cheshire woodlands
arboricultural consultancy

ARBORICULTURAL STATEMENT

FOR

STIRLING LLOYD, BIRCH VALE INDUSTRIAL ESTATE

BIRCH VALE, HIGH PEAK

ON BEHALF OF

STIRLING LLOYD POLYCHEM LTD

BIRCH VALE INDUSTRIAL ESTATE, BIRCH VALE

HIGH PEAK SK22 1DW

REF: CW/6012-AS1

DATE: 9 FEBRUARY 2010

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APPENDICES

1. TERMS OF REFERENCE

1.1 We are instructed by Stirling Lloyd Polychem Ltd to:

- survey from ground level, individually or in groups, all trees having potential to be affected by the development proposal described at Section 2 below, identifying species, condition and suitability for retention
- assess the possible effects of the development proposal on trees
- advise on removal, retention and management of trees
- prepare a schedule of trees
- assess the requirement for protection of trees during the development
- assess potential mitigation strategies where design conflicts are identified
- prepare a report on the above matters to be submitted with a planning application for the proposed development.

1.2 The following documents have been provided by the client:

- Topographic Land Survey drawing
- High Peak Architects Proposed Site Layout drawing 1057.30 Revision A

1.3 Assessing the potential effects of trees upon load-bearing soils beneath existing and proposed structures, resulting from water abstraction by trees on shrinkable soils, was not included in the contract brief and is not, therefore, considered in the report. Cheshire Woodlands cannot be held responsible for damage arising from soil shrinkage or heave due to water abstraction by trees.

1.4 The tree survey is carried out in sufficient detail to gather data for and inform the design of the current project. Our appraisal of the mechanical integrity of trees on the site is of a preliminary nature and sufficient only to inform the current project. The assessment of trees is carried out from ground level without invasive investigation therefore the disclosure of hidden defects cannot be expected. Whilst the survey is not specifically commissioned to report on matters of tree safety, we report obvious defects that are significant in relation to the existing and proposed land use. We do not carry out detailed safety assessments unless specifically instructed in writing to do so and have not carried out such assessments of trees on the proposal site.

1.5 Our assessment of trees was restricted where trees were ivy clad, located wholly or partially on neighbouring land or where basal growth or other vegetation obscured lower stems and root collars. Where a more detailed assessment is required in this regard, our recommendations are set out in the Tree Survey Schedule at Appendix CW1.

1.6 This report and associated plans remain the copyright of Cheshire Woodlands and any transfer of rights to any third party must be with our express written consent.

2. INTRODUCTION

2.1 This assessment evaluates the effects of the development proposal upon trees. The comparative values of trees are considered broadly in line with the guidance of BS5837 (2005) and retention, protection and management of trees is informed by this evaluation.

2.2 Glyn Thomas, senior consultant with Cheshire Woodlands Arboricultural Consultancy, carried out the assessment of the trees and the development proposal. The survey of trees was carried out on 11 December 2009.

2.3 The construction of a replacement industrial building with associated hardstanding is proposed. The locations of the proposed structures are plotted on the Tree Protection Plan at Appendix CW4.

3. THE SITE

3.1 The site comprises existing industrial buildings and associated access and hardstanding located on relatively flat ground along the central spine of the site with steep vegetated banks to the north and south sides, and is bounded by the Sett Valley Trail and residential properties to the south, an industrial site to the north, open countryside to the east and north east and Station Road at the western end.

3.2 The British Geological Survey (1/50,000 series), sheet 99 identifies the site as lying close to interfaces of ‘Boulder Clay’ and ‘Alluvium’.

4. STATUTORY CONTROLS AND PLANNING POLICY

4.1 In terms of impact on trees, the planning application will be assessed against 'saved' policy 16 (OC10 – Trees and Woodlands) of The High Peak Local Plan 2005.

4.2 A telephone enquiry to High Peak Borough Council revealed that:

- Several trees standing within the curtilage of the application site are subjects of The High Peak Borough Council (Birch Vale Print Works – Birch Vale) Tree Preservation Order (TPO) No. 13 (1976), and
- The site is not in a conservation area.

4.3 Subject to certain specified exemptions, the Town and Country Planning Act 1990, requires that an application must be made to the local planning authority (LPA) to carry out works upon or to remove trees that are subject to a TPO. Where directly affecting the implementation of a detailed planning permission (granted under the Town and Country Planning Act 1990) such works as are necessary to implement the approved development may be carried out to trees thus protected.

4.4 We have not been made aware of any extant planning permissions affecting trees on the site in relation to planning conditions.

4.5 The Forestry Act (1967 as amended) requires that a licence must be obtained for the felling of growing trees, subject to certain exemptions. Up to five cubic metres of timber may be felled without a felling licence in any calendar quarter, providing no more than two cubic metres are sold. Where directly affecting the implementation of a detailed planning permission (granted under the Town and Country Planning Act 1990) such works as are necessary to implement the approved development may be carried out to trees without the permission of the Forestry Commission.

4.6 The Wildlife and Countryside Act 1981 (together with the amendments of 1985 & 1991, the subsequent variations to the schedule orders, and strengthening amendments made within the Countryside and Rights of Way Act 2000) forms the basis for legislation protecting Britain's flora and fauna. Nesting birds and all species of bat are afforded statutory protection. It is an offence to:

- disturb a nesting bird
- disturb a roosting bat or damage, destroy or block access to a bat roost

- intentionally kill, injure or take a bat
- sell, hire, barter or exchange a bat, dead or alive
- be in possession or control of a bat or anything derived from a bat

5. SURVEY METHODOLOGY

5.1 The project architect supplied to us a topographic land survey drawing with tree stem positions plotted and a site layout proposal drawing. For the purpose of the report, we have assumed that detail on both drawings is accurate. The topographic land survey drawing is the base for our Tree Protection Plan.

5.2 Data collected during the survey are set out in the tabulated Tree Survey Schedule which should be read in conjunction with the Glossary of Terms at Appendix CW2. Trees have been surveyed individually, in groups and as woodland with individual trees prefixed 'T', groups of trees 'G', woodlands 'W' and hedges 'H'.

5.3 All surveyed trees are allocated Retention and Visual Prominence values as defined at Appendix CW3. In respect of retention values, trees or groups of trees are evaluated twice to consider their relative merits. Firstly, the trees are assessed and categorised in the context of the current land use to provide a broad valuation of all of their attributes and contribution to their environs. Secondly, the trees are assessed and categorised in the context of the development proposal.

5.4 A brief assessment for obvious signs of wildlife habitat in trees on the site was carried out during our survey. No protected or exceptional habitats were identified and details were not recorded. However, trees of most species provide valuable nesting sites for a wide range of birds and it is likely that nesting birds will be present on the site during the period March to September. We have not been made aware of the presence of roosting bats and have not identified any obvious signs of roost sites, however this does not mean that roost sites are absent.

6. DISCUSSION

6.1 The Tree Survey Schedule and the Tree Protection Plan provide the basis for our consideration of the development proposal in relation to trees. The Tree Protection Plan provides an overview of the proposal and sets out the methodology for the protection of trees during the development process.

6.2 **General.** We have collected data for four individually surveyed trees, eleven groups of trees, three woodlands and two hedges.

6.3 Woodland W3 and the northern edges of groups 3 and 4 and woodlands W1 and W2 of our survey stand off-site and other than those parts of these trees that extend across the boundary into the site, most probably lie outside the applicant's control.

6.4 Being visible or partially visible from neighbouring properties, the public highway and surrounding open countryside, the surveyed trees have moderately high collective visual prominence. The most significant in this regard are the linear groups of early-mature and mature trees to the northern boundary of the site, comprising tree T2, groups G1, G5, G8, G9 and G10 and off-site woodland W3, which together provide an important visual screen/buffer as viewed from the Sett Valley Trail and residential properties to the south. Trees T3 and T4, groups G3 and G4 and woodland W1 together provide a reasonable visual screen/buffer between the application site and the neighbouring industrial site to the north. Group G7 and woodland W3 separate the application site from adjacent open countryside.

6.5 The surveyed trees currently provide reasonable boundary screening, contribute to the mature setting of the site and provide a significant collective contribution to the character and appearance of the locale.

6.6 Tree T1 and hedges H1 and H2 have very low visual prominence and in our opinion have little merit in terms of their contribution to the wider landscape.

6.7 **BS5837 Retention Values:** BS5837 recommends that trees be evaluated and categorised according to their 'Retention Value'. These values are detailed in the Tree Survey Schedule and the pre-development values are summarised below. Our methodology for this assessment is described at Appendix CW3.

A 'high value' retention category. Woodland W3 and several trees in group G10
Trees the retention of which in the pre-development context is most desirable.

B 'moderate value' retention category. Trees T2 and T3, groups G1, G3, G5, G7 and G8, woodlands W1 and W2 and several trees in groups G9 to G11
Trees the retention of which in the pre-development context is desirable.

C 'low value' retention category. Tree T4, groups G2, G4 and G6 and several trees in groups G9 to G11
Table 1 of BS5837 states that *'C category trees will usually not be retained where they would impose a significant constraint on development'*

R 'remove' category. Tree T1
BS5837 states that R category trees *'…should not be a consideration in the planning process.'*

6.8 **Assessment of the Development Proposal.** Removal of several trees to the northern edge of group G6 is proposed in order to accommodate an area of new car-park hardstanding. We propose in this regard that individual trees for removal in G6 should be agreed on site with the Council's Arboricultural Officer and marked up by the Consulting Arboriculturist, prior to commencement of development. Group G6 falls within the low value retention category C (BS5837) and should not therefore impose a significant constraint on development of the site. Loss of trees to the northern edge of the group to accommodate the development proposal will have only a minor impact on amenity, which in our opinion can easily be mitigated by new landscaping.

6.9 All of the remaining trees, shrubs and hedges across the site remain substantially unaffected by the development proposal and can be retained and protected for the duration of site construction works in accordance with current best practice guidance within BS5837 and as further detailed on the Tree Protection Plan. In this regard we propose as follows.

- Minor pruning of trees along the northern edge of group G9 and the southern edges of woodlands W1 and W2 to enable installation of temporary protective fencing, which we propose should be agreed with the Council's Arboricultural Officer prior to commencement of development.

- Re-assessment and monitoring of retained fire damaged trees in groups G7 and G9 and monitoring of retained horse chestnut trees in group G10, which exhibit signs of infection by horse chestnut bleeding canker *(Pseudomonas syringae pv aesculi).*

6.10 We have considered the broad implications of the provision or renewal of underground services but the locations of existing and proposed underground services were not identified on the plans supplied by the client and in this regard, our advice is of a general nature.

6.11 A detailed landscape proposal for the development is not currently available. However, the proposed development provides opportunities for substantial landscape improvements in the form of new off-site woodland screen planting on land within the applicant's ownership to the east of the replacement building, silvicultural management and enrichment planting in boundary woodlands W1 and W2 and new native shrub planting along the northern and southern boundaries of the site.

CONCLUSIONS

7.1 The development proposal can be implemented with only the removal of a small number of low value trees, the loss of which will have a very minor impact on amenity. All of the remaining trees, shrubs and hedges are proposed for retention and can be protected for the duration of site construction works in accordance with current best practice guidance within BS5837 as detailed on the Tree Protection Plan.

7.2 The development proposal provides opportunities for substantial landscape enhancement works, which can easily mitigate trees lost to the development, enhance the landscape setting of the site, strengthen the site boundaries, improve continuity of tree cover in the area and maximise opportunities for wildlife conservation and enhancement of habitats.

7.3 In terms of impact on trees, the development proposal as amended by the drawings and schedule appended hereto and as supplemented by a suitable landscaping scheme, can provide a significant net benefit.

7. RECOMMENDATIONS

8.1 We advise that all proposed revisions in respect of external layout, locations of underground services, external surfacing and/or landscaping, having implications for trees should be referred to us for review.

8.2 No tree pruning or removal works should commence on site until necessary consents have been obtained from the LPA in respect of TPOs or as part of a detailed planning permission.

8.3 A site meeting of the LPA's Arboricultural Officer and the Contract Arboriculturist shall take place, prior to commencement of the development, to agree and mark up individual trees for removal in group G6 and to agree details of pruning works along the northern edge of group G9 and the southern edges of woodlands W1 and W2.

8.4 All tree removal and pruning works should be implemented in accordance with Tree Survey Schedule CW/6012-SS2, prior to commencement of any construction activity. All such works should be carried out by a qualified arboricultural contractor, carrying appropriate insurance cover and should be implemented to the minimum current CE and UK industry standards and in accordance with current industry codes of practice.

8.5 Trees should be carefully inspected for birds' nests prior to pruning or removal and any work likely to destroy or disturb active nests should be avoided until the young have fledged.

8.6 All personnel working with or in the trees should be vigilant and mindful of the possible presence of roosting bats. A competent ecologist should investigate any indication that trees on the site are used as bat roosts.

8.7 Construction Exclusion Zones around retained trees should be achieved by the erection of Temporary Protective Fencing as detailed on the Tree Protection Plan. The integrity of such fencing should be maintained for the duration of the works.

8.8 There should be no excavation for new or replacement underground services within any area designated as a Construction Exclusion Zone on the Tree Protection Plan.

8.9 Surface water drainage can be damaging to trees, particularly run-off from surfaces upon which de-icing salts have been used. All surface water likely to be contaminated by de-icing salts should be directed away from trees.

8.10 Foundation design should take into consideration the juxtaposition of existing and proposed trees and the nature of the underlying load-bearing soils.

8.11 Landscaping of the site should be implemented in accordance with a detailed landscape scheme to be approved by the Local Planning Authority.

8. REFERENCES.

BS5837 2005. Trees in Relation to Construction - Recommendations. British Standards Institute, London.

BS3998 1989. Recommendations for Tree Work. British Standards Institute, London.

APPENDIX CW 1

TREE SURVEY SCHEDULE

PROJECT: STIRLING LLOYD, BIRCH VALE INDUSTRIAL ESTATE, HIGH PEAK
CLIENT: STIRLING LLOYD POLYCHEM LTD
REF: CW/6012-SS2
DATE: 11/12/2009

SURVEYED BY: G THOMAS & R HUDSON
CHESHIRE WOODLANDS
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No.	Species	Age Range	Height (m)	Crown Spread (m)	Stem Dia. (mm)	Vitality	Comments	Management	Visual prominence	Retention Value Existing	Retention Value Proposed	BS5837 RPA Radius (m)
T1	Silver birch *(Betula pendula)*	-	3.5	-	480	D	• The standing stem of a recently felled tree	• No work required	0	R	R	-
T2	Horse chestnut *(Aesculus hippocastanum)*	M	18	13	830	M	• Located to the top edge of a raised bank with signs of past excavation of ground on the north side extending almost up to the base of the stem • Suppressed in the past on the west side by T1 with crown biased to the east • Area of bark necrosis and decay at the base of the stem on the south-east side associated with several large stem burrs • Two large primary branches in the lower crown on the north side have been heavily reduced many years ago and have multiple branch attachments arising from the old pruning points • Tree expresses reduced vitality particularly in the upper crown	• Monitor crown for signs of deterioration	2G	B	B	10.0

Inspection was restricted where trees were ivy clad or located wholly or partially on neighbouring land or where basal growth or other vegetation obscured lower stems and root collars

All trees should be re-assessed at appropriate intervals to assess their mechanical integrity unless otherwise stated in the schedule

HEADINGS & ABBREVIATIONS

Age Range: Y = Young, SM = Semi mature, EM = Early mature, M = Mature, PM = Post Mature.
Stem Dia. Stem diameter (measured at a height of approximately 1.5 metres) MS = multi-stemmed
Crown Spread: Maximum crown diameter
Vitality: D = Dead, MD = Moribund, P = Poor, M = Moderate, G = Good
Visual prominence: Broad indication of contribution to the landscape. 0 = none, 1=very low up to 5 =very high, G= contribution to a wider group. Values take into consideration the potential contribution to the landscape. Our assessment of public visibility is influenced by safe life expectancy of the tree or group
Retention Value Existing: Broadly in line with BS5837 (2005) Table 1. Our valuation considers the merits of the tree or group in the context of the existing land-use
Retention Value Proposed: Broadly in line with BS5837 (2005) chapter Table 1. Our valuation considers the merits of the tree or group in the context of a development proposal. R = Remove
BS5837 RPA Radius: Radius from the centre of the stem to the line of tree protection as set out in Table 2 of the Standard

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No.	Species	Age Range	Height (m)	Crown Spread (m)	Stem Dia. (mm)	Vitality	Comments	Management	Visual prominence	Retention Value Existing	Retention Value Proposed	BS5837 RPA Radius (m)
T3	Horse chestnut	M	18	13	830	G	• Bitmac hardstanding and concrete kerb edging stones extend almost up to the base of the stem on the south side • Main stem bifurcates at a height of 3.0 metres, at which point there is an acute included-bark union of co-dominant stems with no visible signs of failure • Signs of past disturbance of ground within the primary root zone • Appears to have been suppressed in the past on the south side	• Monitor included-bark union for signs of failure	2G	B	B	10.0
T4	Horse chestnut	M	18	12	800	M	• Located within woodland W1 • Area of bark damage and decay to the lower stem on the west side • Weeping lesions of Horse Chestnut Bleeding Canker *(Pseudomonas syringae pv aesculi)* to the stem • Tree expresses reduced vitality particularly in the upper crown	• Monitor development of Bleeding Canker infection • Monitor crown for signs of deterioration	2G	C	C	9.6
G1	3 Sycamore *(Acer pseudoplatanus)*	EM	18	11	≤600	M	• Closely spaced linear group located at the entrance to the site and fronting the public highway • All three trees express slightly reduced vitality • **G1/1.** Base of stem abutting the edge of a concrete slab • **G1/2 & G1/3.** Located on raised ground, retained on the north side by a low concrete block wall	• Monitor crowns for signs of deterioration	3	B	B	≤7.4
G2	Goat willow *(Salix caprea)* Hawthorn *(Crataegus monogyna)* Sycamore	Y-SM	9	6	≤220	G	• Young natural colonisation • Low branches on the north side encroaching slightly into the access roadway	• No work required	2	C	C	≤2.6
G3	Hawthorn Ash *(Fraxinus excelsior)* Oak *(Quercus robur)* Silver birch	SM Y Y Y	12	7	≤200	G	• Closely spaced linear group located along the northern edge of the access roadway. • Several of the trees have potential for substantial future growth and could make valuable long term contributions to the landscape	• No work required	2	B	B	≤2.4

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No.	Species	Age Range	Height (m)	Crown Spread (m)	Stem Dia. (mm)	Vitality	Comments	Management	Visual prominence	Retention Value Existing	Retention Value Proposed	BS5837 RPA Radius (m)
G4	3 Himalayan birch *(Betula utilis)*	Y	8	5	≤150	G	• Closely spaced group of ornamental boundary trees underplanted with dense evergreen shrubs	• No work required	2	C	C	≤1.8
G5	3 Sycamore	SM-EM	18	10	≤550 (MS)	G	• Closely spaced linear group located on raised ground, retained on the north side by a low concrete wall • The stems of the two westernmost trees are colonised by ivy • **G5/1.** Twin-stemmed from ground level, at which point there is an acute included-bark union of co-dominant stems with no visible signs of failure	• Sever and remove ivy from the two westernmost trees to a height of 3.0 metres to facilitate a more detailed assessment of the lower stems and root collars • **G5/1** Monitor development of included-bark union	2G	B	B	≤5.5
G6	Hawthorn Ash Elder *(Sambucus nigra)* Goat willow Sycamore	SM Y Y Y-SM	17	9	≤350	M-G	• Closely spaced group, most probably natural colonisation • Signs of waterlogging of ground with a shallow ditch with running water running through the centre of the group • A young ash tree has recently failed at the rootplate • Several trees are twin or multi-stemmed from ground level and are possibly stool shoots from previously cut stumps	• Remove trees to the northern edge for development. Individual trees for removal to be agreed on site with the LPA Arboricultural Officer and marked up by the Consulting Arboriculturist, prior to commencement of development. • Grind stumps to a depth of 0.3 metres below ground level • Retain and protect remainder	2G	C	C&R	≤4.2

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No.	Species	Age Range	Height (m)	Crown Spread (m)	Stem Dia. (mm)	Vitality	Comments	Management	Visual prominence	Retention Value Existing	Retention Value Proposed	BS5837 RPA Radius (m)
G7	3 Sycamore	EM-M	21	12	≤990	G	• Closely spaced group located to the top edge of a wooded bank • Signs of past disturbance of ground within the primary root zones with tipped spoil extending beneath the canopies and around the lower stems • An industrial building on the south side has recently been extensively damaged by fire and there is a high likelihood that the trees have been affected by heat damage • **G7/1.** The dominant tree in the group. Removal of the two flanking trees would have no significant impact on the wider visual qualities/landscape value of the wider group • Several branch pruning wounds and stubs to the stem and around the lower crown where low primary and lateral branches were recently removed or shortened • **G7/2.** Heavily suppressed and growing through the lower crown of G7/1 • **G7/3.** Partially suppressed on the west side by G7/1 • Two co-dominant stems on the south side have recently been cut down to low stumps	• Re-assess when in full leaf in the mid-summer of 2010 for signs of fire/heat damage to the stem and crown	2G	B	B	≤11.9
G8	2 Horse chestnut	M	20	14	≤960	G	• Boundary trees located adjacent to a brick sub-station • Restricted access and not assessed in detail • Contributes to the existing visual screen/buffer between the subject site and the Sett Valley Trail and residential properties to the south	• Arrange access to facilitate a more detailed assessment	3G	B	B	≤11.5

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No.	Species	Age Range	Height (m)	Crown Spread (m)	Stem Dia. (mm)	Vitality	Comments	Management	Visual prominence	Retention Value Existing	Retention Value Proposed	BS5837 RPA Radius (m)
G9	Silver birch Horse chestnut Goat willow Ash Sycamore Norway maple *(Acer platanoides)*	Y-SM Y Y Y Y-EM Y-M	18	12	≤600	M-G	• Closely spaced linear group of boundary trees comprising several mature Norway maples and an early-mature sycamore to the southern edge located alongside the site boundary fence, together with recent young and semi-mature natural colonisation to the northern edge alongside the side elevation of the derelict industrial building • Extensive fire damage to several of the trees • The Norway maple trees to the western end are colonised by ivy • Located on raised sloping ground retained on the north side by ivy covered retaining walls and the side elevation to the industrial building • Forms part of the northern edge of W3 and contributes to the existing visual screen/buffer between the industrial site and the Sett Valley Trail and residential properties to the south	• Sever and remove ivy as necessary to a height of 3.0 metres to facilitate a more detailed assessment of the lower stems and root collars • Prune to reduce radial crown spread on the north side by removal of shortening of lateral and sub-lateral branches to. Detail of the pruning works to be agreed on site with the LPA Arboricultural Officer, prior to commencement of development and to be supervised on site by the consulting arboriculturist • Re-assess when in full leaf in mid-summer 2010 to determine the extent of fire/heat damage	3G	B&C	B&C	≤7.2

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No.	Species	Age Range	Height (m)	Crown Spread (m)	Stem Dia. (mm)	Vitality	Comments	Management	Visual prominence	Retention Value Existing	Retention Value Proposed	BS5837 RPA Radius (m)
G10	Holly *(Ilex aquifolium)* Wych elm *(Ulmus glabra)* Horse chestnut Sycamore Rhododendron Goat willow Alder *(Alnus glutinosa)* Norway maple	SM Y EM-M Y-EM Y SM M	20	12	≤650	G	• Closely spaced linear group of boundary trees located along a steep bank. • Underplanted with locally dense holly and rhododendron and a group of recently established alder trees to the western end • Signs of past excavation of ground at several locations that extends into the primary root zones and close to the base of the stems of several of the trees • Restricted access and several of the trees were not assessed in detail • Forms part of the northern edge of W3 and contributes to the existing visual screen/buffer between the industrial site and the adjacent Sett Valley Trail and residential properties to the south • **G10/1 Horse chestnut.** Partially occluded bark damage with decay to the lower stem on the north side where a co-dominant stem failed many years ago • Areas of bark necrosis to the stem and co-dominant branches consistent with infection by Horse Chestnut Bleeding Canker *(pseudomonas syringae pv aesculi)* • **G10/2 Horse chestnut.** Areas of bark dieback to the stem and co-dominant branches consistent with infection by Horse Chestnut Bleeding Canker • **G10/3 Sycamore.** Main stem bifurcates at a height of 4.0 metres, at which point there is an acute included-bark union of the co-dominant stems with no visible signs of failure • Two partially suppressed semi-mature sycamore trees growing through the lower and mid-crowns on the west side	• **G10/1 & G10/2.** Monitor development of the Horse Chestnut Bleeding Canker infection	3G	A-C	A-C	≤7.8

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G11	Sycamore Ash Gean cherry *(Prunus avium)* Hawthorn	Y-EM Y Y SM-EM	19	13	≤500 (MS)	M-G	• Closely spaced linear group of boundary trees located on a raised bank which extends from the site boundary fence down to the rear elevation of the temporary office buildings • Most probably natural colonisation • Forms part of the northern edge of W3 and contributes to the existing visual screen/buffer between the industrial site and the Sett Valley Trail and residential properties to the south • Several of the trees are colonised by dense ivy • Signs of past disturbance of ground along the length of the bank	• Sever and remove ivy as necessary to a height of 3.0 metres to facilitate a more detailed assessment of the lower stem and root collars of the principal trees within the group	2G	B&C	B&C	≤5.0

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No.	Species	Age Range	Height (m)	Crown Spread (m)	Stem Dia. (mm)	Vitality	Comments	Management	Visual prominence	Retention Value Existing	Retention Value Proposed	BS5837 RPA Radius (m)
W1	Goat willow Silver birch Sycamore Hawthorn Wych elm Horse chestnut Elder	Y-EM Y-SM Y-EM Y-SM SM Y	18	12	≤600 (MS)	G	• Linear belt of developing secondary woodland located along a steep bank, which extends from the northern edge of the access roadway and associated car park hardstanding down to the boundary with a neighbouring industrial site to the north • The majority of the trees appear to be natural colonisation apart from occasional individual goat willow, sycamore and horse chestnut trees, which probably pre-date the woodland • Signs of past disturbance of ground along the southern edge with extensive tipping of spoil that extends over the primary root zones and around the lower stems of several woodland edge trees • Comprises mainly goat willow with occasional silver birch, wych elm, sycamore, hawthorn and elder • Locally dense young natural colonisation of mainly ash • Impoverished herb layer dominated by locally dense bramble and nettle • A linear belt of maintained ornamental shrub plantings located to the southern edge fronting the temporary office buildings • Provides a strong visual screen/buffer between the subject property and the neighbouring industrial site to the north • Individual trees not assessed in detail • Opportunities for positive management that would comprise selective silvicultural thinning to create space for enrichment planting to increase species diversity and in particular to strengthen the shrub layer	• Prune to reduce radial crown spread on the south side by removal of shortening of lateral and sub-lateral branches to facilitate installation of Temporary Protective Fencing. Detail of the pruning works to be agreed on site with the LPA arboricultural officer, prior to commencement of development and to be supervised on site by the consulting arboriculturist	3	B	B	≤6.0

TREE SURVEY SCHEDULE

PROJECT: STIRLING LLOYD, BIRCH VALE INDUSTRIAL ESTATE, HIGH PEAK
CLIENT: STIRLING LLOYD POLYCHEM LTD
REF: CW/6012-SS2
DATE: 11/12/2009

SURVEYED BY: G. THOMAS & R HUDSON
CHESHIRE WOODLANDS
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No.	Species	Age Range	Height (m)	Crown Spread (m)	Stem Dia. (mm)	Vitality	Comments	Management	Visual prominence	Retention Value Existing	Retention Value Proposed	BS5837 RPA Radius (m)
W2	Goat willow Sycamore Rhododendron Norway maple Rowan *(Sorbus aucuparia)* Ash Hawthorn Silver birch	Y-EM Y-EM Y-EM Y Y SM-EM Y	17	14	≤600	D-G	• Area of developing secondary woodland growing on steeply sloping ground, which ahs been extensively modified in the past • The majority of the trees are probably natural colonisation • Provides reasonable boundary screening and creates a strong visual screen/ buffer between the site and open countryside to the north • High-canopy layer of mainly sycamore. Mid-canopy layer of hawthorn and goat willow. Impoverished shrub layer dominated by an area of dense rhododendron to the centre. Herb layer comprises locally dense ground ivy and bramble • Locally dense young natural colonisation of mainly sycamore, particularly to the western end • Signs of extensive past disturbance of ground along the southern edge with tipped spoil extending over the primary root zones and around the lower stems of several woodland edge trees • Individual trees not assessed in detail • Opportunities for positive management that would comprise removal of rhododendron and silvicultural thinning to create space for enrichment planting to increase species and structural diversity and particularly to improve the shrub layer	• Prune to reduce radial crown spread on the south side by removal of shortening of lateral and sub-lateral branches to facilitate installation of Temporary Protective Fencing. Detail of the pruning works to be agreed on site with the LPA arboricultural officer, prior to commencement of development and to be supervised on site by the consulting arboriculturist	3	B	B	≤7.2

TREE SURVEY SCHEDULE

PROJECT: STIRLING LLOYD, BIRCH VALE INDUSTRIAL ESTATE, HIGH PEAK
CLIENT: STIRLING LLOYD POLYCHEM LTD
REF: CW/6012-SS2
DATE: 11/12/2009

SURVEYED BY: G. THOMAS & R HUDSON
CHESHIRE WOODLANDS
PAGE: 10

No.	Species	Age Range	Height (m)	Crown Spread (m)	Stem Dia. (mm)	Vitality	Comments	Management	Visual prominence	Retention Value Existing	Retention Value Proposed	BS5837 RPA Radius (m)
W3	Hawthorn Rowan Ash Sycamore Beech *(Fagus sylvatica)* Norway maple Goat willow Holly Wych elm Alder Horse chestnut Whitebeam *(Sorbus aria)*	SM Y Y-SM EM SM SM EM Y SM SM-EM SM EM	20	13	≤600	D-G	• The northern edge of a wider area of developing secondary woodland • Located on a strip of ground between the southern boundary of the subject site and the Sett Valley Trail, which is steeply sloping in places • Forms an important visual screen/buffer between the subject site and the Sett Valley Trail and residential properties to the south • Individual trees not assessed in detail • Several trees to the eastern end are colonised by dense ivy • Herb layer dominated by locally dense bramble • A linear group of hawthorn trees to the centre are probably the remnants of an old boundary fence • Many of the sycamore trees are multi-stemmed from ground level and are probably stool shoots from previously cut stumps • Contains patches of locally dense young natural colonisation • **W3/1 Horse chestnut.** Dead	• Formally notify the landowner of their duty of care in relation to neighbouring land and the need for regular assessment of their trees • Formally notify the landowner of our findings in respect of tree **W3/1**	3	A	A	≤7.2
H1	*Hypericum sp.*	-	1	-	-	G	• Internal ornamental hedge located to the rear edge of an area of carpark hardstanding • Of no particular merit in terms of its contribution to the wider landscape	• Retain and protect • Maintain at current dimensions by annual clipping	0	-	-	-
H2	*Lonicera sp*.	-	1	-	-	G	• Short length of clipped internal ornamental hedging of no particular merit in terms of its contribution to the wider landscape	• Retain and protect • Maintain at current dimensions by annual clipping	0	-	-	-

APPENDIX CW 2

GLOSSARY OF ARBORICULTURAL TERMS

Abscission. The shedding of a leaf or other short-lived part of a woody plant, involving the formation of a corky layer across its base; in some tree species twigs can be shed in this way

Abiotic. Pertaining to non-living agents; e.g. environmental factors

Absorptive roots. Non-woody, short-lived roots, generally having a diameter of less than one millimetre, the primary function of which is uptake of water and nutrients

Adaptive growth. In tree biomechanics, the process whereby the rate of wood formation in the cambial zone, as well as wood quality, responds to gravity and other forces acting on the cambium. This helps to maintain a uniform distribution of mechanical stress

Adaptive roots. The adaptive growth of existing roots; or the production of new roots in response to damage, decay or altered mechanical loading

Adventitious shoots. Shoots that develop other than from apical, axillary or dormant buds; see also 'epicormic'

Anchorage. The system whereby a tree is fixed within the soil, involving cohesion between roots and soil and the development of a branched system of roots which withstands wind and gravitational forces transmitted from the aerial parts of the tree

Architecture. In a tree, a term describing the pattern of branching of the crown or root system

Axil. The place where a bud is borne between a leaf and its parent shoot

Bacteria. Microscopic single-celled organisms, many species of which break down dead organic matter, and some of which cause diseases in other organisms

Bark. A term usually applied to all the tissues of a woody plant lying outside the vascular cambium, thus including the phloem, cortex and periderm; occasionally applied only to the periderm or the phellem

Basidiomycotina (Basidiomycetes). One of the major taxonomic groups of fungi; their spores are borne on microscopic peg-like structures (basidia), which in many types are in turn borne on or within conspicuous fruit bodies, such as brackets or toadstools. Most of the principal decay fungi in standing trees are basidiomycetes

Bolling. A term sometimes used to describe pollard heads

Bottle-butt. A broadening of the stem base and buttresses of a tree, in excess of normal and sometimes denoting a growth response to weakening in that region, especially due to decay involving selective delignification

Bracing. The use of rods or cables to restrain the movement between parts of a tree

Branch:

- Primary. A first order branch arising from a stem
- Lateral. A second order branch, subordinate to a primary branch or stem and bearing sub-lateral branches
- Sub-lateral. A third order branch, subordinate to a lateral or primary branch, or stem and usually bearing only twigs

Branch bark ridge. The raised arc of bark tissues that forms within the acute angle between a branch and its parent stem

Branch collar. A visible swelling formed at the base of a branch whose diameter growth has been disproportionately slow compared to that of the parent stem; a term sometimes applied also to the pattern of growth of the cells of the parent stem around the branch base

Brown-rot. A type of wood decay in which cellulose is degraded, while lignin is only modified

Buckling. An irreversible deformation of a structure subjected to a bending load

Buttress zone. The region at the base of a tree where the major lateral roots join the stem, with buttress-like formations on the upper side of the junctions

Cambium. Layer of dividing cells producing xylem (woody) tissue internally and phloem (bark) tissue externally

Canker. A persistent lesion formed by the death of bark and cambium due to colonisation by fungi or bacteria

Canopy species. Tree species that mature to form a closed woodland canopy

Cleaning out. The removal of dead, crossing, weak, and damaged branches, where this will not damage or spoil the overall appearance of the tree

Compartmentalization. The confinement of disease, decay or other dysfunction within an anatomically discrete region of plant tissue, due to passive and / or active defences operating at the boundaries of the affected region

Compression strength. The ability of a material or structure to resist failure when subjected to compressive loading; measurable in trees with special drilling devices

Compressive loading. Mechanical loading which exerts a positive pressure; the opposite to tensile loading

Condition. An indication of the physiological vitality of the tree. Where the term ‘condition’ is used in a report, it should not be taken as an indication of the stability of the tree

Construction exclusion zone. Area based on the Root Protection Area (in square metres) to be protected during development, by the use of barriers and / or ground protection

Crown/Canopy. The main foliage bearing section of the tree

Crown lifting. The removal of limbs and small branches to a specified height above ground level

Crown thinning. The removal of a proportion of secondary branch growth throughout the crown to produce an even density of foliage around a well-balanced branch structure

Crown reduction/shaping. A specified reduction in crown size whilst preserving, as far as possible, the natural tree shape

Crown reduction/thinning. Reduction of the canopy volume by thinning to remove dominant branches whilst preserving, as far as possible the natural tree shape

Deadwood. Dead branch wood

Decurrent. In trees, a system of branching in which the crown is borne on a number of major widely-spreading limbs of similar size (cf. excurrent). In fungi with toadstools as fruit bodies, the description of gills which run some distance down the stem, rather than terminating abruptly

Defect. In relation to tree hazards, any feature of a tree which detracts from the uniform distribution of mechanical stress, or which makes the tree mechanically unsuited to its environment

Delamination. The separation of wood layers along their length, visible as longitudinal splitting

Dieback. The death of parts of a woody plant, starting at shoot-tips or root-tips

Disease. A malfunction in or destruction of tissues within a living organism, usually excluding mechanical damage; in trees, usually caused by pathogenic micro-organisms

Distal. In the direction away from the main body of a tree or subject organism (cf. proximal)

Dominance. In trees, the tendency for a leading shoot to grow faster or more vigorously than the lateral shoots; also the tendency of a tree to maintain a taller crown than its neighbours

Dormant bud. An axial bud which does not develop into a shoot until after the formation of two or more annual wood increments; many such buds persist through the life of a tree and develop only if stimulated to do so

Dysfunction. In woody tissues, the loss of physiological function, especially water conduction, in sapwood

DBH (Diameter at Breast Height). Stem diameter measured at a height of 1.5 metres (UK) or the nearest measurable point. Where measurement at a height of 1.5 metres is not possible, another height may be specified

Deadwood. Branch or stem wood bearing no live tissues. Retention of deadwood provides valuable habitat for a wide range of species and

Incorporating extracts from Lonsdale, D. 1999. Principles of Tree Hazard Assessment. Her Majesty's Stationary Office, London

seldom represents a threat to the health of the tree. Removal of deadwood can result in the ingress of decay to otherwise sound tissues and climbing operations to access deadwood can cause significant damage to a tree. Removal of deadwood is generally recommended only where it represents an unacceptable level of hazard

Endophytes. Micro-organisms which live inside plant tissues without causing overt disease, but in some cases capable of causing disease if the tissues become physiologically stressed, for example by lack of moisture

Epicormic shoot. A shoot having developed from a dormant or adventitious bud and not having developed from a first year shoot

Excrescence. Any abnormal outgrowth on the surface of tree or other organism

Excurrent. In trees, a system of branching in which there is a well defined central main stem, bearing branches which are limited in their length, diameter and secondary branching (cf. decurrent)

Felling licence. In the UK, a permit to fell trees in excess of a stipulated number of stems or volume of timber

Flush-cut. A pruning cut which removes part of the branch bark ridge and or branch-collar

Girdling root. A root which circles and constricts the stem or roots possibly causing death of phloem and / or cambial tissue

Guying. A form of artificial support with cables for trees with a temporarily inadequate anchorage

Habit. The overall growth characteristics, shape of the tree and branch structure

Hazard beam. An upwardly curved part of a tree in which strong internal stresses may occur without being reduced by adaptive growth; prone to longitudinal splitting

Heartwood/false-heartwood/ripewood. Sapwood that has become dysfunctional as part of the natural aging processes

Heave. A term mainly applicable to a shrinkable clay soil which expands due to re-wetting after the felling of a tree which was previously extracting moisture from the deeper layers; also the lifting of pavements and other structures by root diameter expansion; also the lifting of one side of a wind-rocked root-plate

High canopy tree species. Tree species having potential to contribute to the closed canopy of a mature woodland or forest

Incipient failure. In wood tissues, a mechanical failure which results only in deformation or cracking, and not in the fall or detachment of the affected part

Included bark (ingrown bark). Bark of adjacent parts of a tree (usually forks, acutely joined branches or basal flutes) which is in face-to-face contact

Increment borer. A hollow auger, which can be used for the extraction of wood cores for counting or measuring wood increments or for inspecting the condition of the wood

Infection. The establishment of a parasitic micro-organism in the tissues of a tree or other organism

Internode. The part of a stem between two nodes; not to be confused with a length of stem which bear nodes but no branches

Lever arm. A mechanical term denoting the length of the lever represented by a structure that is free to move at one end, such as a tree or an individual branch

Lignin. The hard, cement-like constituent of wood cells; deposition of lignin within the matrix of cellulose microfibrils in the cell wall is termed Lignification

Lions tailing. A term applied to a branch of a tree that has few if any side-branches except at its end, and is thus liable to snap due to end-loading

Loading. A mechanical term describing the force acting on a structure from a particular source; e.g. the weight of the structure itself or wind pressure

Longitudinal. Along the length (of a stem, root or branch)

Lopping. A term often used to describe the removal of large branches from a tree, but also used to describe other forms of cutting

Mature Heights (approximate):

- Low maturing – less than 8 metres high
- Moderately high maturing – 8 – 12 metres high
- High maturing – greater than 12 metres high

Microdrill. An electronic rotating steel probe, which when inserted into woody tissue provides a measure of tissue density

Minor deadwood. Deadwood of a diameter less than 25mm and or unlikely to cause significant harm or damage upon impact with a target beneath the tree

Mulch. Material laid down over the rooting area of a tree or other plant to help conserve moisture; a mulch may consist of organic matter or a sheet of plastic or other artificial material

Mycelium. The body of a fungus, consisting of branched filaments (hyphae)

Occluding tissues. A general term for the roll of wood, cambium and bark that forms around a wound on a woody plant (cf. woundwood)

Occlusion. The process whereby a wound is progressively closed by the formation of new wood and bark around it

Pathogen. A micro-organism which causes disease in another organism

Photosynthesis. The process whereby plants use light energy to split hydrogen from water molecules, and combine it with carbon dioxide to form the molecular building blocks for synthesizing carbohydrates and other biochemical products

Phytotoxic. Toxic to plants

Pollarding. The removal of the tree canopy, back to the stem or primary branches. Pollarding may involve the removal of the entire canopy in one operation, or may be phased over several years. The period of safe retention of trees having been pollarded varies with species and individuals. It is usually necessary to re-pollard on a regular basis, annually in the case of some species

Primary branch. A major branch, generally having a basal diameter greater than 0.25 x stem diameter

Primary root zone. The soil volume most likely to contain roots that are critical to the health and stability of the tree and normally defined by reference BS5837 (2005) Guide for Trees in Relation to Construction.

Priority. Works may be prioritised, 1. = high, 5. = low

Probability. A statistical measure of the likelihood that a particular event might occur

Proximal. In the direction towards from the main body of a tree or other living organism (cf. distal)

Pruning. The removal or cutting back of twigs or branches, sometimes applied to twigs or small branches only, but often used to describe most activities involving the cutting of trees or shrubs

Radial. In the plane or direction of the radius of a circular object such as a tree stem

Rams-horn. In connection with wounds on trees, a roll of occluding tissues which has a spiral structure as seen in cross-section

Rays. Strips of radially elongated parenchyma cells within wood and bark. The functions of rays include food storage, radial translocation and contributing to the strength of wood

Reactive Growth/Reaction Wood. Production of woody tissue in response to altered mechanical loading; often in response to internal defect or decay and associated strength loss (cf. adaptive growth)

Removal of dead wood. Unless otherwise specified, this refers to the removal of all accessible dead, dying and diseased branchwood and broken snags

Removal of major dead wood. The removal of, dead, dying and diseased branchwood above a specified size

Respacing. Selective removal of trees from a group or woodland to provide space and resources for the development of retained trees.

Residual wall. The wall of non-decayed wood remaining following decay of internal stem, branch or root tissues

Ring-barking (girdling). The removal of a ring of bark and phloem around the circumference of a stem or branch, normally resulting in an inability to transport photosynthetic assimilates below the area of damage. Almost

inevitably results in the eventual death of the affected stem or branch above the damage.

Root-collar. The transitional area between the stem / s and roots

Root-collar examination. Excavation of surfacing and soils around the root-collar to assess the structural integrity of roots and / or stem

Root protection area. An area of ground surrounding a tree that contains sufficient rooting volume to ensure the tree's survival. Calculated with reference to Table 2 of BS5837 (2005) and shown in plan form in square metres

Root zone. Area of soils containing absorptive roots of the tree / s described. The Primary root zone is that which we consider of primary importance to the physiological well-being of the tree

Sapwood. Living xylem tissues

Secondary branch. A branch, generally having a basal diameter of less than 0.25 x stem diameter

Selective delignification. A kind of wood decay (white-rot) in which lignin is degraded faster than cellulose

Shedding. In woody plants, the normal abscission, rotting off or sloughing of leaves, floral parts, twigs, fine roots and bark scales

Silvicultural thinning. Removal of selected trees to favour the development of retained specimens to achieve a management objective

Simultaneous white-rot. A kind of wood decay in which lignin and cellulose are degraded at about the same rate

Snag. In woody plants, a portion of a cut or broken stem, branch or root which extends beyond any growing-point or dormant bud; a snag usually tends to die back to the nearest growing point

Soft-rot. A kind of wood decay in which a fungus degrades cellulose within the cell walls, without any general degradation of the wall as a whole

Spores. Propagules of fungi and many other life-forms; most spores are microscopic and dispersed in air or water

Shrub species. Woody perennial species forming the lowest level of woody plants in a woodland and not normally considered to be trees

Sporophore. The spore bearing structure of fungi

Sprouts. Adventitious shoot growth erupting from beneath the bark

Stem/s. The main supporting structure / s, from ground level up to the first major division into branches

Stress. In plant physiology, a condition under which one or more physiological functions are not operating within their optimum range, for example due to lack of water, inadequate nutrition or extremes of temperature

Stress. In mechanics, the application of a force to an object

Stringy white-rot. The kind of wood decay produced by selective delignification

Storm. A layer of tissue which supports the fruit bodies of some types of fungi, mainly ascomycetes

Structural roots. Roots, generally having a diameter greater than ten millimetres, and contributing significantly to the structural support and stability of the tree

Subsidence. In relation to soil or structures resting in or on soil, a sinking due to shrinkage when certain types of clay soil dry out, sometimes due to extraction of moisture by tree roots

Subsidence. In relation to branches of trees, a term that can be used to describe a progressive downward bending due to increasing weight

Taper. In stems and branches, the degree of change in girth along a given length

Target canker. A kind of perennial canker, containing concentric rings of dead occluding tissues

Targets. In tree risk assessment (with slight misuse of normal meaning) persons or property or other things of value which might be harmed by mechanical failure of the tree or by objects falling from it

Topping. In arboriculture, the removal of the crown of a tree, or of a major proportion of it

Torsional stress. Mechanical stress applied by a twisting force

Translocation. In plant physiology, the movement of water and dissolved materials through the body of the plant

Transpiration. The evaporation of moisture from the surface of a plant, especially via the stomata of leaves; it exerts a suction which draws water up from the roots and through the intervening xylem cells

Understorey. A layer of vegetation beneath the main canopy of woodland or forest or plants forming this

Understorey tree species. Tree species not having potential to attain a size at which they can contribute to the closed high canopy of a woodland

Vascular wilt. A type of plant disease in which water-conducting cells become dysfunctional

Vessels. Water-conducting cells in plants, usually wide and long for hydraulic efficiency; generally not present in coniferous trees

Veteran tree. A loosely defined term for an old specimen that is of interest biologically, culturally or aesthetically because of its age, size or condition and which has usually lived longer than the typical upper age range for the species concerned

Vigour. The expression of carbohydrate expenditure to growth (in trees).

Vitality. A measure of physiological condition expressed through the health and growth of foliage, shoots and adaptive woody tissues.

White-rot. A range of kinds of wood decay in which lignin, usually together with cellulose and other wood constituents, is degraded

Wind exposure. The degree to which a tree or other object is exposed to wind, both in terms of duration and velocity

Wind pressure. The force exerted by a wind on a particular object

Windthrow. The blowing over of a tree at its roots

Wound dressing. A general term for sealants and other materials used to cover wounds in the hope of protecting them against desiccation and infection; only of proven value against fresh wound parasites

Woundwood. Wood with atypical anatomical features, formed in the vicinity of a wound

Incorporating extracts from Lonsdale, D. 1999. Principles of Tree Hazard Assessment. Her Majesty's Stationary Office, London

APPENDIX CW 3

Guidance Note - Assessment of Retention Values and Assessment of Visual Prominence

Retention Values. Trees or groups of trees are evaluated twice in order to facilitate consideration of their relative merits. Firstly, the trees are assessed and categorised in the context of the pre-development situation to provide a broad valuation of all of their attributes and the contribution to their environs. Secondly, the trees are similarly assessed and categorised in the context of a development proposal. The evaluations consider actual or projected: -

- life expectancy
- current and potential visual prominence
- contribution to the wider landscape
- numbers of other trees and their maturity (continuity for landscape, amenity, habitat)
- wildlife habitats (incl. continuity)
- safety
- conflicts with the built environment or other land use
- cultural, historical or other special value

Groups of trees are assessed and categorised as a single unit.

Pre-Development Retention Value. Each surveyed tree or group of trees is valued and placed into one of the following categories (A, B, C or R). The valuation considers the benefits and disbenefits of retaining the tree or group of trees in the pre-development context; any specific issues are noted in the tree survey schedule.

(A) Trees whose retention in the pre-development context is most desirable (high value category)

- wholly appropriate to the pre-development situation and without being in significant conflict

(B) Trees whose retention in the pre-development context is desirable (moderate value category)

- appropriate to the pre-development situation but not of highest value

(C) Trees that could be retained in the pre-development context (low value category)

- ill suited to the pre-development situation but could be retained with moderate conflicts
- trees of no particular merit in the pre-development context

(R) Trees unsuitable for retention in the pre-development context

- cannot reasonably be retained within the pre-development situation

Post-Development Retention Value. With reference to a development proposal, each of the trees or groups of trees is placed in one of the following categories (A, B, C or R). The valuation considers the benefits and disbenefits of retaining the tree or group of trees in the context of the development proposal; any specific issues are noted in the tree survey schedule.

(A) Trees whose retention is most desirable (high value category)
- retention wholly appropriate to the proposed situation and without significant conflict

(B) Trees whose retention is desirable (moderate category)
- retention appropriate to the proposed situation but not of highest value and/or having only minor conflicts

(C) Trees which could be retained (low value category)
- retention ill suited to the proposed situation but could be retained with moderate conflicts
- trees of no particular merit in the proposed situation

(R) Trees for removal:
- cannot reasonably be retained within the proposed situation

Visual Prominence Values. Determined by assessment of current and potential public visual prominence and taking account of location, tree size and growth potential. An appropriately sited young tree with potential for substantial future growth can be classed as moderately valuable even though it is not particularly prominent at the time of the assessment. However, a young tree cannot equal the value of the most valuable mature tree because a high proportion of trees do not attain maturity. On the other hand a prominent tree with significantly reduced life expectancy might be downgraded accordingly. Visual prominence values are classified as follows:

(0) none, (1) very low up to (5) very high

APPENDIX CW 4

TREE PROTECTION PLAN

TREE PROTECTION SPECIFICATION

Construction Exclusion Zones enclosed by Temporary Protective Fencing, shall: -

1. be erected prior to commencement of any construction or demolition works, delivery of site accommodation or materials and shall remain intact for the duration of site construction works;
2. preclude all construction activity with the sole exception of specified arboricultural works and such works as have been agreed by all parties and to be carried out under supervision;
3. be protected by Temporary Protective Fencing and other measures as specified below and as defined by area on the Tree Protection Plan;
4. preclude the storage or tipping of all materials and substances, in addition toxic substances such as fuels, oils, additives, cement or any other deleterious substance within 5.0 metre of any area designated as a Construction Exclusion Zone or otherwise protected on the Tree Protection Plan.

Any incursion into Construction Exclusion Zones must be by prior arrangement, following consultation with the Local Planning Authority.

Type 1 Temporary Protective Fencing

1. Type 1 Temporary Protective Fencing shall comprise 2.0m high weldmesh 'Heras' type fencing.
2. The fencing panels shall butt together and be securely fixed to a timber framework comprising 2.7m x 100 mm x 100 mm timber posts, set or concreted into 0.6m deep, 150 mm diameter augured holes at 3.5m centres.
3. No fixing shall be made to any tree and every possible precaution shall be taken to prevent damage to tree roots when locating posts.
4. A 600mm x 300mm warning sign reading as per figure 1 shall be fixed to every 10.0m of Type 1 Temporary Protective Fencing.
5. The Consulting Arboriculturist shall direct erection of Type 1 Temporary Protective Fencing

Fig.1

CONSTRUCTION EXCLUSION ZONE
KEEP OUT!

ALL TREES ENCLOSED BY THIS FENCE ARE PROTECTED
BY PLANNING CONDITIONS (TOWN AND COUNTRY PLANNING ACT 1990)
AND ARE THE SUBJECTS OF A TREE PRESERVATION ORDER.
CONTRAVENTION OF TREE PRESERVATION ORDER
CONTROLS MAY LEAD TO CRIMINAL PROSECUTION

THE FOLLOWING MUST BE OBSERVED BY ALL PERSONNEL:

- THE TEMPORARY PROTECTIVE FENCING MUST NOT BE MOVED
- NO PERSON SHALL ENTER THE CONSTRUCTION EXCLUSION ZONE
- NO MACHINE OR PLANT SHALL ENTER THE CONSTRUCTION EXCLUSION ZONE
- NO MATERIAL SHALL BE STORED IN THE CONSTRUCTION EXCLUSION ZONE
- NO SPOIL SHALL BE DEPOSITED IN THE CONSTRUCTION EXCLUSION ZONE
- NO EXCAVATION SHALL OCCUR IN THE CONSTRUCTION EXCLUSION ZONE

ANY INCURSION INTO THE CONSTRUCTION EXCLUSION ZONE MUST BE
WITH THE PRIOR WRITTEN PERMISSION OF THE LOCAL PLANNING AUTHORITY

SCALE: 1:500
UNITS: METRES

0 10 20 30 40 50

REVISION:	NOTES:
A	GT 09/02/2010 LAYOUT 1057.30 REVISION A ADDED

TREE PROTECTION PLAN

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CLIENT	STIRLING LLOYD POLYCHEM LTD
PROJECT	BIRCH VALE INDUSTRIAL ESTATE BIRCH VALE HIGH PEAK
JOB REF	CW/6012-P3 Revision A
DATE	18 DECEMBER 2009
SCALE	1:500

- AREA TO BE DEVELOPED
- INDIVIDUAL TREE TO BE RETAINED (T1)
- GROUP OF TREES TO BE RETAINED (G1)
- WOODLAND TO BE RETAINED (W1)
- GROUP OF TREES TO BE REMOVED
- STEM POSITION APPROXIMATED
- PHASE 1 TEMPORARY PROTECTIVE FENCING