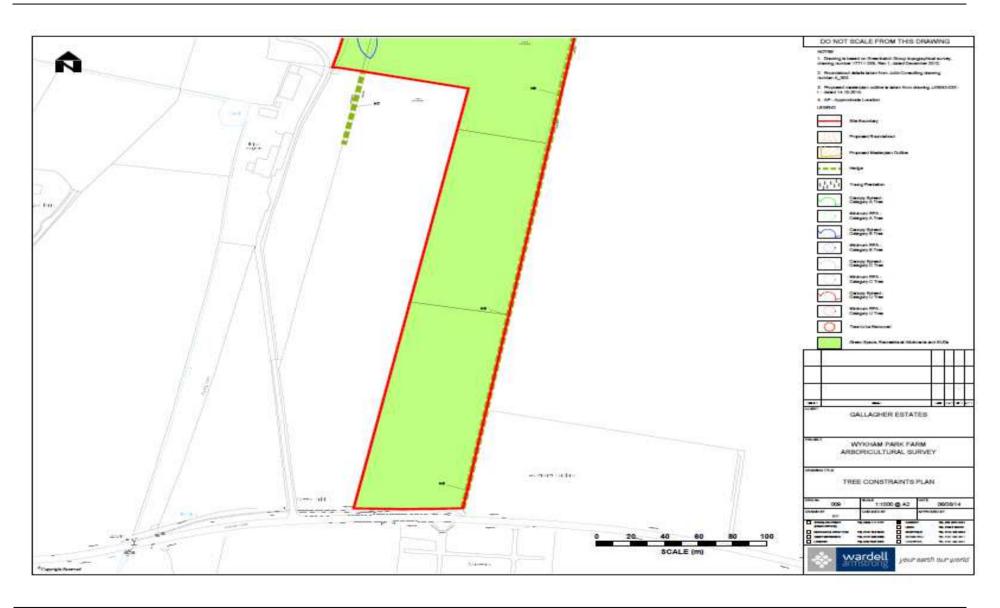








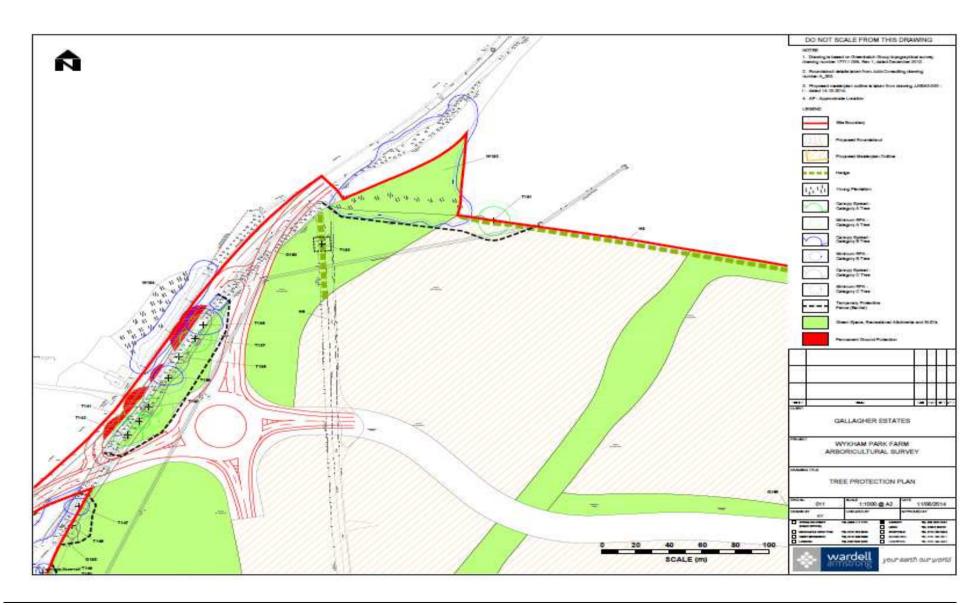






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SETTING.	Outros vides	Proposition	1600		1 No. Stema	201 SH 495 29A	24-	v .	Orane	Chresi .	Marie	33- Years	•	
WITH THE	Community of	Replication	7600	ton	The Rena	do de aktiv	Sign	DME	Stone	Stant	Non	30 Vests	100	5 8
	Comments:	Progradi com	10m	Tide Office	1 No. Rhore	71 88 98 3W	Sin .	CHI I	Oranie Oranie	Olived Olived	None	33h Years 33h Years	E .	-
	Non-participations	Systemate	The Care		1 No. Harris	Strictle Service	Ser	v	Dised	Clared Chiresi	Marie	33- Years	C C	
	Air paraticularies	None make	1800		Steel Sterrey	miles relief	Sim	w	Const	Shows	Nine	30- Years		4.00
M THE	Note that the later of	Rowroot :	2311	1.23kg	The River	184 128 13E /W	Sec	DM:	Done	Start	Hore	SET Years	At :	GALLAGE
WE THE	Acer competite Commission	Plant maybe	10m	O Blue	Principles	SIN DR. TR BW SIN DR. 48 289	24	M SM	Done.	(2000)	Name Name	33- Years 33- Years	80	-
MI TIM	Air production	Registrose Reservose	10m	0.48e	7 No. Steriot	SHOUSE ARE JOSE SHOUSE THE THE	Ser .	SM .	Orani	Chart.	None None	10-Years	0	- I
THE PER	Not particulate un	Symmet	10m	C) States	Origina (Charton)	WHERE HE HE	Sier	W	Drawit	Street	Hire	100 Years	0	No.
ALTIN.	Note: premalophiliprine	Sylvenore	25m	G48e	27to Barrie	201 28 AR 200	driv.	M	Obsid.	25000	Nume	1.0+ Years	CI.	WYKHAN
ETTT SE	Auto percebujulaturus Non percebujulaturus	Systemore	15m	O dille	7 No. Blanca 2761 (Berta)	SH SH SH SW 4th AR 2R FW	See.	SM	Oranii Oranii	Choose .	None None	30+ Years 10+ Years	10	ARBORICUL
e tris	Franksa morani	Option 1	180		The Barra	104 196 116 13W	Ton.	u	(See )	Sizesi .	Spine .	100 Face	in .	ST-MORE COM-
	Frankling Bolden	fair .	10m		7No River	MUSE OF THE CAN	4m	u	Pair	Street .	None	SD- Years	an .	
WITH IN	Arm paradicipations	Rysamore	14m	C ROW	1 No. Steries	7N 78 TH BW	Sim	M :	Chase!	Direct.	None	33+ Years	81	Decisional PROJ.
	FINITE ROPER	(April	18m		The Sterie	198, 196 10K 19M	der	DW.	Orans	Olivesi .	Mane	33- Years	C	7507 000
WE THE	Publica scietarii Ner produkuldania	Systops	10m		5 No. Steven	294 TIBS TITLE MAY.	2.34	M.	Change	Street	Name	30+ Years 30+ Years	-	TREE CON
	No parabolisticas	Symmoth	10m	0.85e	Ditto Marca	DI SHIRK W.	Die:	w	Grand .	Stored	None	30- Years	10	1
WITH THE	Not proving taken a	Systemice	15m	0.49	Trin. Rigeral	150.79 FK 0.9W	No.	v .	Orana	'Olivesi'	Marie	30-Years	C.	man and
OF THE	Contraction .	Bright can	74m	12.88m	470 Bere	74.78 TK 7W	den.	w	Stone	Steel	Non	30-Years	101	010 6
	President morrors	Date:	10m		COLUMN TOWNS	en de la mo	de	u u	Great Great	Charit	None	20+ Veste 20+ Veste	81	AND TO STATE OF THE PERSON NAMED IN COLUMN
	Programming	Nonety inside			1 No. Stance	SHI DR GR THA	28m	SM.	Oosel Dool	Post	Nume	TD Years	Ct.	C STREET, STRE
SETTING.	Codings (See	Right on.	28n	1.3	1 No. Steve	10K T2H 116 MW	Die .	OM:	Orasel	Sidest .	New	dith Years	41	
	Province moreon		2010		No Rece	20126 36 BW	Ser	W	Does	Street	How	30+ Years	.00	
	Andrews Control of the Control of th	1	20n		1 No. Sterne	an se se an	See	W	Door.	Though Choose	None	20- Years	C	
METWORK	Complete Systems	Symmetrical	2Ave	0.840	1 No. Sterie	191 136 136 SW		u	Orani	thous.	None	30h Years	-	Employed Total
MTW: No	Name of Street or other own	Proper cheeping.	280	Cities	The River	191 TIR TIR SON	der .	W	Drawn .	Stant	Hom	20+ Vesia	100	warde
	Averalist proving		24 0		5 No. Stance.	13N 136 13R 18M		W.	State	Should	None	30- Years 30- Years	6	CO STREET, STREET
	Videolitical econolisists	Path	24m			104 106 106 106			Orani.					





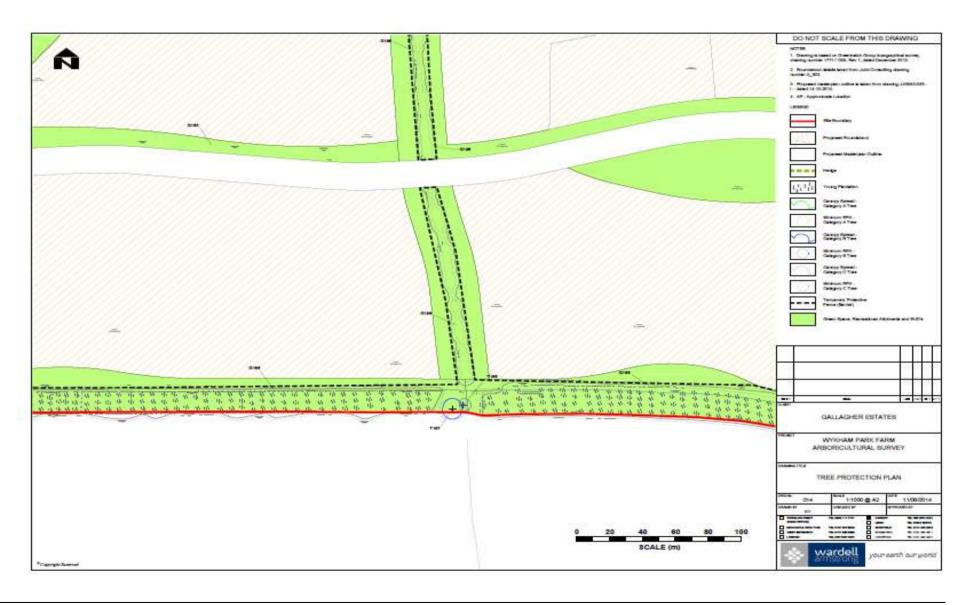




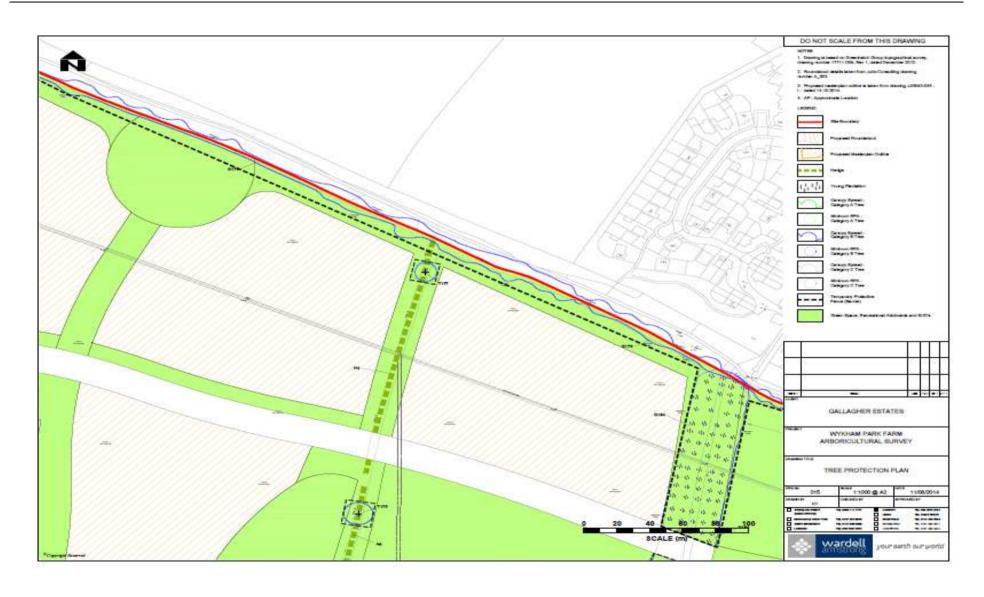




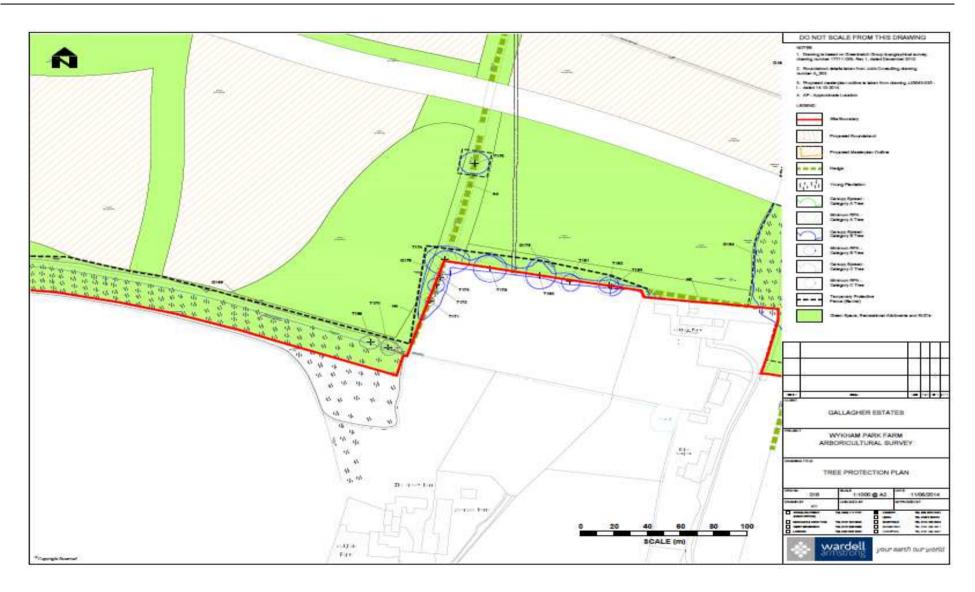




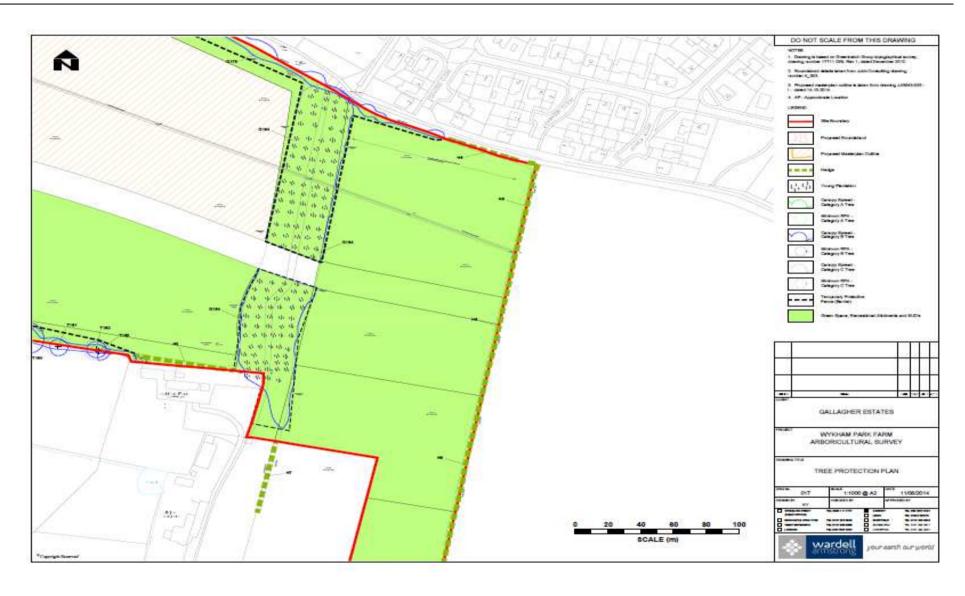




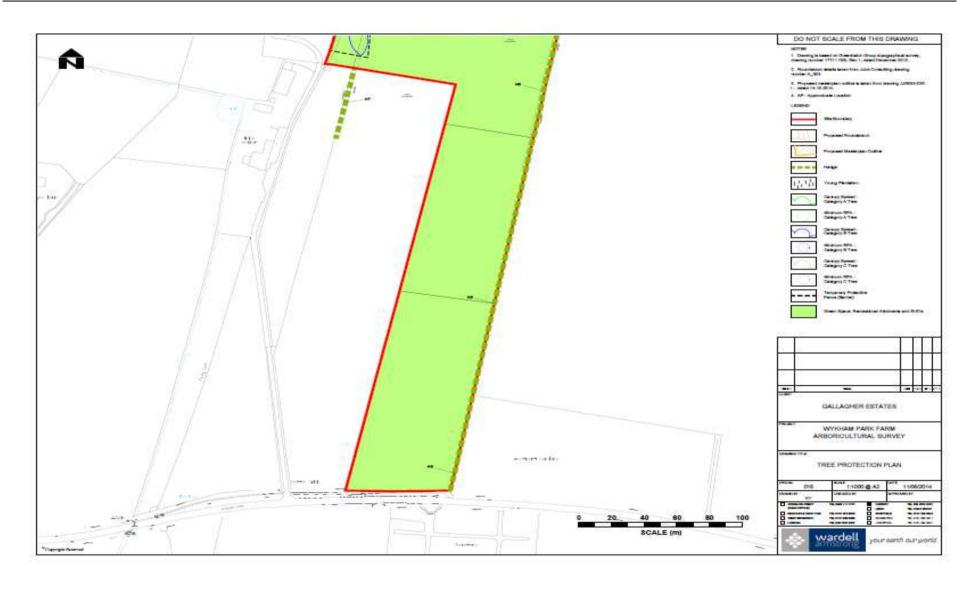














	Tree Strong													19	
rene to		Common States	-	The Care of	the state of State of	Transmission .	Cont. Charge a Marie	lane.	In.	- In-	In-	like manager to make	-	=	
GUM O	PRODUCTION	Program contr.	Tibe:	0.35m	CONTRACTOR	Carroge SHIDW Section for SW	Sec.	HW.	Grand	Closed	Thine.	SG Pleasuring Contribution SC+ Years	IC .		
ditab its	M. Bullimann	Line	Title:	0.36m	1 No. Stame	SN BE SK BW	2in	EM .	Diesi	Shoot	Storate .	SID- Years	90	<b>3</b> 1	
GIBE N	e perchadense	Special Contract of the Contra	Tim Zin		1 No. Steries 2 No. Steries	SN SH SK SW	Str.	19	Design Control	Stone	None None	20+ Feese 10+ Feese	- C	-1	
G100 A	et carpeste	Fleti trapie	Tile .	33e	1 No. Warra	2H 2H 2H 2H 2W	ite	Y	Dissel.	Storel	None	3Dr Tean	62	<del>-</del>	
drillo. Or	METHOD STATE OF THE PARTY AND	tingfatious.	Title	C.See	1 No. Stame	2N 28:28:2W	0.706	Ψ	Diesi	Stood	Stepan.	SSH Team	Ci .	<b>-</b>	
0180 P	ina eq.	Cherry	Title:	Cláre .	The Bare	2H 2F 2R 2W	U.Sec	Y.	Sec	(Society)	force :	ZIP Feese	G	-	
G186 C	siangus recregora	Other binds	10te	0.3m	1 No. Wester.	2N 2F 2R 2W	0.10	Y .	(Rood)	Shored Shored	Name Name	30+ Years 30+ Years	100	-1	
	sulfried Monthland	646	Title		Side Steens	2N 79 3K 7W	II Tree	Ψ.	Gent	Stood	None	20-Years	0	-	
GEORGIA	article expension	Aut .	Tâm:	d dbe	196 Paris	\$50 000 000 000	II Tale	W-	Share	Shoot	More	30+ Years	80		
	M. OF LOOK TO	Prett maple	Title :	G After	196 Bern	DO DE SE SW	0.300	M	Mont	Stood	Store:	20-Years	io .	<b>-</b>	
G108 G	ercention le surgess	Regital cars	16m 18m	Cl 45m	1 No. Sterie	SN DE SE SW SN DE SE SW	G.tai G.ta		thesi	Stood	None	30t Years 30t Years	100	-	
	ALTONO MORNING	fiair .	10e	5.36m	166 Paris	dis life size and	2017	W.	Share	Stood	None	SCH Yearin	80	===	
@108: N	er peerstephinkering	Rystruck	The .:	0.30m	1 Hour Element	ex in ex ew	2ht	u.	Thomas .	Cloud	Same .	20+ Years	NO.	<b>-</b>	
	er carrieday	Frent maple	Title	O the	1 No. Sterne 1 No. Sterne	2N 2E 28 2W 2N 2E 28 2W	G 1a	Ψ	thood.	Shoot	No.	30+ Years 30+ Years	100	4	
	COLUMN TO SERVICE STATE OF THE	Cherry	Title		THE PROPERTY.	20 28 28 2W	C to	4	(Disse	Stood	No.	OD- Years	90	⊣	
	THE SCHOOL STATE	Study pros	Title :		The Bare	24 35 38 7W	U to	Y	Time	Otomi .	None :	20- Feets	100	= 1	
drak Pe	gar syrame	family	10to .	0.15m	190 Rene	2H 28 28 2W	0.10	¥	floor	District	Manage	30+ Years	100		
OTHER SIZE	ris-simologi	Rampeer Lend			1 No. Warre	2H 2E 28 2W	0.1m	Y :	Thorn.	Closel	Mane	30+ Years	NC	-	
	Milespecial	Prett regile Sright-ret	Tare		100 Bens	EX 66 TO TW	Distr.	ISM ISM	Day	Shoot Shoot	September 1	20- Years 20- Fees	100	<b>⊣</b> .	
	range rereges	restore	1400		2 Sto Riverse	EN OF BRIDAY	3e	SM .	Dood	Stored	Minne	30+ Years	100	□ □	
GTMS PV	prince excessor	NAC .	16m		1 No. Warris	IN ISS ISS IN	2m	HM :	Dood .	dissel	Name	30- Years	NC.		
	entitings metabels	Drugtes for	Title		160 Barris	SN DE SK NW	0.6re	M.	Direct	Stood	Septime .	10+ Years	9	-	
	er promotion before	Spanie	Tilm.		100 Bene	25 36 36 36 25 76 76 76	3.36	SM SM	Direct Charge	Bood	Store:	20- Years	6	-1	
distribution and	Action econesis	Pan	16m	Cl. day	Title: States	TH 79.79 7W	G to	8M :	Thorse .	Door	None	10+ Years	0	<del>-1</del> :	
green Co	Married Willer	Trigital-oats	186c	0.8%	THE CHARGE	75 No. 19 76	Q the	NM	Stani .	Stood	None	10+7464	C2	⊒:	
GIST N	at plataments	Systemate	en.	0.15m	150 Paris	影響·ORW	in a	SM	There's	Shood	More	10+ there	9	-1	
1118 A	er paracity/sitemen	Signature Systemate	901 200 m.	1.50	1 No. Stern.	201 490 QK 6W	See .	DN	those:	Choose Choose	None	10+ Years 30+ Years	100	-	
1107 70	Market Spatter	Union	26×1	T.Res	The Charge	THE TIDE YOU AND !	Ties	CHE	Stant .	Stood	None	30+ Team	K	∃:	
	er peanstructeries	No.	18m	0.69	150 Terre	2.89 79 38 W	din .	M-	Shied	Stood	None	30+ Years	G	<b>-</b>	
	er pearstrate/eine	Systems	23m		The Bere	SN SE SE SN	Sec	M	Gee	Otomi	Stock .	SO- Fees	100	-	
	e projekt	Sylamore	230x		1 No. Wester	THE THE WAY	Sa.	CNI	Door.	Stones Stones	None None	30+ Years	R2	<b>⊣</b> :	
THO 76	d and these	Lime	28m ·	time :	1 No. States	10H SE BILLION	Sec	Chell	Diese .	Good	Storage.	SSH Team	KI .	<b>-</b>	
THE A	er peeutly light/scross	Systemate	22%	tue:	190 Dece	3N 16E 10E 18W	Sire	OW	Felt.	Stone	Store :	20- Fees	80	<b>-</b>	
	er platamente.	Shirtery regite	284		1 No. Whete.	SN TON THE BAY	Se	DMI .	Close .	Stored	Marie	30+ Teals 10+ Years	80	-	
	or prompted and	Line Rosemone	204 234		1 No. Warre.	IN THE THE WAY	160	DM:	Pair Directi	Stones Stooms	Name Name	10+Years	10	→	
THE THE	NAME OF TAXABLE PARTY.	Street .	21%	I Res	The Rece	THE REAL PROPERTY.	Sie	U	Sec	Stood	None :	ZP Fees	R2	<b>3</b> :	
	ACTIVATION OF THE PARTY.	Math:	the .		7 No. Steine	el de all eW	Ster	CBE	Presi	Pose	None	70+Their	CI .	_	
	ercentrator	fright out.	Title 27m		1 No. Maria 1 No. Wester	TN ME SECTIVE	No.	w	Book	Stood	No.	30+ Years 30+ Years	100	-1	
	· management	Spanish .	21m		7 No. Charles	Sty Te Se Se	Se-	W	Share	Shoot	Name .	Stir Years	9	=	
TIME: N	e perchaption.	Systems	20to	Cabo.	196 Ferre	DK THIS SET SW	<b>B</b> elow	м	Shower	Closel	Same .	20+ Years	CS.		
	manage refere	Bradistrook	28n		1 No. Stance.	504 TH GR WW	See.	M	thood.	Should	None	30+ Years	.00	<b>-</b> 1	
	er peanutrytelenna gan nytrefree	Spinerose Spinerose	20in		196 Perie	BH 79/300 1/300 BH 79/300 1/300	156	DM:	These .	Stood Trees page	None Facility	SON Times	6	-	- 3
1138 Fe	gio synative	lead.	5		1 No. Eleme	BK 136 128 10W	Tilen :	CRE	Money	Plant	Feet	SOA Track	Q.	_	
1107 A	er personalitation or	Rysenore	Tile .		2 No. Werns	ON SHISSON	36	94	Dood	Good	None	20-Years	art.		
TIME O	Military Miller	Registrate.	180		1 No. Fleron	201 205 200 200	Sec	M.	Own	Sixed	None	30+ Years	iic	<b>-</b>	
TIRD G	METAL CORNE	Bright out.	Title		1 No Sterie	別無 B B B	See	CM	Direct .	Choose .	Store .	20 Years 20- Fees	100	-1.	- 9
	er personalitation	Symptom	TFm	Office	7 No. States	401 SE SE 200	Ser	W	Clinical I	Stored	Stiere.	20- Years	100	⊣ ।	
TIES A	er personalization.	Promote	18m	CLRe .	1 No. Warris.	564 RE 58 7W	26	M	Pair	Stocks	None	30+ Years	NO.		<b>611</b> +
Time N	of the administration of	Systemate	184	0.3%	Silva Stene	6H 6K 76 FW	2m	M CM	Glasti .	Choose	Stones.	OSH Yeller	10	<b>그</b>	G. Mari
Time A	m proprietalista	Systemate Plant course	Sin.	1.650	Title Dame	FOR 126 TOR 7W 65 ME THE BW	20	M	Design	Stone	None	3D- Years 3D- Years	At .	⊣	GA
THE C	remode/Minr	Progleb-sell.	10m		1 No. Hieron	No the KK 2NY	2.5/e	RM :	District	Shoul	Marie	SDP Years	G.	<b>=</b>	-
TIRE A	er jestvoligiskelen.	Spanner	Title.	0.45m	7 No. Sterne	IN this bar 7W	Ben	Mic	Best	Shood	None	10+ Topis	Ct		
		Systems	18e		City Davis	計画 助 W	Se-	M-	Share	Slood	More	10+ Years	G	<b>-</b>	Marie I
		Service .	The .		276s. Herre	201 200 400 20W 501 200 200 20W	An	M. RM	Shows:	Shoot .	Name Name	10+ Years 20+ Years	GI .	<b>⊣</b> 1	40000
		Systems	15m		27th Marie	ON THE DISCOVERY	Ser.	20M	These .	Stood	No.	CD-Years	100	⊣	ARBO
TITLE PA	office moreon	PART	No.	O Bro	100 Pers	10H 15E 11E 13W	Se-	M-	Share	Stood	None	10+ Then	90	⊒:	
		man)	Title		The Rena	EN SE SE SW	Mary .	M	Feb	Closel	Same.	20+ Years	(R)	그.	Shooks (Year
		Page 1999	14m. 18m:		1 No. Steries	7H TH THIRM:	den.	M. DM	Third.	Shood Shood	No.	30+ Years 30+ Years	W1	- 1	
	ACTION COMPANY	nan nan	Tipo:		150 Paris	10H 10H 13H HW	dis.	DM	Chart	Chase	None	20- Years	10	⊣ ।	TRES
	er personalistischer	Systems	10m		Office Others	DOM: TEXAS	U.tre	u-	Sec	Stood	Toron .	20- Fees	100		
THE A	er peeudoptelenos	Systemate	18m.	O.More	2 No. Killerine	DOM: SHEW	Sei	М.	- Dood:	Stored	Minner:	30+ Years	(Q)		
TTRI A	er pereunkopisianus.	Symmetry	10e		1 No. Warra	NOTE THOUSAN	Sec.	M	Chand .	Closel	Name	30+ Years	RC .	- 3	019
	PERSONAL PROPERTY.	Brightious.	18m		4 No. Stene	THE THE THE THE	Sec.	M.	Diese	Shoot	Separation of the last of the	20+ Years 20+ Fees	80	<b>-</b> 1. □	March 17
TTM: Fe	CANADA SOCIAL	040	The .	0.54m	Silver States	40 cm (00 mm)	Size	M	flood	Stood	Store.	30th Vision	Ct.	<del>-</del> 1	87
TIME A	er platentiles	Money inspire	the .	0.36m	Title Warra	SH 795 SE SW	Zibe:	BM :	Dood.	Post	None	15 Team	ct	<b>⊒</b> } (4	
THE	and the same	English-cuit	280	1.2m	1 No James	19H 19E 11H (BK)	lie-	CMI	Dine	Choose	Stone.	4Dr Years	83	_	-
	action modes		39n	GRe	150 Deire	201 (SE 201 SE)	Se-	0.	Street	illood	None	20 Think	60	4 1	
	de personales		20m		1 No. Stern.	Set the cas law.	Sec.	M.	Blood .	Shoot .	Name Name	30+ Years 30+ Years	ic	<b>⊣</b> :	Li recon
WINE A	er personnen er en	Note: 100	2444	C.See	The Steries	TANK TOR TOR TOW	Size.	u	Chart .	Stood	None	30+ Team	80	<b>-</b> 1	SEC NAME OF TAXABLE PARTY.
W196 74	minima Inggroundation	Holes (Pessinal)	Men .	Office	7 No. Terries	10H 10H 10H 10H	din .	W-	Sheet	Shoot	More	20+ Years	80	<b>∃</b> .	wa
WINE A	er yallen men	Stationary require:	28m	Che	THE PERSON	10H 126 TH 10W	den	M.	Thorse Thorse	Stood Stood	Since Since	20- Years 20- Years	10		dr (0)
	telline emelod		Sales .		Thu Black	10H 10H 10H 10W		M							

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