

CUNNANE STRATTON REYNOLDS

TREE SURVEY

**Haydens Lane,
Adamstown, Lucan,
Co Dublin.**

December 2021

REV A



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SUMMARY

This report presents a record of those trees existing within or adjacent to a brownfield site at Hayden's Lane, Adamstown, Lucan, Co Dublin. The site formerly contained a large industrial building, which has been removed to ground level with concrete floors/foundations and associated car parking and access roads still present.

Trees have been surveyed as individuals or tree groups in accordance with BS 5837 (2012). The site tree survey was undertaken on 24th March 2021 by Cunnane Stratton Reynolds arborist;

Keith Mitchell Diploma Arboriculture (Level 4)
 Technician Member Arboricultural Association (UK)
 Tree Risk Assessment Qualification (International Society of Arboriculture)
 MA(Hons) Landscape Architecture
 Member of the Irish Landscape Institute
 Chartered Member of the Landscape Institute (UK)
 Diploma EIA Management

This survey and report are based on the topographic site survey information supplied in the following drawing;

- Precision Surveys Topographic Survey Dwg 623
- CSR Landscape Plan 21503-1-100 LMP

A full survey record is presented in Appendix 1, together with accompanying drawings Tree Constraints Dwg No 21503A_T_101, Arboricultural Impact Assessment Dwg No 21503A_T_102 and Tree Protection Plan Dwg No 21503A_T_103. After introducing the terms of reference and the methodology of the survey, the report summaries the survey findings in an overview of the existing tree cover along the route.

A total of thirty individual trees and three tree groups were recorded as part of the survey.

Where assessment takes the form of a Tree Group – any trees of particular arboricultural significance or relevance to proposed scheme within these groups may also be identified individually. Every effort has been made to access all trees for inspection, however in some instances where site conditions prevent full access, some measurements may be visually estimated.

The site has a mix of ornamental non-native and native trees varying from young trees to large fully mature trees. Most are of moderate to low quality.

The report concludes with recommendations for protection measures to ensure the conservation of retained trees during the proposed development.



1. INTRODUCTION

Terms of Reference

Cunnane Stratton Reynolds (CSR) were instructed to undertake a tree survey, to inform the planning, design and layout of a proposed brownfield site located in Adamstown, Lucan between existing residential development and Griffeen Valley public park.

Following a site survey, CSR considered those tree and tree groups that might potentially be impacted by the proposed development and produced a subsequent tree survey report presenting our findings, (in accordance with BS 5837:2012), together with recommendations for their best practice management in relation to the proposed development.

This involved a survey of the principal trees / tree groups concerned in accordance with BS 5837 (2012).

Documents supplied to CSR for purposes of conducting a tree survey include:

- Precision Surveys Topographic Survey Dwg 623
- CSR Landscape Master Plan 21503-1-100 LMP

Site Inspection & Methodology

The site was surveyed on 24th March 2021 by a qualified Arborist. A visual inspection from the ground was performed on all relevant existing trees / tree groups on site. Where access allowed, principal individual trees were examined, and existing reference number tags checked before critical measurements were taken and observations made.

A description was recorded of each tagged tree / group of trees, their species, age class, all relevant measured dimensions (height, stem diameter, crown spread radii and crown clearance height) and an assessment of the tree health / vitality, structural form, life expectancy and quality categorisation. Any recommended remedial works required were outlined. Significant tree groups are subject to group description and assessment, in accordance with BS 5837 (2012).

The findings of the survey are recorded and presented in this Tree Survey Report and Tree Schedule (Appendix 1). A Tree Classification and Constraints drawing was produced to inform the alignment process. An Arboricultural Impact Assessment and Tree Protection Proposals were considered in the context of the proposed development.

This report is subject to the scope and limitations as given at the end of the report.

Accompanying Drawings

The tree survey report should be read in conjunction with;

- Tree Classification & Constraints (Dwg No 21503A/T/101).



- Arboricultural Impact Assessment (Dwg No 21503A/T/102).
- Tree Protection (Dwg No 21503A/T/103).

A1 size colour coded drawings accompany this report, (monochrome drawings should not be relied upon). These drawings are based upon the topographical / survey drawing supplied to CSR.

Site Location

The site is located between Haydens Lane, Adamstown, Co Dublin and Griffeen Valley public park.



2. DESCRIPTION OF EXISTING TREES

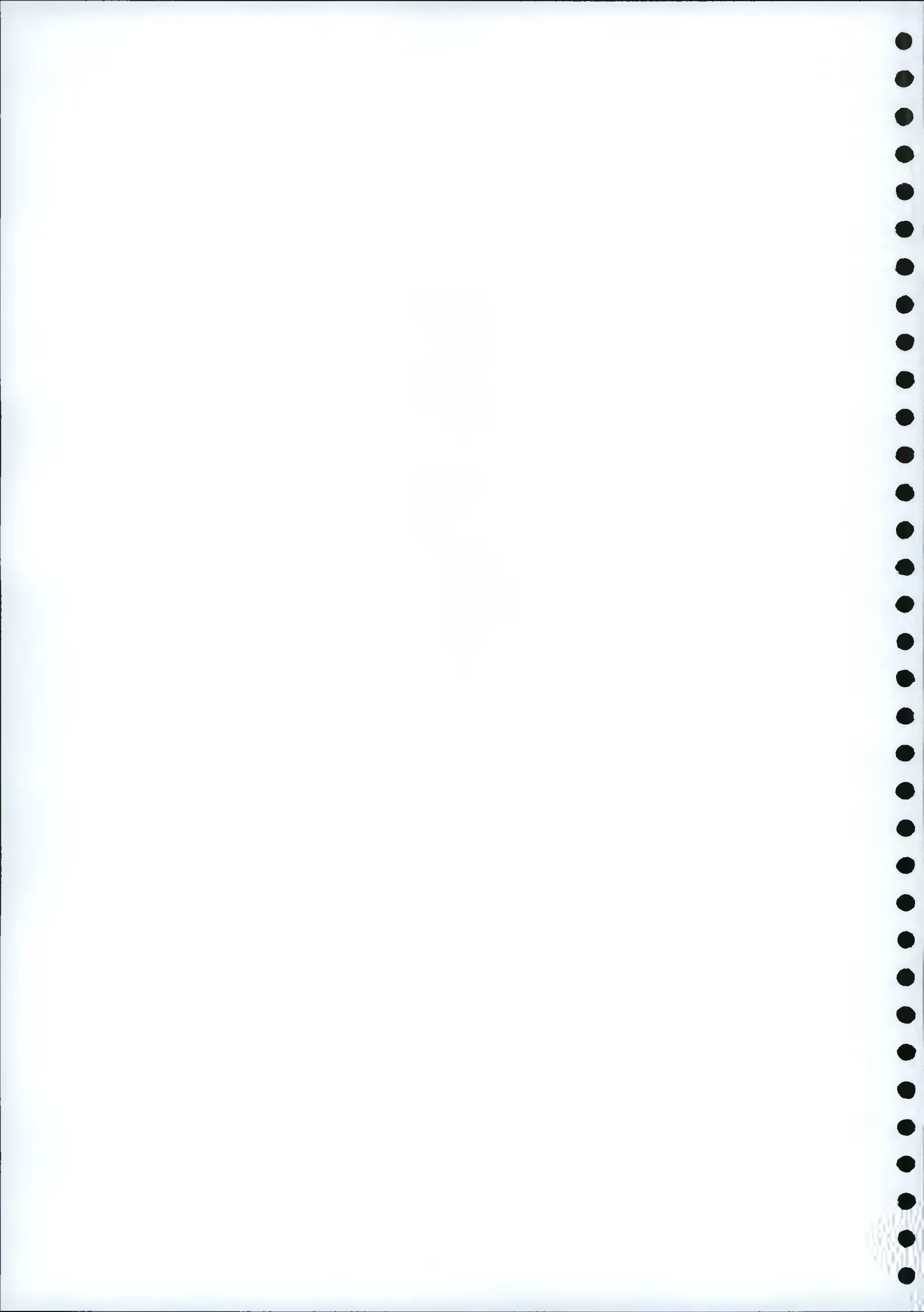
2.1 The existing trees are primarily ornamental specimens with a large proportion of Leylandii Cypress trees, that appear to have been planted in association with the previous development on the site.



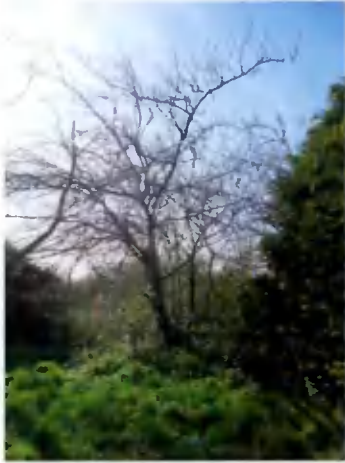
Figure 1: Satellite imagery of site (approximate area identified with redline).

A total of thirty individual trees and three tree groups were recorded as part of the survey.

Their location, size and quality category may be reviewed with reference to the accompanying Tree Survey Dwg No 21503A/T/101 and the tree survey (Appendix 1).



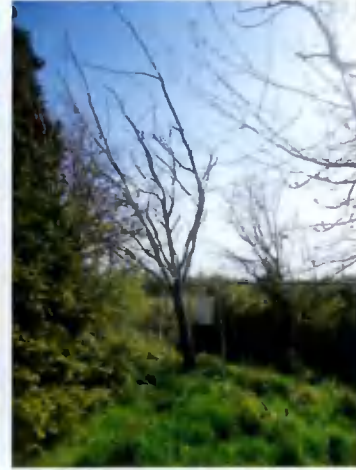
2.2 Photographic Summary of Trees Surveyed



T001



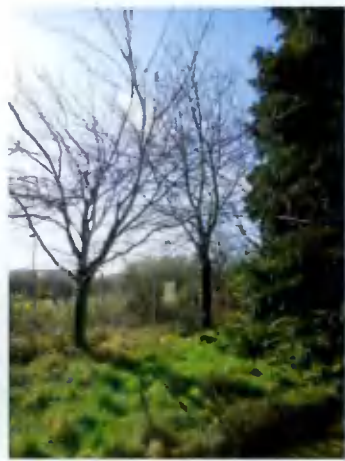
T002



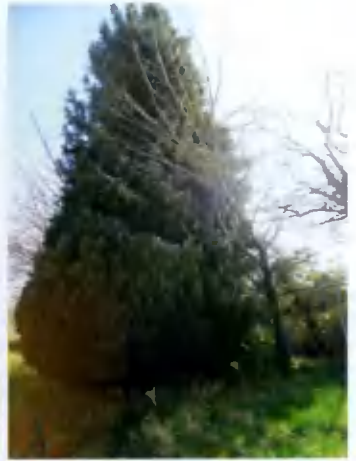
T003



T004 & T005



T006 & T007



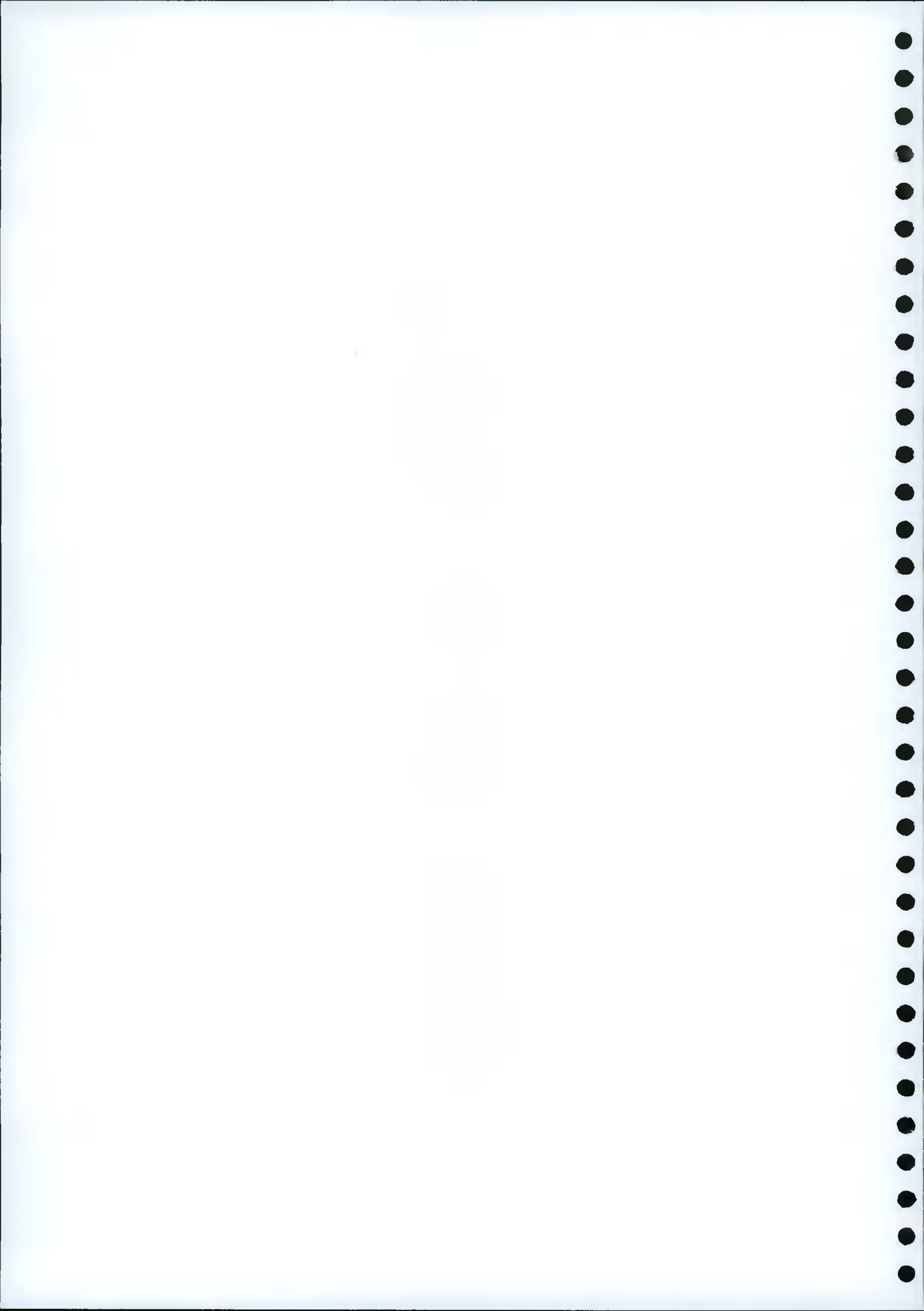
T008 & T009



T010



T011 & T012

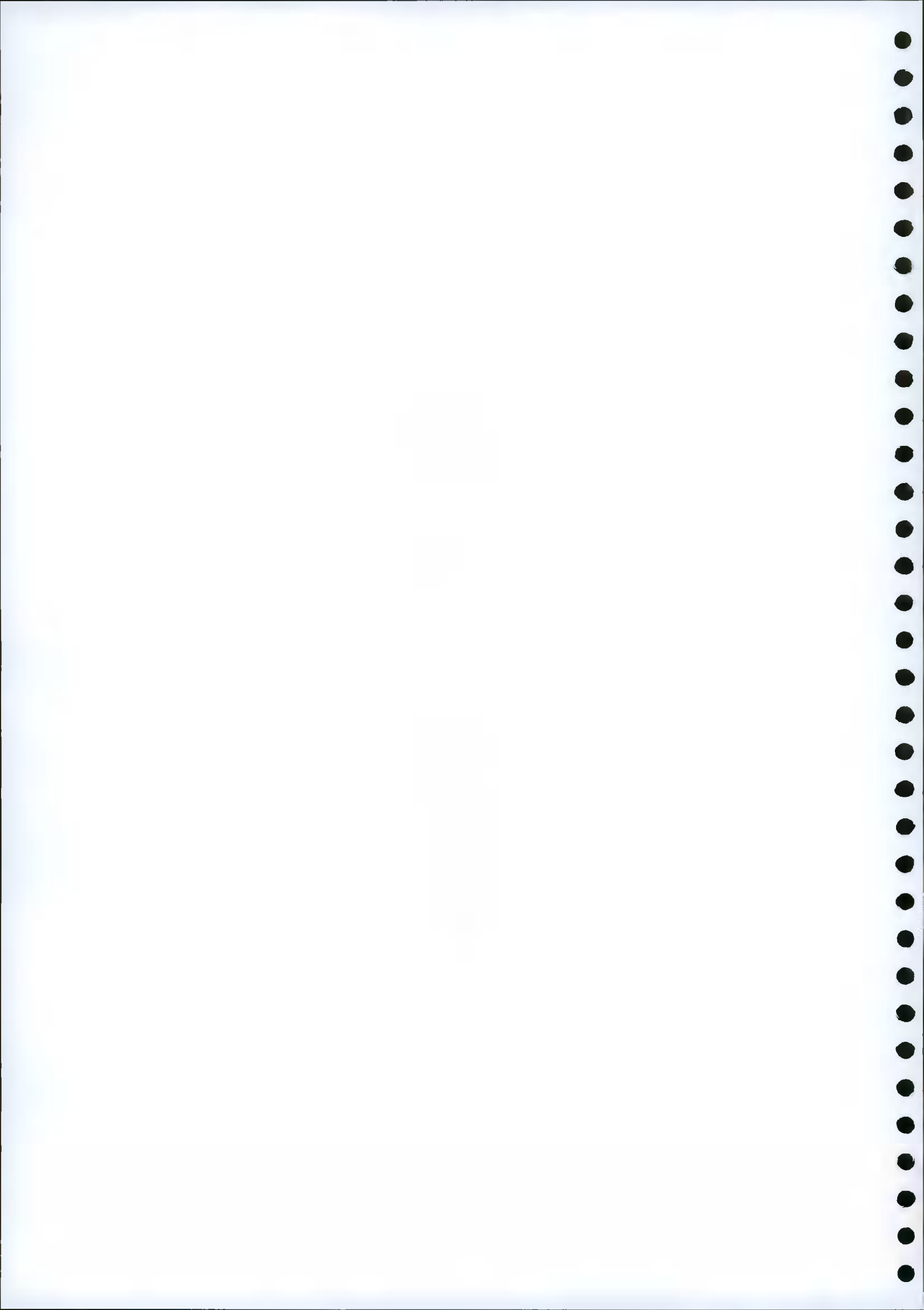




T013



T014 & T015 & T016





T017 & T018 & T019



T020



T021



TG2



T024 & T025



T022 & T023



T026





T027



T028



TG3

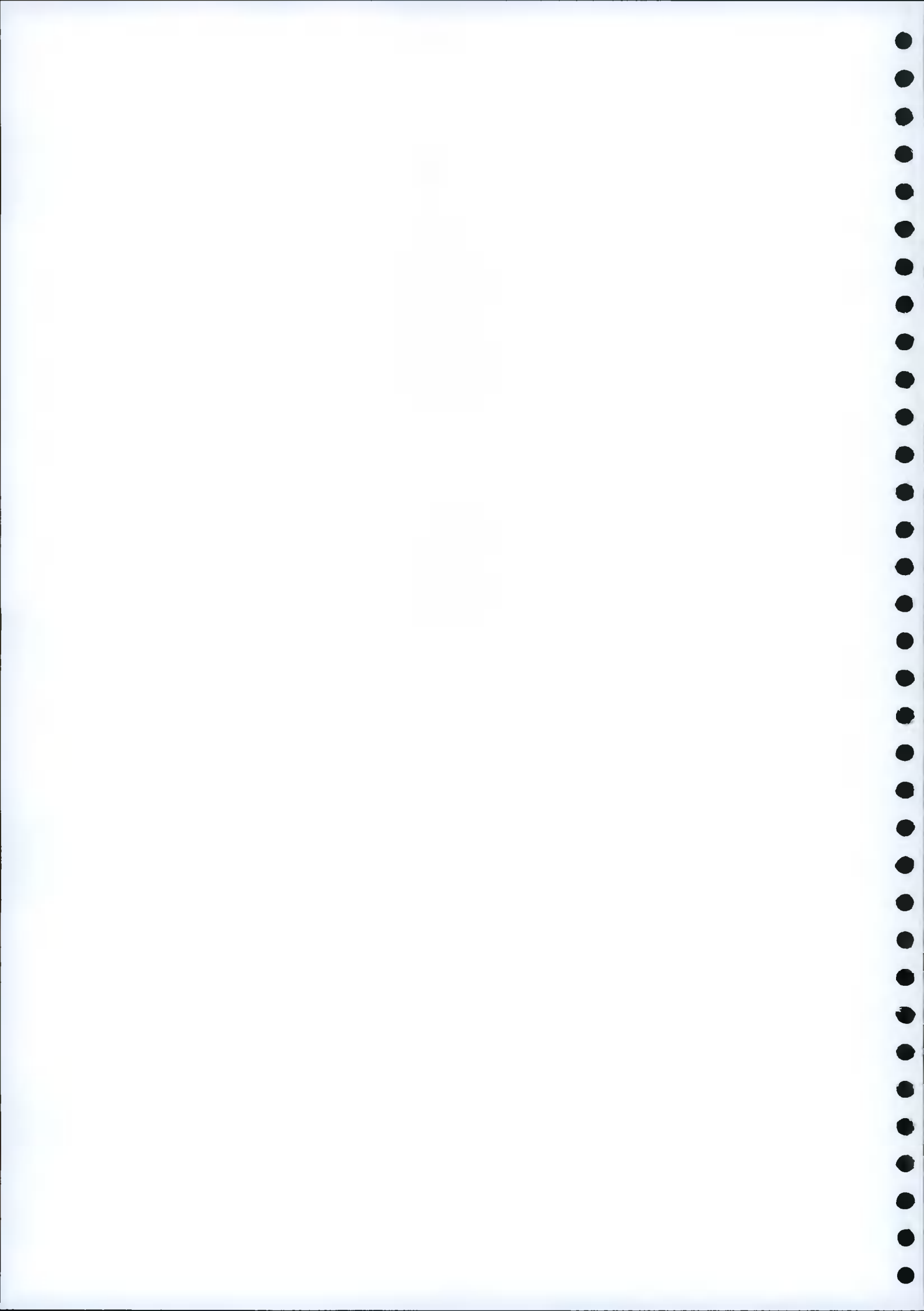


T29



T30

2.3 The trees on site are a mix of primarily non-native ornamental species, with a high proportion of coniferous Cypress planted in groups. Most trees are young to early mature in age and appear to have been planted as part of the previous development on the site around boundaries and within the car park layout.



3. ARBORICULTURAL IMPACT ASSESSMENT

3.1 This section discusses the potential impact of the proposed pipeline on the existing trees and considers the need for mitigation measures, in accordance with BS 5837 (2012), for sustainable development.

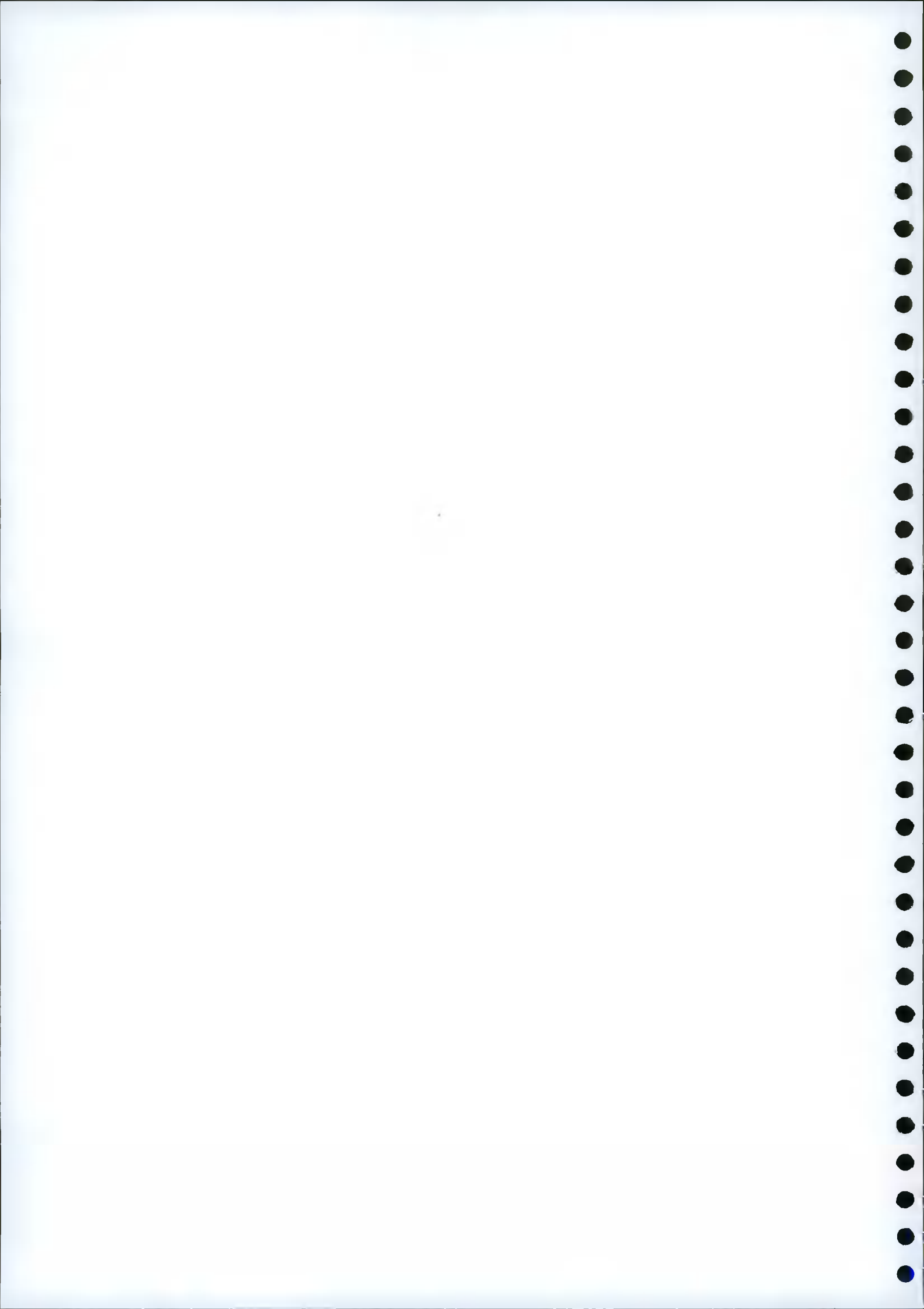
3.2 Category 'U' trees are recommended for immediate removal, (or monolith to safe height), on general management grounds, irrespective of site development – none were identified during this survey.

Direct Loss of Trees

3.3 The following trees or a significant portion of the following trees calculated root protection areas (RPA's), are in direct conflict with the proposed pipeline and consequently their retention in the context of the proposed development is not considered viable.

Tag No	Tree Species	Tree Class	Number of trees
T2	Prunus avium	C1	1
T3	Prunus avium	B1	1
T4	Cupressus x cupressocyparis	C1	1
T5	Cupressus x cupressocyparis	C1	1
T6	Prunus avium	B2	1
T7	Prunus avium	B2	1
T8	Prunus avium	B2	1
T9	Cupressus x cupressocyparis	C1	1
T10	Cupressus x cupressocyparis	C1	1
T11	Prunus avium	B2	1
T12	Prunus avium	B2	1
T13	Salix alba	B2	1
T17	Betula utilis	C1	1
T18	Betula utilis	C1	1
T19	Betula utilis	C1	1
T20	Prunus sp.	C1	1
T21	Betula pendula 'Youngii'	C1	1
T24	Eucalyptus viminalis	B1	1
T26	Acer platanoides	B1	1
T27	Acer platanoides	B1	1
T28	Acer platanoides	B2	1
T29	Acer platanoides	B2	1
T30	Cedrus atlantica	B1	1

Tag No	Tree Species	Tree Class	Number of trees
TG1	Cupressus x cupressocyparis Prunus avium	C2	Approx' 7
TG2	Cupressus x cupressocyparis	C2	2
TG3	Cupressus x cupressocyparis	C2	2



Indirect Impacts

3.4 Cognisance must also be given to indirect impacts - in particular care must be taken to ensure the proposed development and ancillary works do not represent an unacceptable conflict with the calculated 'Root Protection Area' of the existing trees proposed for retention.

Compromising a 'Root Protection Area' may just as readily kill or destabilise a tree over time, by means of root damage/severance and or earth compaction/covering preventing essential transfer of water, air and nutrients to roots.

Good planning and site management will be required during construction works to ensure these areas are not adversely impacted by construction activities. The use of tree protection fencing as set out in tree protection drawing 21503A_T_103 to exclude access to root protection areas will be critical to avoiding detrimental impacts and their successful retention.

Provided proper tree protection measures are adhered to it is not anticipated that any further trees will require removal due to indirect impacts.

It is advised that the site manager must carefully review the tree protection drawing 21470 T 103, prior to commencement of works on site. The proposed tree protection measures should be in place from the outset prior to the commencement of works. Any queries should be raised with the project Arborist prior to commencement of works on site.

Additional Considerations

3.5 Scrub and tree removal should ideally take place outside the bird nesting season (March – August).

Summary

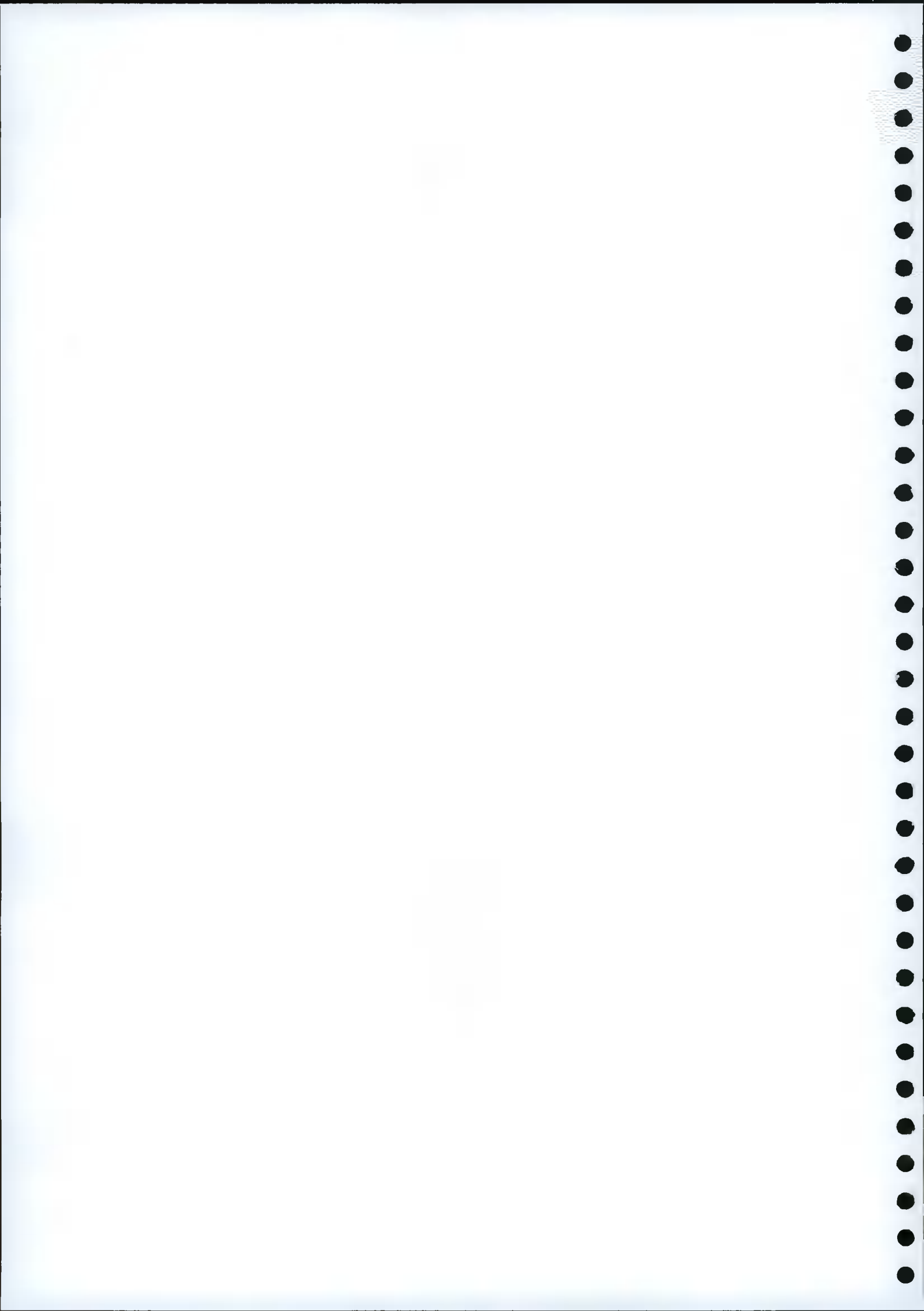
3.6 Table 1 illustrates the worst-case scenario of trees to be removed and their corresponding classifications.

Table 1.

Tree Class	Trees proposed for removal
A Class Trees	0
B Class Trees	13
C Class Trees	21
U Class Trees	0
TOTAL	34

Tree Protection

3.7 Adequate protection and so successful retention of those trees to be retained adjacent to the works area, will be achieved by rigidly excluding all construction activities from tree root protection areas by fit for purpose barriers/fencing and/or additional ground protection.



3.8 Tree Protection Areas (TPAs) are proposed, as indicated on accompanying Tree Protection Plan (Dwg No 21503A_T_103). Protective fence line locations and details for these fences are also illustrated on the plan.

Services

3.9 The proposed development in this instance is an underground service run.

4. RECOMMENDATIONS – Arboricultural Method Statement

Recommendations for the specific measures advised regarding management of the trees in relation to this development are detailed within Appendix 1. These recommendations should inform, and be referred to in, the method statements submitted for approval prior to commencement by the responsible building/engineering and landscape contractors whose works (subject to grant of permission) will affect retained trees and the Tree Protection Areas.

1. *Tree Works.*

Tree removals should be carried out by an appropriately qualified tree surgeon taking adequate measures such as section felling and use of ground protection boards to avoid damage to both surrounding retained trees and soils.

2. *Protective Fencing.*

Protective fencing (barriers) should be erected in the positions and alignments as indicated on the Tree Protection Plan (Dwg No 21503A T 103).

Fencing should be in accordance with BS 5837:2012 unless otherwise agreed with the planning authority. Commencement of development should not be permitted without adequate protective fencing being in place. This fencing, enclosing the minimum tree protection areas indicated, must be installed prior to any plant, vehicle or machinery access on site. Fencing should be signed 'Tree Protection Area – No Construction Access'. Fencing is not to be taken down or re-positioned without written approval of the project Arborist. No excavation, plant or vehicle movement, materials handling or soil storage is to be permitted within the fenced tree protection areas indicated on plan.

3. Boundary Treatments

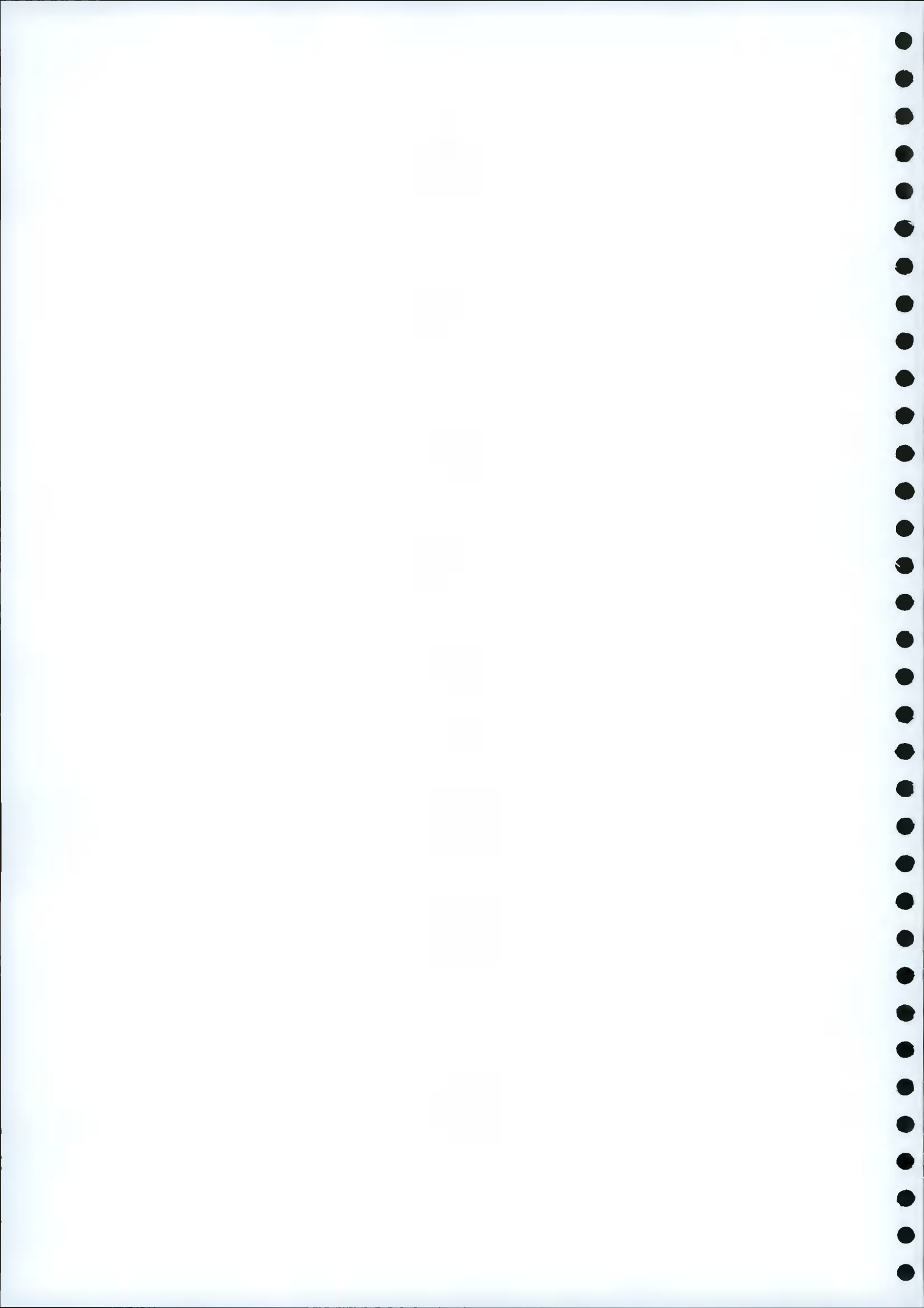
None proposed.

4. Landscape Works

Avoid change of levels around root protection areas of trees to be retained.

5. Specialist engineering responses (e.g. Cellweb / non-dig construction)

Non-dig cellweb system or similar approved to be used where pedestrian paths traverse RPA



6. Monitoring & Compliance

A professionally qualified Arborist is recommended to be consulted as required by the principal contractor or developer. It is advised that tree protection fencing, any required special engineering and supervision works etc must be included / itemised in the main contractor tender document, including responsibility for the installation, costs and maintenance of tree protection measures throughout all construction phases.

Copies of the Tree Survey and all accompanying drawings, a copy of BS 5837:2012 and NJUG 4 (2007) '*Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees*' should all be kept available on site by the contractor during development. All works are to be in accordance with these documents.

Limitations and Scope of this Survey Report

This report covers only those trees individually inspected, (shown on the 'Tree Survey Drawings' and described in the 'Schedule'), reflecting the condition of those trees at the time of inspection. Inspection is limited to visual examination of the subject trees from the ground without; test boring, use of tomographic equipment, dissection, probing, coring, ivy removal or excavation to establish structural integrity.

The trees were not climbed and dimensions are approximate, but considered a reasonable reflection of the trees measurements. A number of trees were visually obscured by heavy ivy and or epicormic growth, which could potentially hide from view existing faults or weaknesses, as such they would benefit from re-inspection upon removal of such growth. Some trees were physically inaccessible due to dense briar and scrub growth and measurements in these cases have been visually estimated from the closest point of access. This survey can only therefore be regarded as a preliminary assessment.

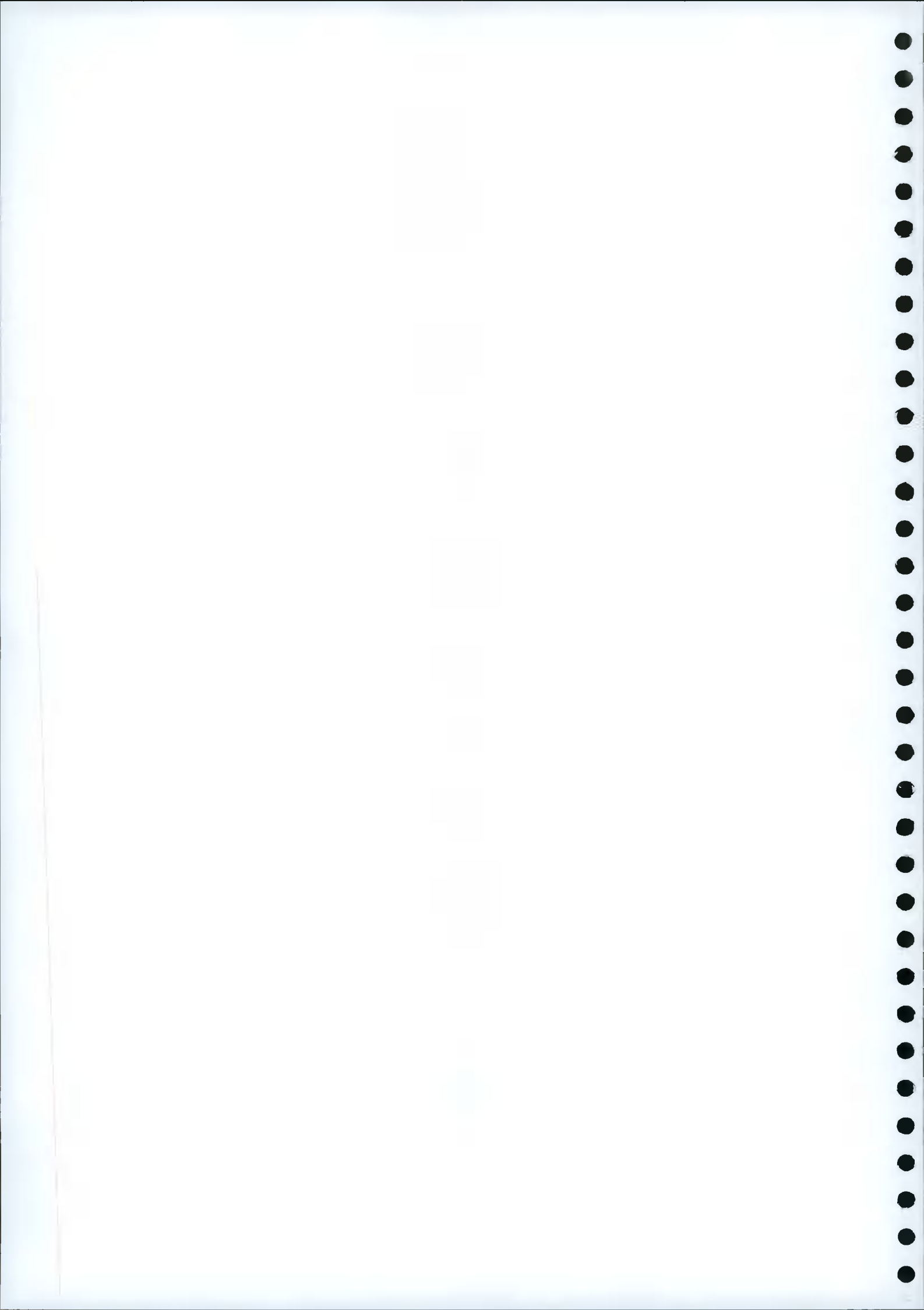
There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the subject trees may not arise in the future. The currency of this survey report and its recommendations is one year.

The accompanying drawings are illustrative and based on the land (topographical) survey information supplied; CSR Ltd accept no legal liability or responsibility for any errors in the information contained in the supplied drawings.

CSR Ltd accept no responsibility for the performance of trees subject to pruning or other site works (including construction activities) not performed in strict accordance with recommendations as specified in this report and/or in accordance with BS 3998:2010 and BS 5837:2012

All retained trees mentioned in this report should be subject to expert re-inspection within 12 months and prior to completion of development works and public occupancy of the site.

This report was produced as a part of a planning application for the scheme; the author accepts no responsibility or liability for actions taken by reason of this report by the client or their agents unless subsequent contractual arrangements are agreed. Public disclosure or submission of any part of this report without title, or permission from the author, renders this report invalid and legally inadmissible.



References/Bibliography

BS 5837 (2012). *Trees in Relation to Design, Demolition and Construction - Recommendations*. British Standards Institution. TSO, London.

BS 3998 (2010) *Tree Work - Recommendations*. British Standards Institution. TSO, London.

NJUG 4 (2007) *Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees (Issue 2)*. National Joint Utilities Group.

TREE SURVEY KEY

Information in the attached schedule is given under the following headings:

Tree No.

Individual trees have been numbered and tagged on site with corresponding survey tag or treated as a group where appropriate (e.g. Woodlands/hedgerows) and illustrated on accompanying tree survey drawing.

Species

Common & Latin names of species are provided

Height

Overall estimated height given in meters (measured using Truplus 200 Laser Rangefinder).

Stem Diameter

The diameter of the main trunk taken at a height of 1.5m on a single stem tree, or, on each branch of multi-stemmed (MS) trees.

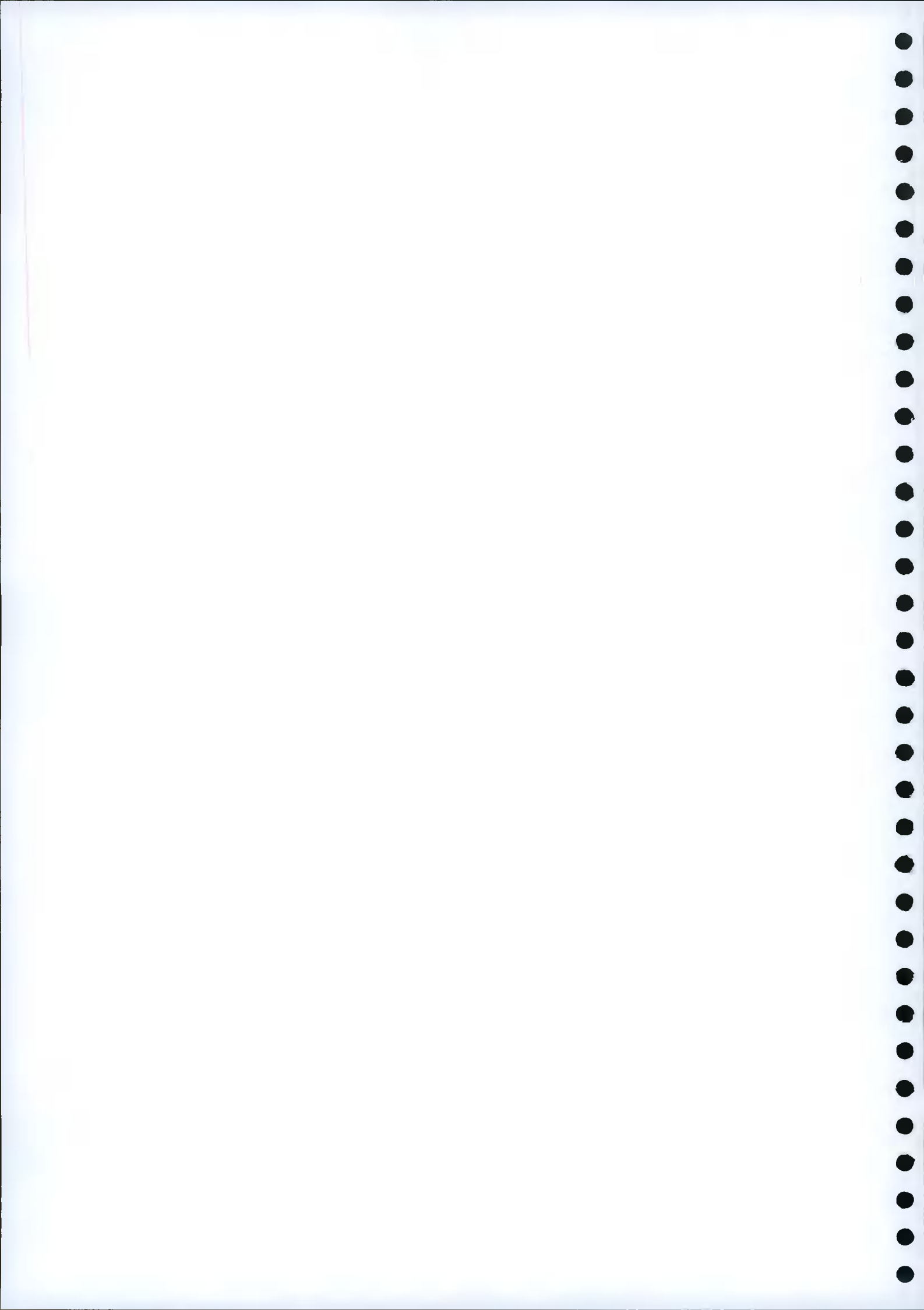
Crown Spread

The largest radius of branch spread is provided in meters for North / East / South and West directions.

Height of lowest branch

The distance between ground level and first significant branch or canopy (and direction of growth) given in meters (m).

Any measurement or dimension that has been estimated (for offsite or otherwise inaccessible trees where accurate data cannot be recovered) is identified by the suffix #.



Life stage

The tree's age is defined as:

Y = Young, in first third of life (tree which has been planted in the last 10 years or is less than 1/3 the expected height of the species in question).

MA = Middle Age, in second third of life (tree, which is between a 1/3 and 2/3's the expected height of the species in question).

M = Mature, in final third of life (tree that has reached the expected height of the species in question, but still increasing in size).

OM = Over mature (tree at the end of its life cycle and the crown is starting to break up and decrease in size).

V = Veteran Tree (exceptionally old tree).

Physiological Condition

The tree's physiological condition is defined as:

Good - Good vitality: normal bud growth, leaf size, crown density and wound closure

Fair - Average to below average vitality: reduced bud growth, smaller leaf size, lower crown density and reduced wound closure

Poor - Low vitality: limited bud growth, small chlorotic leaves, sparse crown, poor wound closure

Dead - No longer living.

Structural Condition

The trees structural condition is defined as:

Good - No major structural defects observed (possibly some minor defects)

Fair - Minor defects present, (such as bark wounds, isolated decay pockets or structure affected due to overcrowding), that could be alleviated by tree surgery/management

Poor - Major structural defects present such as extensive deadwood, decay or defective to the point of being dangerous. (Significant defects are noted e.g. decay, collapsing etc).

Preliminary Management Recommendations & Timescale

Recommendations actions based on limitations of survey – (may include further investigation and or assessment of suspected defects by means and or methods not undertaken / within the remit of this survey).



Estimated Remaining contribution (Years)

Life of the tree is given as;

- 10 < less than 10 years remaining
- 10 + in excess of 10 years remaining
- 20 + in excess of 20 years remaining
- 40 + in excess of 40 years remaining

Tree Quality Assessment Category

U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.

- Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning)
- Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline
- Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality

(NOTE: Category U trees can have existing or potential conservation value which it might be desirable to preserve).

A High quality

Trees of high quality with an estimated remaining life expectancy of at least 40 years

A1 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)

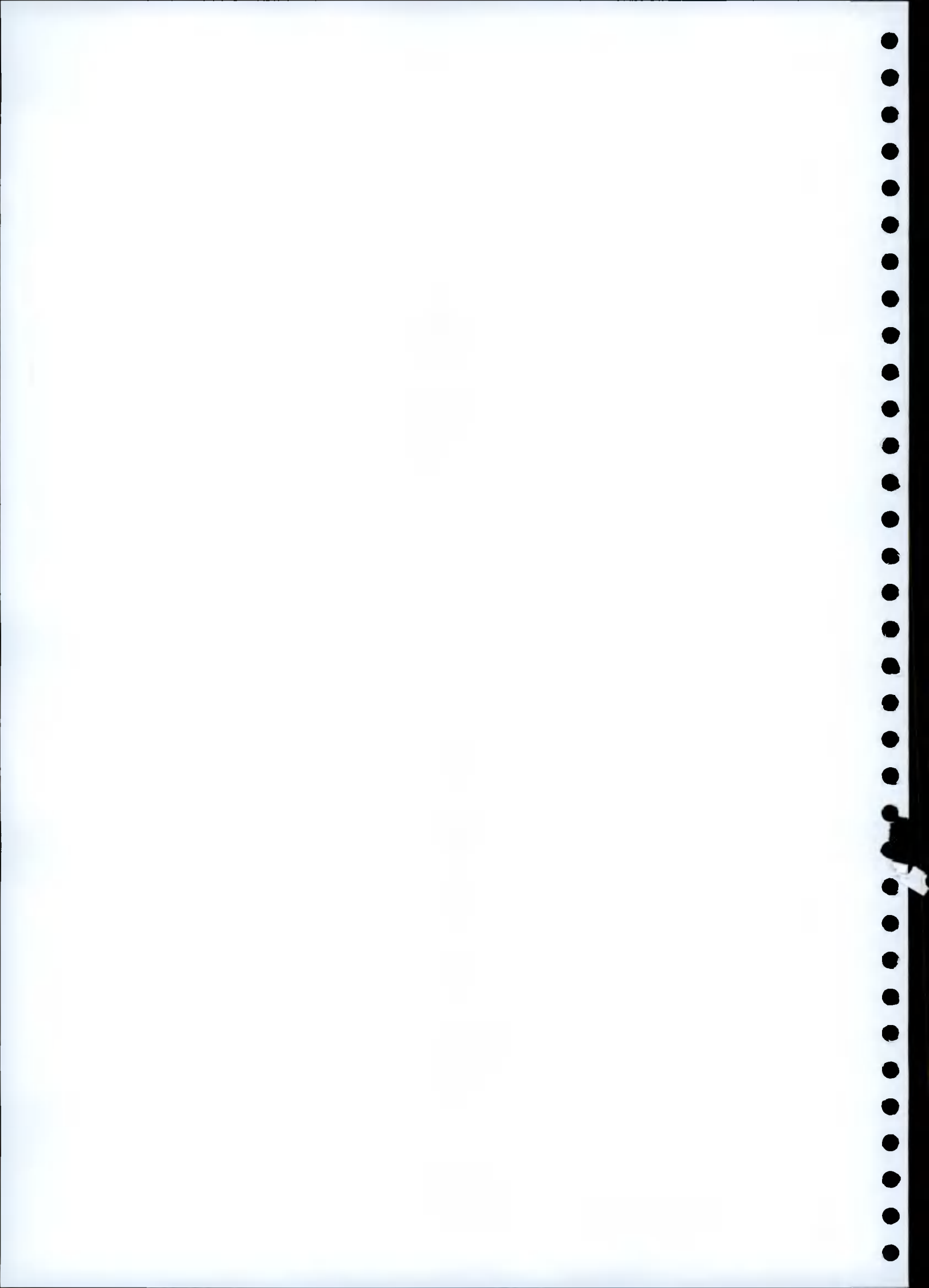
A2 Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features

A3 Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)

B Moderate quality

Those trees of moderate quality with an estimated remaining life expectancy of at least 20 years.

B1 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.



B2 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.

B3 Trees with material conservation or other cultural value

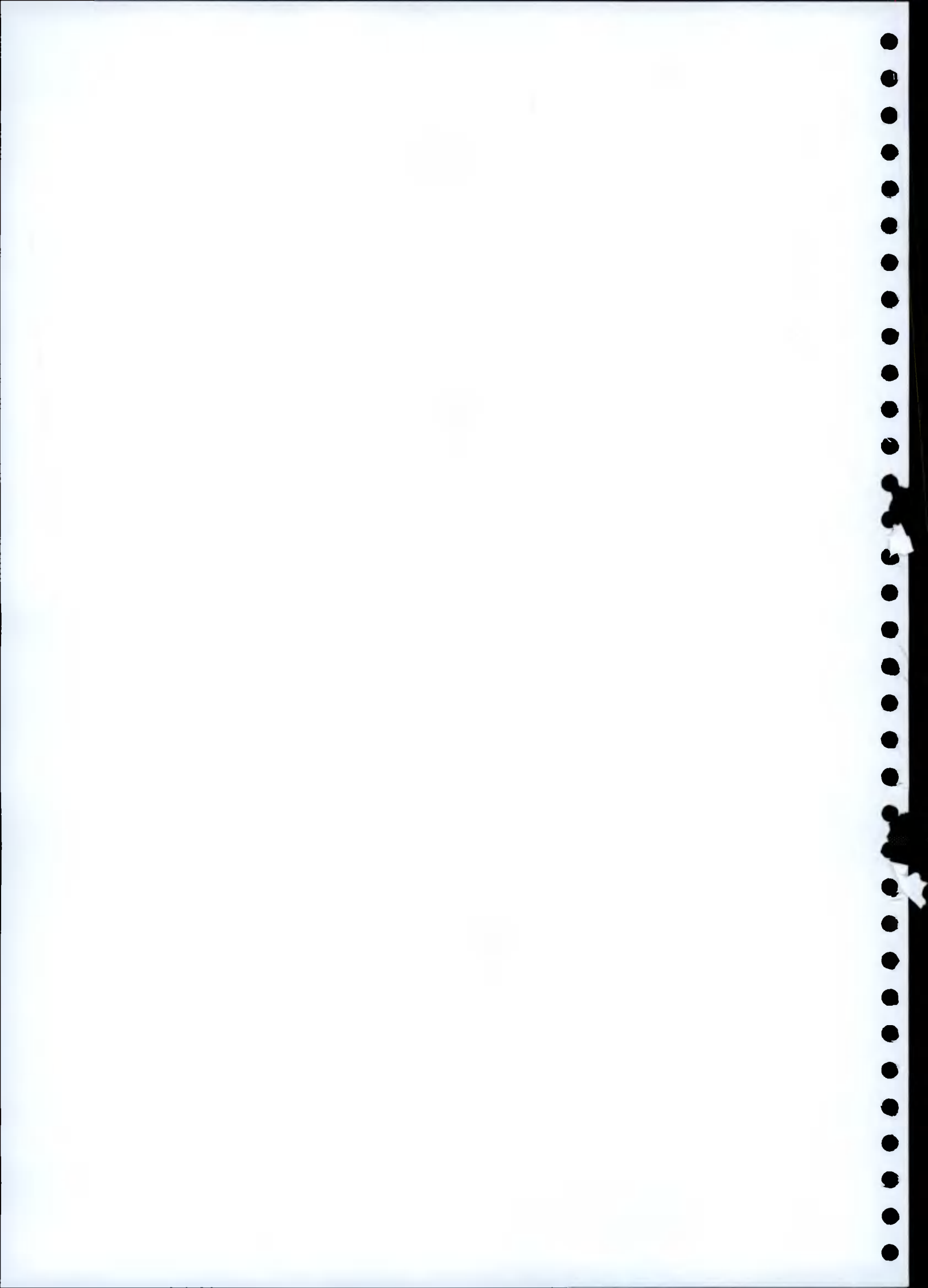
C Low quality

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.

C1 Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories.

C2 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.

C3 Trees with no material conservation or other cultural value.



APPENDIX 1

Tag	Species	Height (m)	Crown Spread (m)	Girth (mm)@ 1.5m	RPA circle radius (m)	Ht of lowest branch (m) & direction of growth	Life Stage	Estimated remaining contribution (years)	Physiological Condition	Structural Condition	Preliminary management recommendations	Category of retention + sub-category	Notes
1	Prunus avium	7	4/3/3/3	330	3.96	0m all	MA	20+	Good	Fair	Remove Ivy	B1	
2	Prunus avium	5	2/2/2/2	130	1.56	1m e/w	Y	40+	Good	Fair		C1	
3	Prunus avium	6	2/2/2/2	250	3.00	2m all	MA	20+	Good	Fair	Remove Ivy	B1	
4	Cupressus x cupressocyparis leylandii	10	3/3/3/3	420	5.04	0m all	MA	20+	Good	Good		C1	
5	Cupressus x cupressocyparis leylandii	10	3/3/3/3	420	5.04	0m all	MA	20+	Good	Good		C1	
6	Prunus avium	7	3/3/3/3	250	3.00	3m all	MA	20+	Good	Good	Remove Ivy	B2	
7	Prunus avium	6	4/3/3/3	250	3.00	2m all	MA	20+	Good	Good	Remove Ivy	B2	
8	Prunus avium	7	3/2/2/2	180	2.16	2m all	MA	20+	Good	Good	Remove Ivy	B2	
9	Cupressus x cupressocyparis leylandii	8	2/3/3/3	200x2	3.39	0m all	MA	20+	Good	Fair		C1	blue
10	Cupressus x cupressocyparis leylandii	9	2/2/2/2	490	5.88	3	MA	20+	Good	Good		C1	
11	Prunus avium	7	4/2/3/3	375	4.50	1m all	MA	20+	Good	Fair	Remove Ivy	B2	
12	Prunus avium	8	4/3/4/4	400	4.80	1m all	MA	20+	Good	Fair	Remove Ivy	B2	
13	Salix alba	9	8/7/6/6	900	10.80	3m n	M	10+	Fair	Poor	Monolith	B2	branch break / decay
14	Quercus robur	7	3/3/3/3	240	2.88	2m all	Y	40+	Good	Fair		A2	
15	Quercus robur	6	2/2/2/2	150	1.80	2m all	Y	40+	Good	Fair		A2	remove stake ties
16	Quercus robur	6	2/2/2/2	200	2.40	2m all	Y	40+	Good	Fair		A2	remove stake ties
17	Betula utilis	6	2/2/2/2	180	2.16	2m all	Y	40+	Good	Good		C1	
18	Betula utilis	4	2/2/2/2	150	1.80	2m all	Y	10<	Poor	Poor		C1	
19	Betula utilis	4	1/1/1/1	80	0.96	2m all	Y	40+	Good	Good		C1	
20	Prunus sp.	5	2/2/2/2	140	1.68	1m all	Y	20+	Fair	Good		C1	
21	Betula pendula	6	2/2/2/2	200	2.40	2m all	MA	20+	Good	Fair		C1	Youngii
22	Acer platanoides	11	4/4/5/4	450	5.40	1m s	MA	40+	Good	Fair	Remove Ivy	B1	
23	Eucalyptus viminalis	14	9/3/4/6	460x4	11.04	1m w	MA	10+	Fair	Fair	Remove Ivy	B1	
24	Eucalyptus viminalis	15	5/5/6/5	840	10.08	3m all	M	20+	Good	Fair	Remove Ivy	B1	power line conflict
25	Cedrus atlantica	11	3/3/3/2	460	5.52	2m all	MA	40+	Good	Fair		B1	power line conflict
26	Acer platanoides	8	3/3/3/2	340	4.08	2m e	MA	40+	Good	Fair		B1	
27	Acer platanoides	9	4/4/4/2	420	5.04	2m s	MA	40+	Good	Fair		B1	
28	Acer platanoides	8	2/2/2/3	150x3	3.12	1m all	MA	40+	Good	Fair		B2	
29	Acer platanoides	8	3/3/3/3	270	3.24	1m all	MA	40+	Good	Fair		B2	
30	Cedrus atlantica	8	2/2/2/2	300	3.60	1m all	MA	40+	Good	Fair		B1	
TG1	Cupressus x cupressocyparis leylandii & Prunus avium	6		Av 135	1.62	0m all	MA	20+	Good	Fair		C2	
TG2	Cupressus x cupressocyparis leylandii	5		300	3.60	0m all	MA	20+	Good	Fair		C2	
TG3	Cupressus x cupressocyparis leylandii	5		300	3.60	0m all	MA	20+	Good	Fair		C2	

