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Environmental and Rural Chartered Surveyors

Client: Day Cummins Ltd.

Site: Land at Low Road
Whitehaven, Cumbria

Tree Report for Proposed Residential Development

Prepared by
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TREE SURVEY

1. Site

a. Site Description

The survey site comprises of an area of scrub / waste ground adjacent to Low Road, Whitehaven, Cumbria.

This surveyed area consists of an area of rough grass and scrub cover. Tree stock within the site is distributed throughout the site and is solely comprised of native species.

The site is bounded to the East by the public highway 'Low Road', to the North by the Low Road Public Cemetery and to the South and West by further areas of tree and scrub cover.

See Appendix 1, Appendix 2 and Appendix 3 for detailed tree list, site layout detail and images.

b. Survey Details

The site was surveyed on 06/02/14, tree heights were estimated via use of clinometer (Suunto PM-5), measurements of DBH taken at 1.5m height and crown spread was taken by ground measurements. The position of trees and crown extents are estimated from site location plan. All images were taken at the date with Sony DSCH200. Sun positions were estimated on site via Sun Surveyor software. Weather conditions were overcast with moderate winds.

All surveying of tree stock on the site was carried out visually from the ground only. Where ivy cover was encountered on trees then only limited visual checking of structure and potential defects was possible.

At the time of surveying all trees were recorded on standard tree record sheets, see Appendix 1: Tree Schedule. Trees were surveyed throughout the entire site, detailed individual details were recorded for all significant trees within the existing site. Where larger numbers of closely spaced trees were encountered in the survey area these are included as a Group record which includes the approximate height range and maximum Diameter at Breast Height (DBH) of trees within the group, these groups are referred to by group i.e. Group 2 (G2).

The surveyed trees are categorized by the standard retention categories as defined in BS5837:2012. Such retention categories seek to inform the design process of trees which may be worthy of consideration for inclusion within the proposed development. All work recommendations relate to trees within the context of the current site layout and usage.

Trees requiring removal to facilitate the proposed development or are unsuitable for retention are indicated in red on the Tree Location Plan and are further identified in the work recommendation section of the Tree Schedule.

2. Existing Structures and Proposed Development

a. Existing Structures

At the time of survey there are no permanent structures in the surveyed area, the site is bounded by public highway and attached pavement to the East.

b. Proposed Development

The current development proposal undergoing design consideration is for the construction of a number of residential dwellings with associated vehicle access and landscaping.

3. Tree Preservation Orders and Conservation Areas

a. Site Description

The site is not located within a Conservation Area. At the time of the report the surveyed site is not covered by an active tree preservation order (TPO).

4. Tree Constraints

a. Overview

The need to survey and report on the condition and useful life expectancy of existing trees is intended to inform the design process and accompany a planning application for the proposed development.

b. Proposed Development

As can be seen from Appendix 1; Tree Schedule, Appendix 2; Tree Location Plan and Appendix 3: Images; surveyed trees are distributed throughout the site.

Trees within the surveyed site can be assigned to a number of areas as follows:

Off-site Group OSG1 – adjacent Northern boundary.

Trees adjacent to the Western site boundary, G1.

Trees within the main survey area, A1 to A8.

4b continued

With regards to the Northern boundary group:

Group OSG1 is located within the grounds of the cemetery adjacent to the Northern site boundary. This group is comprised of mature trees of both native and non-native varieties.

Many trees within this group are in very poor condition with significant quantities of standing deadwood overhanging the site boundary. Any development within this area may be located at a sufficient distance from group OSG1 so as not to exert any pressure upon these retained trees.

Area A3 is located immediately adjacent to the Northern site boundary and largely comprised of early mature Sycamores, these trees are predominately of poor form and structure and as such have limited retention values; as such they should not significantly influence the development of the site in this area. If managed, suitable members of this group may possibly be retained to form a buffer between a proposed development and the adjacent cemetery.

Above ground issues are covered in Sections 4c and 6 of this report.

See Appendix1: Tree Schedule, Appendix2: Tree Location Plan, Appendix3: Images

With regards to trees adjacent to the Western boundary.

Tree group G1 would appear to represent the line of a former boundary hedge.

This hedge has been unmanaged for a significant period and as such has developed into a line of Hawthorn and Holly trees with occasional larger Sycamores.

This group does not form a significant landscape feature either within the site or the wider landscape and as such should not exert an influence upon the layout of a development in this area. If retained as an established boundary group within a development we would recommend that this group be re-established as a hedge through removal of Ivy cover, unsuitable trees and subsequent laying to form a hedgerow.

Above ground issues are covered in Sections 4c and 6 of this report.

See Appendix1: Tree Schedule, Appendix2: Tree Location Plan, Appendix3: Images

With regards to trees within the main site.

Tree areas A1, A2, A4, A5 and A6 are typical of early secondary woodland regeneration on empty sites. The majority of trees within these areas are within the juvenile to semi-mature age range and are native species which are predominant within the surrounding landscape; Sycamore, Goat Willow, Ash, Silver Birch, Hawthorn.

These species are distributed throughout these surveyed areas in varying ratios and densities, for example a higher density of juvenile Goat Willows within area A1 which has wetter ground conditions and a low density of tree cover with occasional Hawthorns within the dry, grass species dominant area A6.

At the time of the survey the areas within the central site have not yet developed into established areas of woodland with associated landscape significance and as such their removal would not have a significant impact within the wider landscape. This status will change over the medium term if the site remains undeveloped and the surveyed areas develop into established woodland areas.

Tree areas A7 and A8 are located adjacent to the site boundaries and are areas of longer established tree cover which is typified by high densities of un-managed early mature Sycamores.

These trees are generally of poor individual form and structure with many multi and co-dominant examples having poor major unions of significant bark inclusions.

Tree area A7 is unlikely to be suitable for long term retention due to the previously stated defects and elevated position in proximity to the public highway, as such it should not influence the layout of any development in this area.

Tree area A8 forms the Northern extent of a larger area of Sycamores which are off-site to the South of the surveyed area. These trees have again developed with poor individual forms and structures and as such would be unsuitable for retention in close proximity to any development. Removal of these trees would not represent a significant impact either within the site or the wider landscape context. However, if development is located in excess of 30 metres from A8 then these trees may be managed and retained as an extension of the off-site wooded area to form a buffer group at the site boundary.

Above ground issues are covered in Sections 4c and 6 of this report

See Appendix1: Tree Schedule, Appendix2: Tree Location Plan, Appendix3: Images

24/03/2014

c. Existing structures

As previously noted there are no permanent structures within the surveyed area.

At the present time there are no significant issues in relation to existing structures, it should however be noted that the form and structure of trees within Areas A7 and A8 combined with their proximity to the public highway Low Road mean that they will require regular monitoring and maintenance as appropriate.

Recommendations for works and monitoring are contained in Appendix 1: Tree Schedule.

5. Tree Constraints – Development

Due to the nature of the proposed development and the location of the surveyed trees it should be possible to retain all suitable surveyed tree references and also ensure protection of same during the construction process.

A mixed provision of Tree Protection Fences are likely to be required for the development phase, due to the nature of the proposed development these protective fences will be of securely anchored and stayed 'Heras' type panels along the Northern boundary to protect off-site trees in OSG1 and adjacent the Western site boundary if Group G1 is retained.

Due to the nature of the site we have not indicated positions of Tree Protection Fences in Appendix 2 but if required they may be located at the distances indicated for the Root Protection Area (RPA) radii shown in Appendix 1.

An indicative list of recommended practices during construction phase is listed below:

Once installed tree protection must remain in place and be observed at all times.

No fires within 10m of the crown of any retained trees.

Soil levels in rooting areas to be retained with minimal level changes, no greater than 300mm.

No cement mixing/washout to take place within 15m of any retained trees.

No chemicals, bitumen etc to be stored within 10m of any retained trees.

Any spillage of fuel, chemicals or contaminated water occurring within 2m of the root protection areas to be reported to project supervisor.

Underground services may be safely routed outside the RPA of retained trees.

6. Tree Constraints - Proposed Development and Juxtaposition with Trees

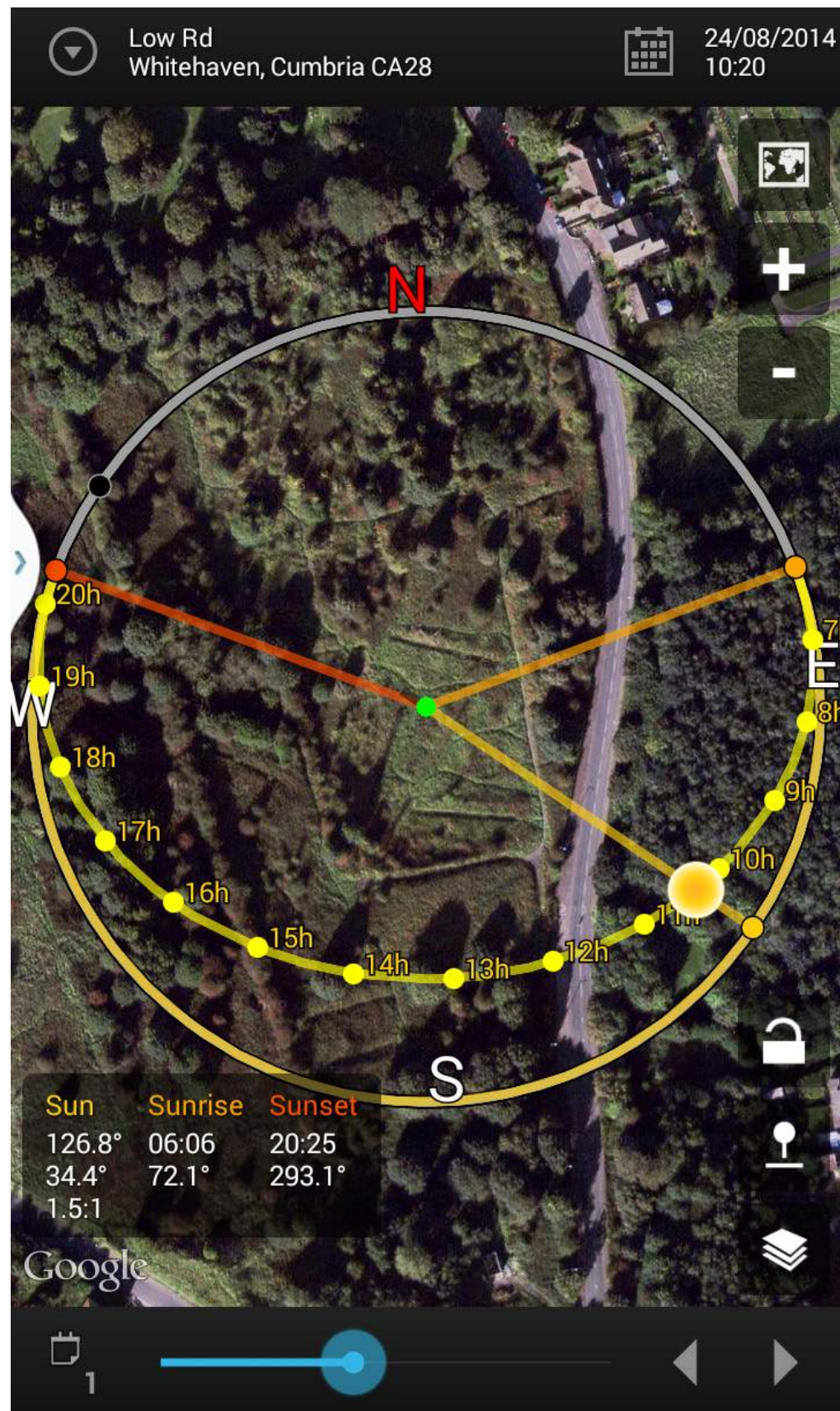
Due to the nature of the proposed development and the location of trees within the site no significant above ground issues should be created by retained trees.

All significant mature trees are located off-site adjacent to the Northern boundary and as such will not cause any over shadowing or light loss within the site.

See Appendix1: Tree Schedule, Appendix2: Tree Location Plan, Appendix3: Images.

24/03/2014

Sun Track in relation to site



7. Proposed Tree Planting

At the time of this survey a requirement for additional planting has not been identified in direct relation to the proposed development.

Any landscaping within the development is likely to include an element of tree planting, such planting will provide more appropriate and sustainable tree stock within the development than that which is currently within the site.

8. Scope of brief

Carry out a survey of trees within the site in accordance with BS5837:2012 and collect data in order to advise the development designer of key issues relating to trees, with options and strategies. Prepare a Report with associated data, site plans and imagery, in order to facilitate consideration of the tree issues both for existing structures and the proposed development.

9. Supporting Information

Client supplied satellite image. Not to scale

10. Conclusions

It is concluded that

It is possible to retain the suitable existing significant surveyed trees within the site identified for the proposed development. It is possible to complete the construction phase without additional damage/stress being placed upon trees to be retained within the site if guidance detailed in this report, suitable construction methods are used and recommendations contained in BS5837:2012 are followed.

11. Recommendations

It is recommended that

The design and layout of the proposed development reflects the guidance contained within this report both for the management of trees for retention and the protection of same during the proposed development phase and that due consideration is given to the position of any development in relation to retained trees and the removal of trees which are unsuitable for long term retention from the site prior to any development.

Tree Ref.	Species	Height (est) m	Sread (est) m NSEW	Age Class	Vigour	DBH (mm)	Condition/Comments	BS5837 Current Cat	Work Recommendations	RPA r	life expectancy
OSG1	Mixed group	<22	<10	m	l - n	est <600	Mixed off-site group adjacent to Northern site boundary. Hollies, Sycamores, Ash and Walnut. Many trees in poor condition - large Walnut - standing deadwood	B3 to U	off site but require remedial works due to significant hazard from a number of trees	7.2	10 to 40
A1	Mixed area	<15	<3	j to em	l - n	<270	Early secondary woddland regeneration in wetter area of site, predominately Salix caprea (Sc), with Crataegous monogina (Cm), Acer pseudoplatanus (Ap), Fraxinus excelsior(Fe) and Betula pendula Bp.	C1	will require removal in context of development	na	10 to 20
A2	Mixed area	>8	>3	j to sm	l - n	>140	More open area of mainly younger trees, many standing deadwood stems. Salix caprea (Sc), Crataegous monogina (Cm), Acer pseudoplatanus (Ap), Fraxinus excelsior(Fe) and Betula pendula Bp.	C1	will require removal in context of development	na	10 to 20
A3	Acer pseudoplatanus	>19	>4	m	n	>250	Area of larger Sycamores adjacent to N boundary, poor stem taper ratios, ivy cover and unblanced crowns to SW	C1	likley to require removal and replanting in context of development unless retained as buffer strip with cemetery	3	10 to 20
G1	Crataegous monogina Ilex aquafolium Acer pseudoplatanus	>8 Cm >18Ap	>3 Cm >6Ap	m	n	>250Cm >330la >370Ap	Lapsed hedge line along Western site boundary, unmanaged, ivy cover, deadwood and poor stem tapers	C1	likley to require removal and replanting in context of development unless retained and remedial work undertaken i.e. removal of poor trees, laying of Hawthorn/Holly and removal of ivy	4.4	10 to 20
A4	Mixed area	>17	>8	j to m	n	>350	Area of more open spaced juvenile Ap and Cm with occasional mature Sc	C1	will require removal in context of development	4.2	10 to 20

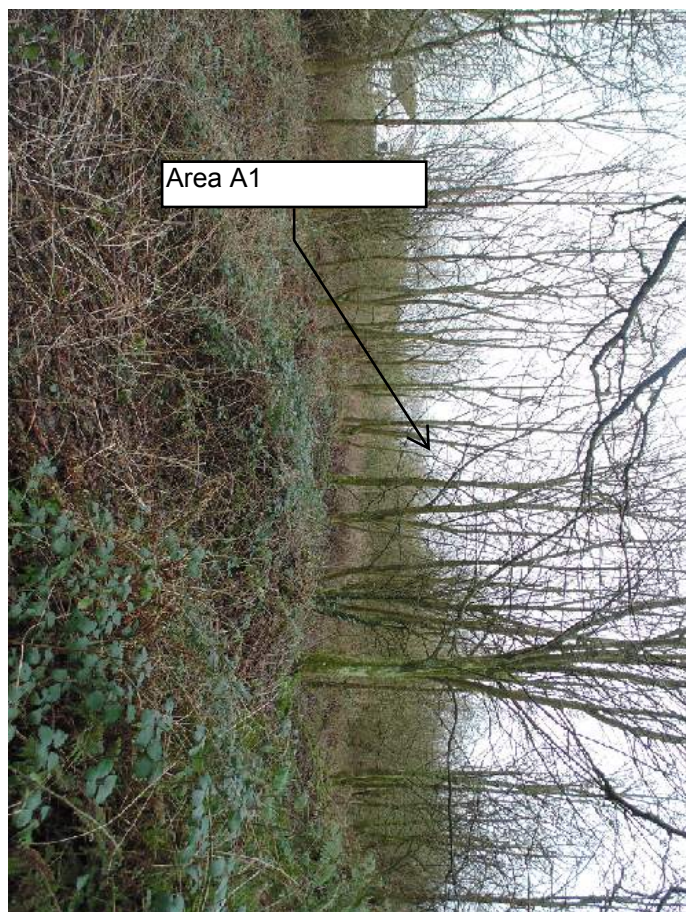
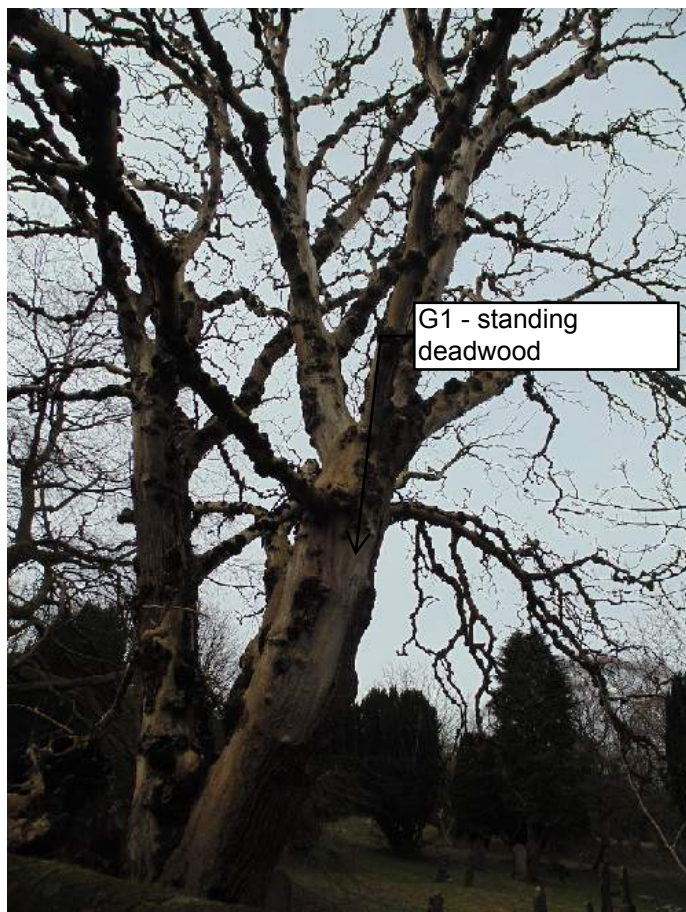
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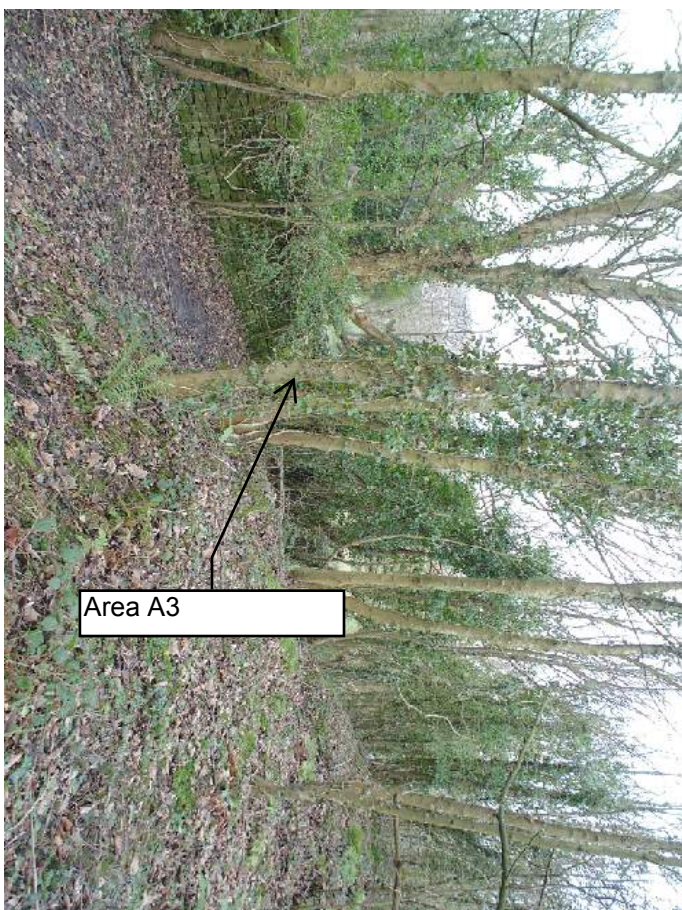
Table 1 Cascade chart for tree quality assessment

Category and definition	Criteria (including subcategories where appropriate)	Identification on plan
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	<ul style="list-style-type: none"> 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 <p><i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</i></p>	See Table 2
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 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
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 with material conservation or other cultural value
	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

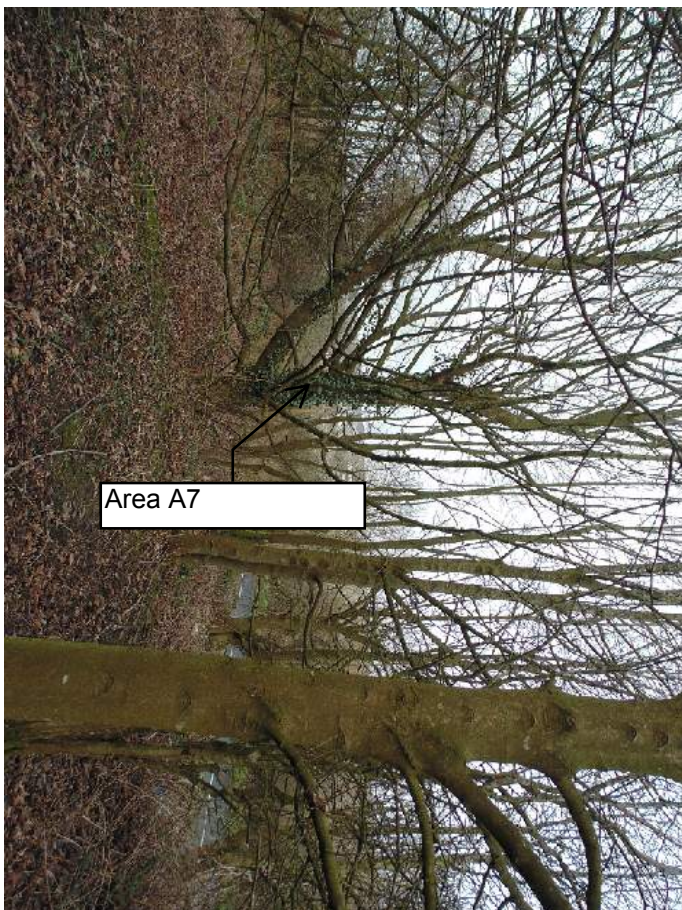
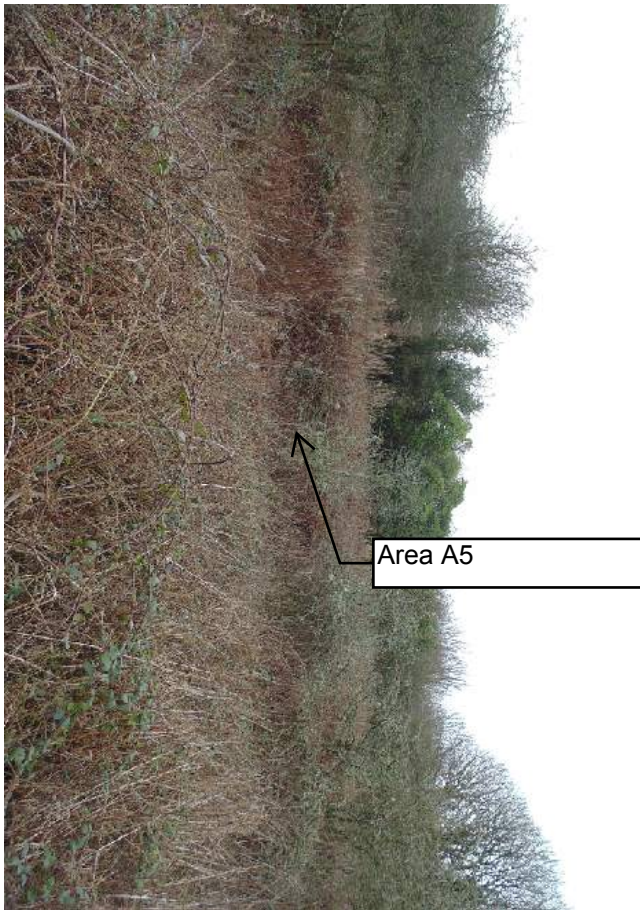


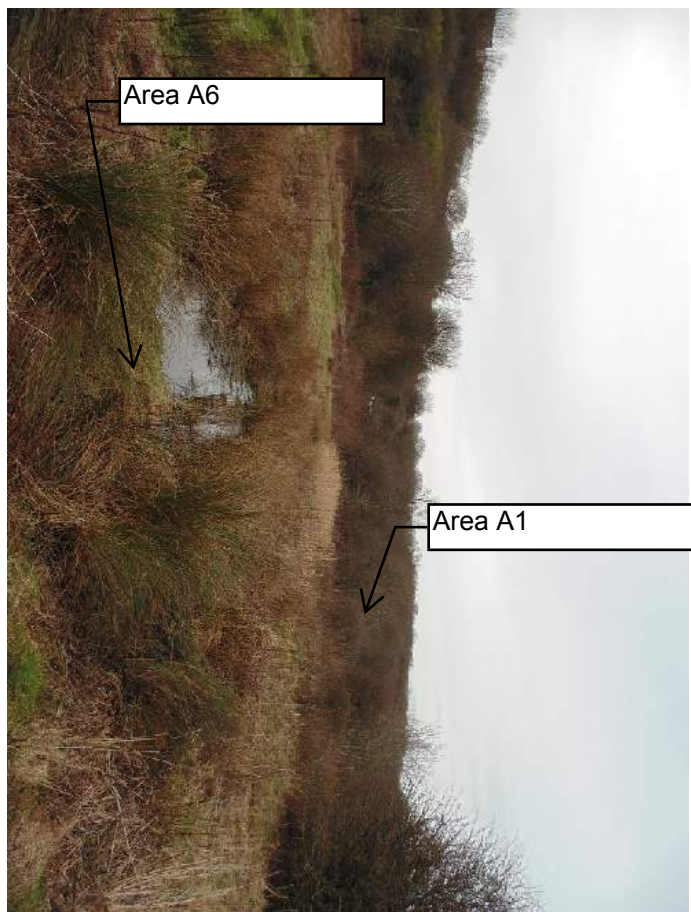
Tree Location Plan
Low Road, Whitehaven
Not to scale

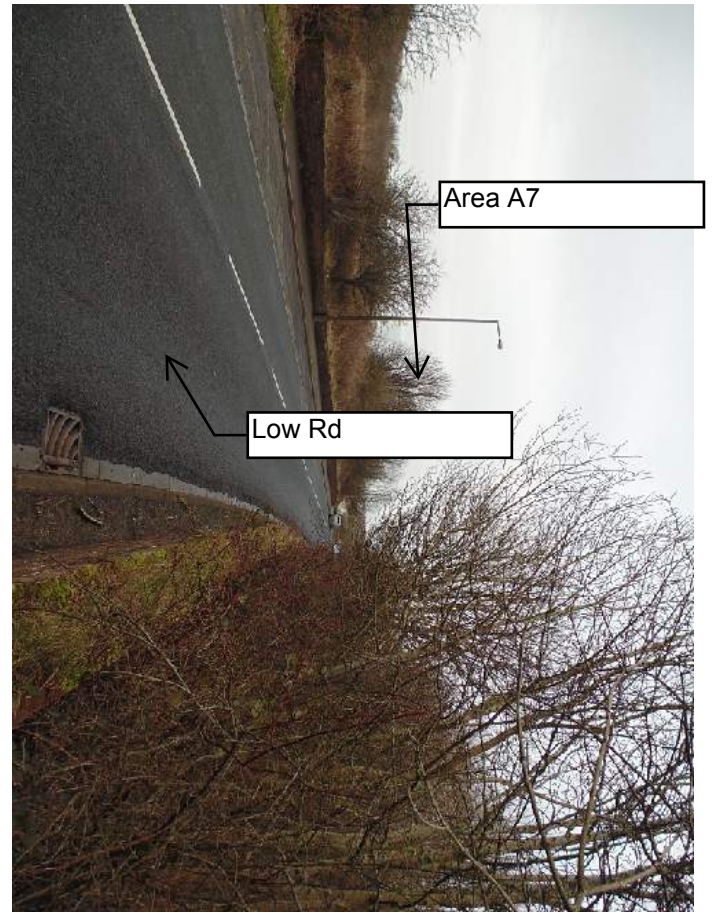
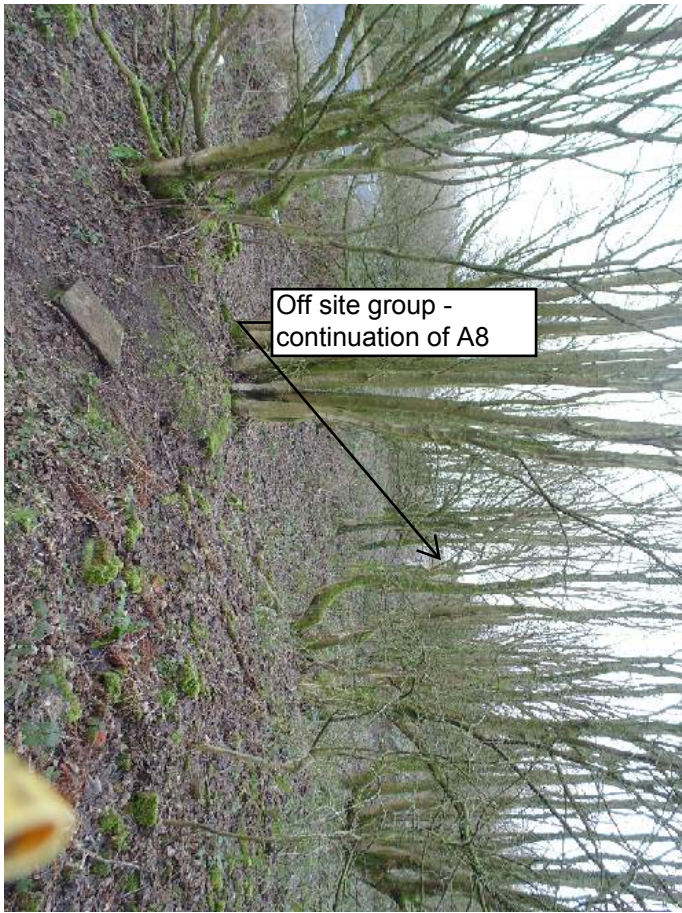












Appendix 4

Selected Reference List

The Body Language of Trees by Claus Mattheck & Helge Breloer (1994) London:HMSO.
Diagnosis of ill-health in trees by R.G. Strouts and T.G. Winter. (2000) London:HMSO
Principles of Tree Hazard Assessment and Management by David Lonsdale.(1999) HMSO
BS5837:2012 British Standards Institute
Trees Their Use, Management, Cultivation and Biology Robert Watson 2006