

LANDLINK ESTATES

aspect
arboriculture

SALT BOX
BOGNOR REGIS

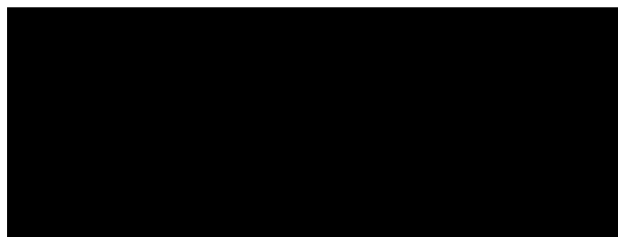
Arboricultural Impact Assessment

August 2017
9600_AIA.001

COPYRIGHT

**The copyright of this document
remains with Aspect Arboriculture
trading division of Aspect Landscape
Planning Ltd. The contents of this
Document therefore must not be
copied or reproduced in whole or in
part for any purpose without the
written consent of Aspect Arboriculture
trading division of
Aspect Landscape Planning Ltd.**

Aspect Arboriculture
Hardwick Business Park
Noral Way
Banbury
Oxfordshire
OX16 2AF



CONTENTS

1	INTRODUCTION	1
1.1	Appointment and Scope	1
1.2	Limitations	1
1.3	Site Description	2
1.4	The Trees	2
1.5	Statutory Designations	3
2	POLICY REVIEW	4
2.1	The National Planning Policy Framework	4
2.2	Arun District Local Plan 2003	4
3	ARBORICULTURAL IMPACT	6
3.1	Preliminary Tree Protection Plan	6
3.2	Tree Removals	6
3.3	Mitigation Replanting	7
3.4	Pruning	7
3.5	Supervised Excavation	8
3.6	Protective Barriers	8
4	CONCLUSIONS	9

APPENDICES

Appendix A	9600 TS 01	Tree Survey Schedule
Appendix B	9600 TCP 01	Tree Constraints Plan
Appendix C	9600 TPP 01	Tree Protection Plan
Appendix D	9600 TSM 01	Tree Survey Methodology

1 INTRODUCTION

1.1 Appointment and Scope

1.1.1 Aspect Arboriculture are instructed to inform proposals for development at the above site, and to establish and report on the arboricultural impact of the final design. The commission was made on behalf of Landlink Estates.

1.1.2 The planning application is to be submitted as a hybrid application, part in full, and part outline with scale and access for approval only. The application comprises:

- Full planning application for Class B8 warehouse, fuel island, car parking, access roads, plus engineering works, landscaping and associated works; and
- Outline planning application for the development of employment units, warehouse, hotel, 2 No. drive thru units, public house, gym, plus engineering works, landscaping and associated works”.

1.1.3 The scope of Aspect’s appointment is limited to the preparation of an Arboricultural Impact Assessment, preceded by the objective analysis of the arboricultural constraints. The arboricultural constraints are based on a BS5837:2012 tree survey, which was undertaken by Aspect during July 2017 - refer to Appendix A.

1.1.4 This report provides a record of the trees present and establishes the arboricultural impact of the proposed scheme, drawing conclusions relating to the significance of the site's trees and the LPA's adopted policy, and provides a strategy for the safeguarding of the trees that are to be retained.

1.2 Limitations

1.2.1 This assessment has been prepared in respect of proposed development and should not be interpreted as a report on tree health and safety. Reasonable effort has been made to identify visible defects whilst undertaking the tree survey; trees are however, prone to natural failure without warning therefore no guarantee can be made as to the absolute safety of any of the trees surveyed. Aspect’s opinion of tree condition and structural potential is therefore valid for a limited period of 12 months from the date of inspection. Validity is assumed in the absence of inclement weather and no change to the trees existing context.

- 1.2.2 This work relates to arboriculture, therefore reliance should not be given to comments made in respect of other disciplines i.e. landscape, ecology or civil engineering without first consulting an appropriate expert.

1.3 Site Description

- 1.3.1 The application area is comprised of a single field, currently under arable usage. The site is bound by the A29 to the east, a caravan site to the south, and further agricultural land to the southwest, west and north. The site falls under the administration of Arun District Council as the Local Planning Authority.
- 1.3.2 The existing tree cover occurs almost exclusively along the site's boundaries, and comprises primarily intermittent field boundary hedgerows interspersed with parcels of trees. The site's southeastern corner boundary is defined by an offsite ornamental belt, forming a boundary screen from the adjacent caravan park. The only internal tree cover comprises a low quality parcel of Crack Willow and Hawthorn located close to the site's southern boundary.
- 1.3.3 The underlying bedrock is understood to be Chalk (Lewes Nodular/Seaford/Newhaven & Culver Chalk Formations)¹, overlain with a loamy soil with naturally high groundwater².

1.4 The Trees

- 1.4.1 Existing trees within influence of the application area can be defined by reference to 11no. individual trees, 8no. groups of trees, and 2no. hedgerows, of these, one category B tree, and one category B group are within influence of the site.
- 1.4.2 **Category B tree cover:** T10 English Oak: Located offsite adjacent to the western boundary, whilst of indifferent condition, T10 is considered to make a moderate contribution to the site's amenity.
- 1.4.3 G2 Ash, Rowan, Alder, Sycamore, Goat Willow, Field Maple, Hawthorn, Elder, Sea Buckthorn: Comprises an offsite collection associated with the caravan park to the south, which collectively is considered to make a moderate contribution to the amenity of the application area.

¹ British Geological Survey, cited online April 2017

² Soilscales, cited online April 2017

- 1.4.4 The remaining tree cover is considered to be of low arboricultural quality only, and to represent generally unremarkable examples of their species (Category C).

1.5 Statutory Designations

- 1.5.1 Background checks have revealed that the site does not occur within a Conservation Area and that there are no Tree Preservation Orders confirmed on trees that are within influence of the application area (Arun District Council, August 2017).

2 POLICY REVIEW

2.1 The National Planning Policy Framework

2.1.1 The NPPF (2012) provides planning policy guidance at the National level. With respect to arboriculture, it considers that *'planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss'* (para. 118).

2.1.2 For clarity, there are no veteran trees, nor any areas of designated ancient woodland, within influence of the application area against which these tests can be applied.

2.2 Arun District Local Plan 2003

2.2.1 At a local level, the Council has a statutory obligation to ensure adequate provision is made for the preservation of trees through Section 197 of the Town and Country Planning Act (1990). It is understood that the Council's primary development control document, is the Arun District Local Plan adopted April 2003. Of which, Saved Policy GEN28 explicitly relates to trees, and is reproduced below:

2.2.2 POLICY GEN28: Trees and Woodlands

Development will not be permitted if it would damage or destroy one or more trees protected by a tree preservation order, identified as ancient woodland or in a conservation area unless:

- the removal of one or more trees would be in the interests of good arboricultural practice; or*
- the benefits of the proposed development outweigh the amenity value of the protected trees.*

Conditions may be used to ensure that, for any trees which are removed as part of a development, an equivalent number are planted on the site.

- 2.2.3 In summary of the above, the Council requires developers to consider existing trees, with a presumption that new development does not result in a loss of important, or protected trees, and any necessary removals will be satisfactorily mitigated for within a comprehensive landscape scheme.
- 2.2.4 This document has been prepared in direct response to paragraph 118 of the NPPF, and policy GEN28 of the Arun District Local Plan (2003). It provides an assessment of the trees that are within and over-sail the application area. The assessment considers their visual significance, and suitability for integration within a completed development, subsequently detailing the requirement for tree loss/tree works, and informing opportunities for replacement tree planting.

3 ARBORICULTURAL IMPACT

3.1 Preliminary Tree Protection Plan

- 3.1.1 In keeping with the recommendations of BS5837:2012, an assessment of the proposed impact upon the existing trees is presented in the format of a preliminary Tree Protection Plan (Appendix C).
- 3.1.2 The purpose of the TPP is to identify: a) trees to be retained and integrated within the proposed setting, b) illustrate safeguarding measures to ensure that retained trees are not harmed, either during the course of construction, or as a result of the development; and lastly, c) identify trees that it is necessary to remove in order to implement the development and mitigate with new tree planting.
- 3.1.3 The assessment and the TPP are informed by the tree survey and constraints plan balanced with the requirements of the layout and adopted policy. The tolerance of the trees to disturbance based on species, age, condition and the presence of surrounding trees and features of the existing site has also been considered.

3.2 Tree Removals

- 3.2.1 It is Aspect's default and professional opinion that trees should only be recommended for removal where: a) it is *necessary and unavoidable* to site development within close proximity to existing trees, such that they cannot be confidently retained in the long-term as living features, and/or b), where the amenity value of the tree will be significantly reduced as a result of the proposals, particularly if already of a low retention priority. In both cases, there is a presumption that removal will be justified by the provision of replacement trees of equal or improved suitability for the setting.
- 3.2.2 The proposals only necessitate the clearance of:
- **T6** Ash
 - **G1** Intermittent hedgerow (3no. sections c.4m, c.4m & c.6m in length)
 - **G3** Crack Willow & Hawthorn
- 3.2.3 All the necessary removals detailed above warrant category C only, and are considered to be readily mitigable for within an appropriate scheme of soft landscaping.
- 3.2.4 The extent of tree removal is illustrated in Appendix C and is distinguishable from retained trees through the absence of an RPA or a hatched canopy; identification numbers are

shown coloured red and canopy edges are both dashed and coloured red. As a precaution against erroneous felling, it is recommended that the project arboriculturist spray-marks the trees to be removed with a red flash in the presence of an appointed arboricultural contractor.

- 3.2.5 Clearance works should be timed to avoid the main nesting season for birds between 1st March and 31st August. If scheduled within this period it is recommended that an ecologist is present to advise on any necessary protective measures, and on hand to confirm that tree works are not likely to cause disturbance to nesting birds.

3.3 Mitigation Replanting

- 3.3.1 The removal of low quality tree cover on the southern boundary and internally presents an opportunity for the introduction of better quality specimens of greater amenity potential which will be appropriate for inclusion within the proposed commercial setting. The Landscape Strategy (submitted separately ref: 5920.LS.ASP1) specifies a selection of native and ornamental species throughout the site to complement, and reinforce the retained boundary tree cover.

- 3.3.2 The proposed soft landscaping will improve the number, quality, diversity and distribution of tree cover, and enhance the future amenity potential of the application area. The use of advance nursery stock and semi-mature plantings will provide immediate impact.

3.4 Pruning

- 3.4.1 The only pruning works necessary to implement the proposals amount to the shortening of the lower eastern canopy of G5 (Category C Ash) to facilitate proposed attenuation basins. The extent of pruning works are to be determined onsite, but are anticipated to amount to the shortening of minor lower secondary branches, and to be achievable without detriment to the trees' future potential.
- 3.4.2 It is recommended that throughout the entire site, dead branches are removed from the canopies of retained trees. Although this work is not required to facilitate construction, it will help mitigate the risk of future tree related hazards emerging. It would be prudent for this work to coincide with clearance work on account that access to the trees will be unimpeded.
- 3.4.3 Tree works should be undertaken in accordance with sections 7.3 (for removal of deadwood) and 7.8 (for selective pruning) of BS3998:2010, by a competent tree contractor,

to ensure that cuts are performed correctly and positioned so as to avoid future structural defects or physiological issues, facilitate growth and maintain aesthetic value.

3.5 Supervised Excavation

3.5.1 Within the proposed redevelopment, it will be necessary to manage the installation of 4no. sections of features within the peripheries of the RPAs of retained trees. The areas are illustrated within Appendix C with an orange hatch and affect the following tree cover:

- T9 Ash - Proposed car parking occupying <1% of the RPA
- G5 Ash w/hedgerow remnants – Proposed attenuation basin

3.5.2 When the extent of incursion is considered in conjunction with the fact that the area is understood to have been regularly disturbed by agricultural cultivation, the incursions are considered to be within acceptable limits. The upper soil profile's importance to supporting the trees' root networks is considered to be reduced, compared to undisturbed ground; this has been a key consideration when determining the impact.

3.5.3 This opinion is subject to the precautionary measure of any excavation being undertaken by hand following the principles contained within section 7.2 of BS5837:2012 'Avoiding physical damage to the roots during demolition or construction'. To ensure that the principles are adhered to, it is recommended that the works within RPAs are carried out under direct arboricultural supervision.

3.6 Protective Barriers

3.6.1 Due to the proximity of the development to the retained tree-cover, it will be critical to protect the retained trees' above-ground structures and underlying RPAs from damage during construction works. To achieve this, the barrier specification for direct protection should consist of the default specification provided in BS5837:2012. It is considered essential that this is erected prior to occupation of the site for construction related purposes. The location for the tree protection fencing is illustrated within Appendix C with a bold blue line.

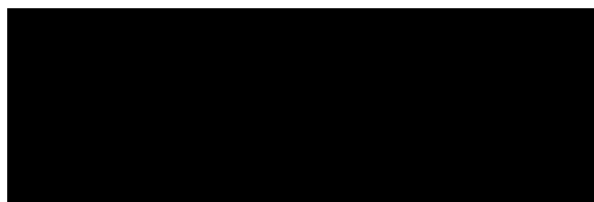
3.6.2 It would be prudent for the project arboriculturist to oversee the initial setting out of tree protection barriers and provide written confirmation to the LPA's arboricultural officer on completion.

4 CONCLUSION

- 4.1 Pursuant to national and local level policy tests and current best practice in the context of proposed development, a BS5837:2012 survey and assessment has been prepared to inform the retention of trees of merit and their contribution to amenity.
- 4.2 The proposals only necessitate the loss of a small number of low quality trees to facilitate access to the site and accommodate the proposed internal layout. The proposals will not result in the loss of any trees considered worthy of individual distinction. The proposed removals will be mitigated for within an appropriate scheme of improved quality replacement plantings.
- 4.3 The proposed development is considered supportable from the arboricultural perspective and in terms of national and local Policy where it relates to trees. This opinion is subject to the implementation of the submitted planting proposals, and the adoption of safeguards for protecting trees during construction.

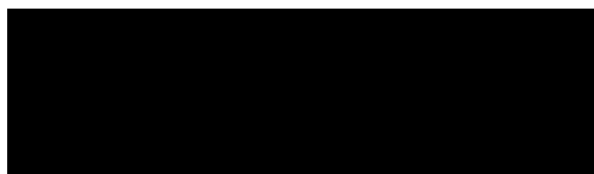
Prepared By:

James Bardey BSc (Hons) MArborA
Senior Arboricultural Consultant



Checked By:

Dr Richard Curtis BSc (Hons) PgDip PhD MArborA
Associate Director



APPENDICES

APPENDIX A

TREE SURVEY SCHEDULE (9600 TS 01)

**BS 5837:2012 Tree Schedule: Salt Box,
Bognor Regis**

e.g.: young, semi-mature, early-mature,
mature or over-mature

Height and Crown spread measured to the nearest half meter; # denotes where this is estimated.

Category prefix A-C denotes arboricultural quality, decreasing from A (high) to C (low); Subcategories 1, 2 and 3 highlight associated arboricultural (1), landscape (2) and ecological (3) qualities.

Category U trees are those in such a condition that they cannot be realistically retained as living trees in the current context for the long term.

Measured to the nearest 10mm; # denotes estimated diameter where access is not possible.

*e.g.: above-average, average,
below average or dead*

Height of first significant branch and/or canopy

General observations, i.e. defects, preliminary management recommendation, presence of pests/disease, perceived significance.

e.g.: good, indifferent, poor, or hazardous

The following survey should not be interpreted as a report on tree health and safety. Aspect's opinion of tree condition and structural potential is valid for a limited period of 12 months from the date of inspection. Validity is assumed in the absence of inclement weather and no change to the trees existing setting.

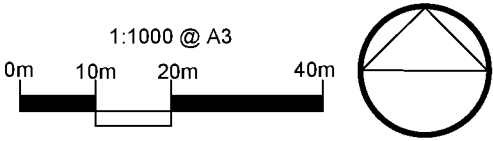
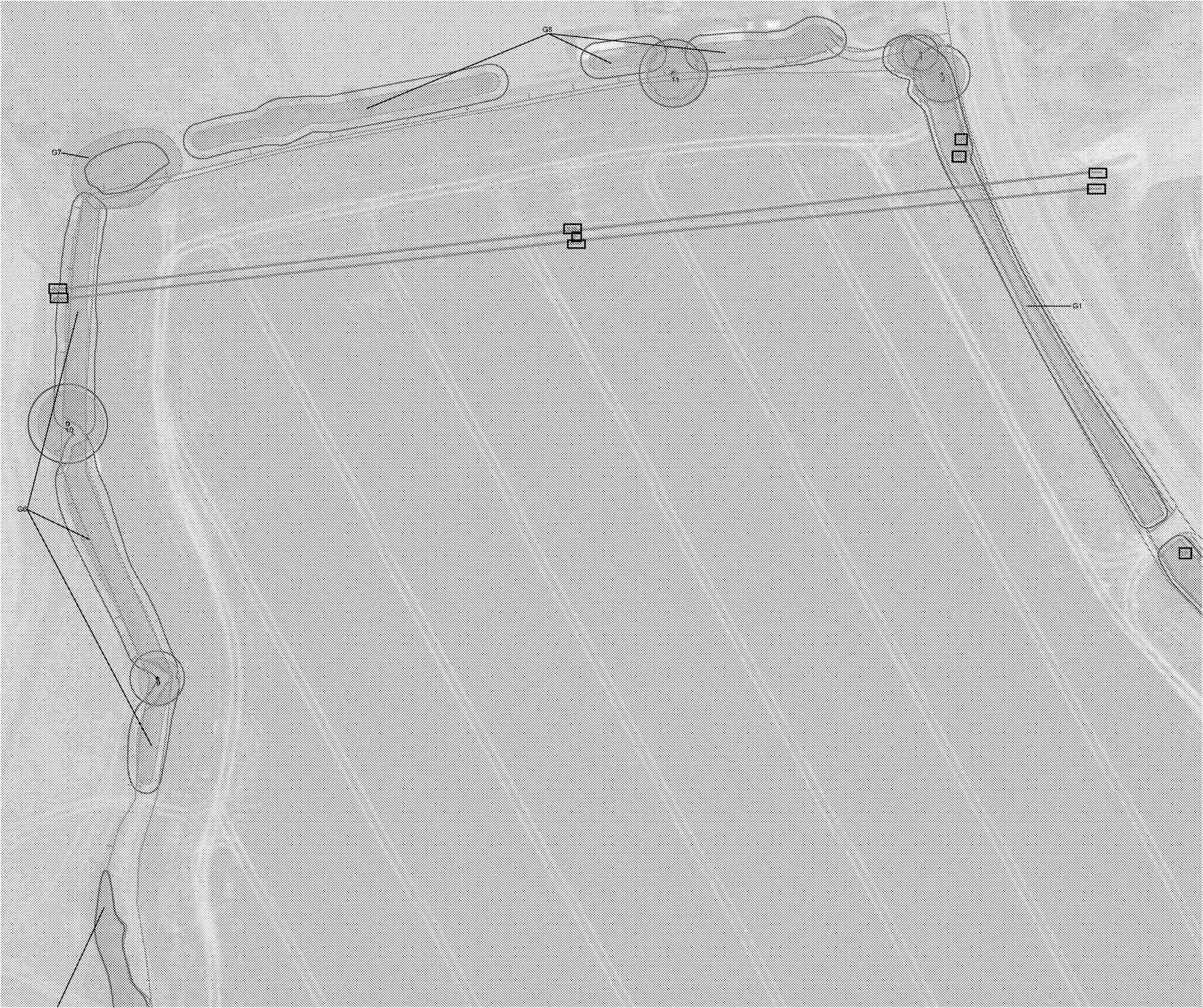
Tree Number	Common Species Name	Trunk Diameter (mm)	Height (m)	Crown Spread (m)					First Significant Branch (m)	Crown Clearance (m)	Life Stage	Physiological Condition	Structural Condition	Comments	BS5837 Category	RPA Radius (m)
				N	E	S	W	Radial								
1	Ash	4*200#	10m	6.25	7	6	6.5		2	3	Early Mature	Average	Indifferent	Sited on the North East corner access point Inaccessible due to dense understory scrub - unable to thoroughly inspect. Multi-stemmed from base. Unremarkable example of species.	C1	4.8
2	English Oak	2*450#	10m	6	6	8.3	6.25		4.5	3	Early Mature	Below Average	Poor	Sited on the North East corner access point Inaccessible due to dense understory scrub - unable to thoroughly inspect. Base of stem obscured by Ivy, Bramble & epicormic growth Appears to be twin stemmed - unable to inspect union Above average deadwood and epicormic growth Considered to be of low arboricultural quality	C1	7.5
3	Ash	190	8m	3.25	4.25	2.8	1		1.75	2.25	Semi Mature	Average	Poor	Establishing ornamental planting Flail damage to western canopy Low arboricultural quality	C12	2.4
4	English Oak	215	8m	4	5.5	4.5	2		1	0.5	Semi Mature	Average	Poor	Establishing ornamental planting Flail damage to western canopy Low arboricultural quality	C12	2.7
5	Hawthorn	100 2*50	7m	2.5	2.5	2.5	1		0.5	0.5	Semi Mature	Average	Poor	Likely remnant of old field boundary hedgerow Self-set Ash establishing at base Flail damage to western canopy Low arboricultural quality	C12	1.5
6	Ash	170	6m	2.75	4.25	3.3	1.5		1.5	1	Semi Mature	Average	Poor	Establishing ornamental planting Flail damage to western canopy Low arboricultural quality	C12	2.1
7	Horse Chestnut	205	6m	2.25	2.75	3	1		1.5	1.5	Semi Mature	Average	Poor	Establishing ornamental planting Flail damage to western canopy Low arboricultural quality	C12	2.4
8	Ash	3*270#	9m					6#	2#	2#	Early Mature	Average	Indifferent	Dominant component of G4 Inaccessible due to dense understory scrub Stems clad and obscured by Ivy - unable to thoroughly inspect Appears to be multistemmed from base Unremarkable example of species	C1	5.7
9	Ash	420 340 280	10m	5.5	6	7.5	5#		2.25	3	Early Mature	Below Average	Poor	Established within ditch on western boundary Multistemmed from base Stems clad and obscured by Ivy, extending into upper canopy - unable to thoroughly inspect Above average amount of epicormic growth throughout Unremarkable example of species	C1	7.2
10	English Oak	870#	12m	9	9.5	9	8#		3	3	Mature	Below Average	Indifferent	Offsite: located to west of boundary ditch Stem clad and obscured by Ivy extending into upper canopy - unable to thoroughly inspect Flail damage to lower eastern canopy Above average epicormic growth and deadwood throughout Unremarkable example of species, but considered to provide moderate contribution to amenity	B2	10.5
11	Ash	320 2*150 3*250 300 450	15m	9#	9.25	9	7.25		1.5	4 to 5	Mature	Average	Poor	Established to south of boundary ditch Base inaccessible due to dense understory Stems clad and obscured by ivy - unable to thoroughly inspect Consistent in appearance with lapsed coppice stool Unremarkable example of species	C1	9

Tree Number	Common Species Name	Trunk Diameter (mm)	Height (m)	Crown Spread (m)					First Significant Branch (m)	Crown Clearance (m)	Life Stage	Physiological Condition	Structural Condition	Comments	BS5837 Category	RPA Radius (m)
				N	E	S	W	Radial								
G1	Elder Hawthorn Sycamore Hazel Dogwood Cherry Rowan	450# Max	7 Max					4 Max	0.5 av	0.5 av	Semi Mature to Mature	Below Average to Average	Poor to Indifferent	Intermittent parcels of old field boundary hedgerow remnants with occasional self-set specimens and frequent scrub Overgrown and obscured by bramble - unable to access any stems Unlikely to provide a long term future contribution to amenity Considered to be of very low arboricultural quality	C12	5.4
G2	Ash Rowan Common Alder Sycamore Goat Willow Field Maple Hawthorn Elder Sea Buckthorn	470# Max	16 Max					7.5 Max	2 av	3 to 4 to North	Semi Mature to Early Mature	Average	Indifferent	Inaccessible offsite collection associated with neighbouring campsite to south Structures typical for species given context Forms a mutually suppressed and cohesive belt providing screening benefit Collectively considered to be of moderate arboricultural quality	B2	5.7
G3	Crack Willow Hawthorn	500#	9m					6 av	0.5 av	0.5 av	Semi Mature to Early Mature	Average	Poor to Indifferent	Established parcel of predominantly Crack Willow Inaccessible due to dense understory scrub and surrounding stock proof fencing Considered to be of low arboricultural quality with occasional failed specimen	C12	6
G4	Blackthorn	2*250# Max						3.25 Max	0.5 av	0.5 av	Young to Early Mature	Average	Poor to Indifferent	Parcel of naturalising scrub with occasional field boundary hedgerow remnants distributed throughout Clad and obscured by bramble - unable to thoroughly inspect	C12	4.2
G5	Ash Hawthorn Elder Blackthorn English Oak Goat Willow	500# Max	14 Max					6.25 Max	2#	3#	Semi Mature to Early Mature	Below Average to Average	Hazardous - Indifferent	Parcel of predominantly established Ash with understory of field boundary hedgerow remnants and dense naturalising scrub. Clad and obscured by Ivy and Bramble - unable to thoroughly inspect One fallen dead Ash to northern extent Field boundary ditch to west of stems Above average amounts of deadwood and sparse canopies throughout Considered to be of low arboricultural quality	C12	6
G6	Hawthorn	400# @base	6 Max					2.5 Max	0.5 av	0.6 av	Early Mature	Below Average to Average	Poor to Indifferent	Intermittent parcels of old field boundary hedgerow remnants Predominantly clad in Ivy - unable to thoroughly inspect Located to east and west of field boundary ditch	C12	4.8
G7	Crack Willow	450# Max	15 Max					9 Max	2	1.5	Semi Mature to Early Mature	Average	Poor to Indifferent	Offsite: Small parcel of established Crack Willow sited within and to north of field boundary ditch Inaccessible, stems clad in Ivy and Bramble - unable to thoroughly inspect Structure typical for species One fallen specimen to eastern extent of group Some flail damage to lower southern canopies	C12	5.4
G8	Hawthorn	Hawthorn Crack Willow Elder Blackthorn Hazel Goat Willow	400# @base	7 Max				2.5 Max	0.5 av	0.5 av	Early Mature	Average	Poor to Indifferent	Intermittent parcels of field boundary hedgerow remnants with occasional self-set specimens Mostly inaccessible, stems being sited to north of ditch Predominantly clad in Ivy and Bramble	C12	4.8

Tree Number	Common Species Name	Trunk Diameter (mm)	Height (m)	Crown Spread (m)					First Significant Branch (m)	Crown Clearance (m)	Life Stage	Physiological Condition	Structural Condition	Comments	BS5837 Category	RPA Radius (m)
				N	E	S	W	Radial								
H1	Hawthorn Elder	90 av	4 av					1.75 av	0.5 av	0.5 av	Semi Mature	Average	Indifferent	Maintained field boundary hedgerow associated with neighbouring campsite to south Occasional semi-mature and early-mature specimen offsite to south - unable to accurately plot	C12	1.2
H2	Hawthorn	300# Max 80 av	6 Max					3.5 Max	0.5 av	0.5 av	Semi Mature to Early Mature	Below Average to Average	Indifferent	Remnants of former field boundary hedgerow restocked to form continuous belt Appears to be previously maintained	C12	0.9 ave. 3.6 max.

APPENDIX B

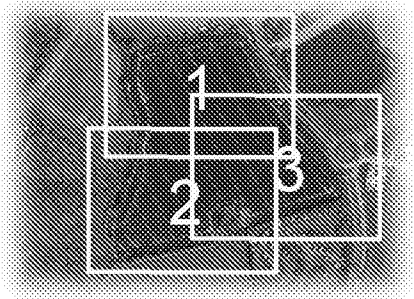
TREE CONSTRAINTS PLAN (9600 TCP 01 Rev A)



KEY:

- 15 Tree Numbers
- Tree Canopies
- Category 'U' Trees
- Category 'B' RPA
- Category 'C' RPA

Note: Trees 1-3, 5-10 as well as G1-G8 are not on the topographical survey and their locations have been approximated using a scaled aerial photograph combined with measurements taken on site.



Cited from Google Earth

REV	DATE	NOTE	Drawn	Chk'd

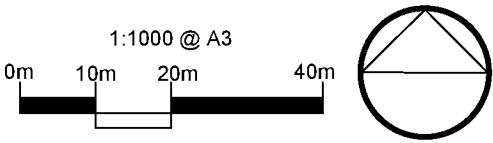
aspects arboriculture

TITLE
Salt Box, Bognor Regis
Tree Constraints Plan

CLIENT
Landlink Estates

SCALE 1:1000 @ A3	DATE JUL 2017	DRAWN RO
DRAWING NUMBER 9600 TCP 01 Rev A (1/3)	REVISION	

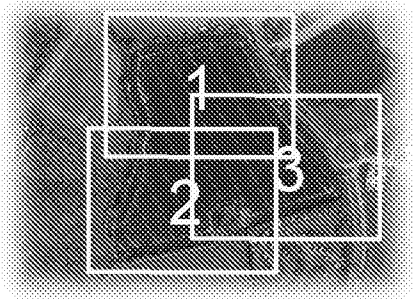
Based on: 23113_TOPO_500



KEY:

-  15 Tree Numbers
-  Tree Canopies
-  Category 'U' Trees
-  Category 'B' RPA
-  Category 'C' RPA

Note: Trees 1-3, 5-10 as well as G1-G8 are not on the topographical survey and their locations have been approximated using a scaled aerial photograph combined with measurements taken on site.



Cited from Google Earth

REV	DATE	NOTE	Drawn	Chk'd
REVISIONS				

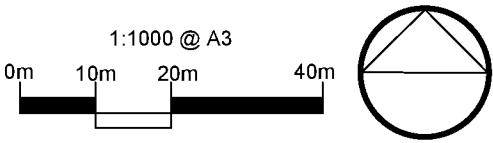
aspect arboriculture

TITLE
**Salt Box, Bognor Regis
Tree Constraints Plan**

CLIENT
Landlink Estates

SCALE 1:1000 @ A3	DATE JUL 2017	DRAWN RO
DRAWING NUMBER 9600 TCP 01 Rev A (2/3)		REVISION

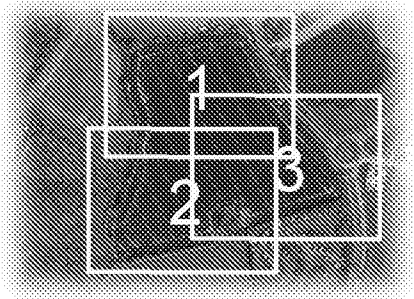
Based on: 23113_TOPO_500



KEY:

- 15 Tree Numbers
- Tree Canopies
- Category 'U' Trees
- Category 'B' RPA
- Category 'C' RPA

Note: Trees 1-3, 5-10 as well as G1-G8 are not on the topographical survey and their locations have been approximated using a scaled aerial photograph combined with measurements taken on site.



Cited from Google Earth

REV	DATE	NOTE	Drawn	Chk'd
REVISIONS				

aspect arboriculture

TITLE

Salt Box, Bognor Regis
Tree Constraints Plan

CLIENT

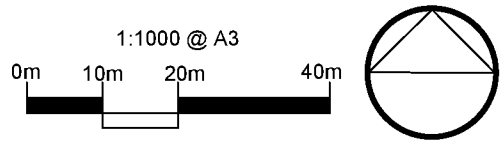
Landlink Estates

SCALE 1:1000 @ A3	DATE JUL 2017	DRAWN RO
DRAWING NUMBER 9600 TCP 01 Rev A (3/3)	REVISION	

Based on: 23113_TOPO_500

APPENDIX C

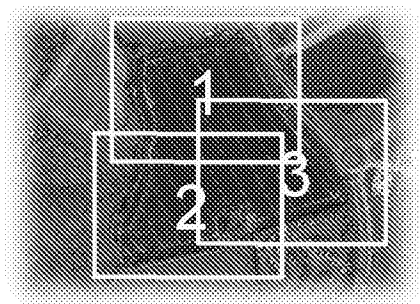
TREE PROTECTION PLAN (9600 TPP 01)



KEY:

- 15 Tree Numbers
- Tree Canopies
- Category 'U' Trees
- Category 'B' RPA
- Category 'C' RPA
- Trees to be Removed
- ▬ Tree Protection Barrier
- ▨ Manual Excavation

Note: Trees 1-3, 5-10 as well as G1-G8 are not on the topographical survey and their locations have been approximated using a scaled aerial photograph combined with measurements taken on site.



Cited from Google Earth

REV	DATE	NOTE	Drawn	Chk'd

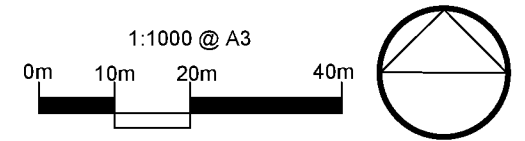
aspects arboriculture

TITLE
Salt Box, Bognor Regis
Tree Protection Plan

CLIENT
Landlink Estates

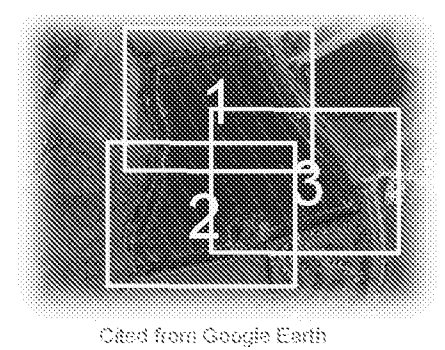
SCALE 1:1000 @ A3	DATE AUG 2017	DRAWN GW
DRAWING NUMBER 9600 TPP 01 (1/3)	REVISION	

Based on: 1744-P02-BD.dwg



- KEY:
- 15 Tree Numbers
 - Tree Canopies
 - Category 'U' Trees
 - Category 'B' RPA
 - Category 'C' RPA
 - Trees to be Removed
 - Tree Protection Barrier
 - Manual Excavation

Note: Trees 1-3, 5-10 as well as G1-G8 are not on the topographical survey and their locations have been approximated using a scaled aerial photograph combined with measurements taken on site.



REV	DATE	NOTE	Drawn	Chk'd
REVISIONS				

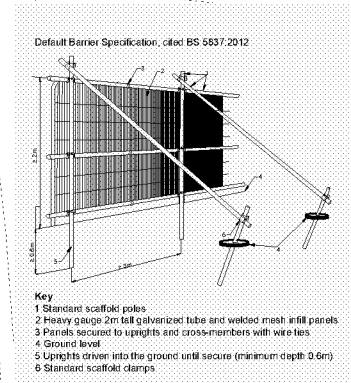
aspect arboriculture

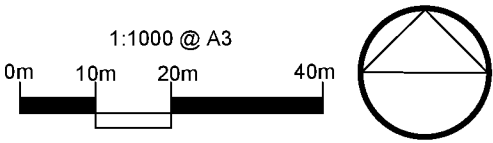
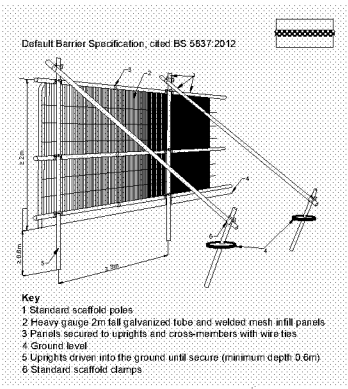
TITLE
Salt Box, Bognor Regis
Tree Protection Plan

CLIENT
Landlink Estates

SCALE 1:1000 @ A3	DATE AUG 2017	DRAWN GW
DRAWING NUMBER 9600 TPP 01 (2/3)		REVISION

Based on: 1744-P02-BD.dwg

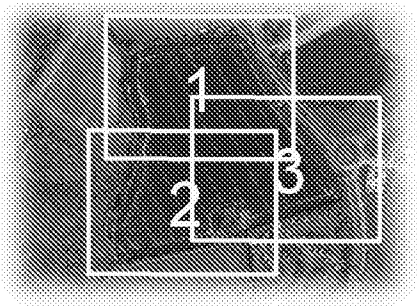




KEY:

- 15 Tree Numbers
- Tree Canopies
- Category 'U' Trees
- Category 'B' RPA
- Category 'C' RPA
- Trees to be Removed
- ▨ Tree Protection Barrier
- ▨ Manual Excavation

Note: Trees 1-3, 5-10 as well as G1-G8 are not on the topographical survey and their locations have been approximated using a scaled aerial photograph combined with measurements taken on site.



Cited from Google Earth

REV	DATE	NOTE	Drawn	Chk'd
REVISIONS				

aspect arboriculture

TITLE

Salt Box, Bognor Regis
Tree Protection Plan

CLIENT

Landlink Estates

SCALE 1:1000 @ A3	DATE AUG 2017	DRAWN GW
DRAWING NUMBER 9600 TPP 01 (3/3)	REVISION	

Based on: 23113_TOPO_500

APPENDIX D

TREE SURVEY METHODOLOGY

Tree Survey Methodology

The tree survey is a form of Visual Tree Assessment undertaken during July 2017. Tree locations are identified via a topographical survey; locations of any trees excluded from the topographical survey were plotted on site. The purpose of the survey is to record information about trees on or adjacent to the site to inform design options. In keeping with clause 4.4 of BS5837: 2012 'Trees in Relation to Design, Construction and Demolition', the survey provides a record of the following parameters:

Tree Numbers: all individual trees are sequentially numbered. Groups of trees, woodlands and hedgerow are also sequentially numbered with a corresponding prefix relevant to their type e.g. G, W or H respectively; the identification of trees as woodland, groups of trees or within hedgerows is undertaken where appropriate. The identification of trees as individuals within collections has been made where it is considered sensible to make such a differentiation.

Species: listed by common name

Stem Diameter: given in millimetres and obtained by measuring single/multiple stems at 1.5m using a diameter tape in accordance with Annex C within BS5837:2012. Diameters of inaccessible trunks are estimated and provided with the suffix '#'.

Tree Heights: determined using a clinometer and measured to the nearest 500mm. Heights are estimated where specific triangulation is not achievable and by reference to measured trees nearby (provided with the suffix '#').

Crown Spreads: measured at cardinal points using a Leica Disto™ laser distance measurer. Measurements were recorded to the nearest 250mm. Inaccessible crown spreads are estimated based on measured canopies nearby and provided with the suffix '#'

Crown Clearance: The height of the first significant living branch and/or canopy (as appropriate) is recorded using a Leica Disto™ laser distance measurer to inform vertical ground clearance. Crown clearance may be higher or lower than the first significant branch. Estimated clearances are provided with the suffix '#'. Height of first significant branch will be provided where considered advantageous to make the distinction.

Life Stage – The age of trees, groups of trees, hedges and woodlands are defined as follows:

- Young (within the first 1/4th of life expectancy)
- Semi-mature (within the second 1/4th of life expectancy)
- Early Mature (within the third 1/4th of life expectancy)
- Mature (within the fourth 1/4th of life expectancy)
- Over Mature and Veteran (exceeding normal life expectancy)
- Veteran (significantly exceeding normal life expectancy)

Physiological and structural condition: physiological condition defined as follows; good, above average, average, below average, poor or dead. Structural condition is defined as: good, moderate, indifferent, poor or hazardous

Comments: further observations were recorded where necessary i.e. details regarding defects, preliminary management recommendations, presence of pest/disease and perceived significance.

BS5837 Category: pursuant to BS5837:2012 section 4.5 and cascade chart for tree quality assessment (refer to reproduced Table 1 overleaf). Trees qualifying under a given category (A-C and U) and any appropriate subheading (1-3) are considered to fall within the scope of that category's definition.

Estimated Remaining Contribution. Described` as a guideline only and in terms of years: <10, 10+, 20+ and 40+ relevant to category U, C, B and A respectively. This information is not provided on the tree schedule to avoid conclusions based upon 'life expectancy'.

Table 1 Cascade chart for tree quality assessment

Category and definition	Criteria (including subcategories where appropriate)		
Trees unsuitable for retention (see Note)			
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	- Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) - Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline - Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality <i>NOTE: Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</i>		
	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation
Trees to be considered for retention			
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)
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
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

landscape planning • ecology • arboriculture

aspect

Aspect Arboriculture
West Court
Hardwick Business Park
Noral Way
Banbury
Oxfordshire OX16 2AF