

Arboricultural Impact Assessment



**Tyler
Grange**

Aldi, Merthyr Tydfil

15th June 2021

13892_R02a_LS_CW

Report No:	Date	Revision	Author	Checked
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Summary

- S.1. This Arboricultural Impact Assessment has been prepared by Tyler Grange Group Limited (TG) on behalf of Aldi Stores Ltd to accompany a planning application for the extension of the current supermarket building and car parking alongside associated soft landscaping proposals. This report assesses the impact of the proposals on the existing surveyed tree stock and is informed by a baseline BS5837:2012 Tree Quality Survey of the site.
- S.2. The tree survey identified one tree and two groups of trees which are of moderate value (Category B) and seven trees and one tree group of low value (Category C).
- S.3. No trees onsite are subject to a Tree Preservation Order, Conservation Area or Ancient Woodland designation and no ancient or veteran trees were identified during the survey.
- S.4. The loss of nine internal trees within the car park area is required to facilitate the new travel arrangement and extension of parking to the north. This includes the loss of T1-T4 and G1 which are considered to be low to moderate value within the context, most of which are yet to hit full maturity.
- S.5. With the implementation of the new tree and shrub planting as part of the development's soft landscaping scheme, this will result in a net gain in tree cover of improved diversity to that of the current scenario. The proposals are therefore considered to accord with local and national planning policy as it relates to trees.



Section 1: Introduction

Purpose

- 1.1. This Arboricultural Impact Assessment has been prepared by TG on behalf of Aldi Stores Ltd to accompany a planning application at the current Aldi site on the south west side of the High Street, Merthyr Tydfil (hereby referred to as 'the site').
- 1.2. Full planning permission is sought for the extension of the current supermarket building and car parking alongside associated soft landscaping proposals. The layout of the proposed development is shown on the Proposed Site Plan included at **Appendix 1** to the rear of this report.
- 1.3. The application is to be submitted to Merthyr Tydfil County Borough Council. Local planning policy pertinent to trees and new development is set out at **Appendix 2** alongside the relevant national planning policy.
- 1.4. This report:
 - Provides the findings of a tree survey and the associated tree constraints towards the proposed development; and
 - Evaluates the effects of the proposed development on existing trees.
- 1.5. The tree survey and assessment has been guided by the recommendation set out within the British Standard 5837:2012 'Trees in relation to design, demolition and construction – recommendations' (BS5837) to accord with industry best practice.

Site Description

- 1.6. The site is located towards the south of the town of Merthyr Tydfil and is centred on National Grid Reference SO 05056 05648. The site boundary is demarcated by the red line as shown on the **Tree Constraints Plan** (TCP) located to the rear of the report.
- 1.7. The site comprises the current Aldi store with associated car parking and landscaping. The northern boundary is formed primarily by car parking along the High Street with several trees planted in a row along the northern edge of the car park (T1, T2, G1) behind a wall. Entrance into the site is from the east.
- 1.8. The vegetated corridor of the River Taff runs along the southern boundary with mature trees forming a green backdrop to the store when viewing it from the south. This tree cover extends from the river along the western boundary with more formal landscaping alongside the road infrastructure to the west (

Section 2: Baseline Information

- 2.1 The tree survey was completed by a suitably qualified Arboricultural Surveyor of Tyler Grange on 10th March 2021. The survey was completed in accordance with BS5837 and the methodology as detailed at **Appendix 3**. A measured topographical survey (supplied by others) was used to inform the location of trees and their surrounding context.
- 2.2 The distribution of the trees surveyed is illustrated on the TCP to the rear of this report together with details of their constraints to new development in accordance with BS5837, including:
- Tree Quality Gradings¹;
 - Root Protection Areas² (RPAs);
 - Tree Canopy Spreads³; and
 - Tree Shading⁴.
- 2.3 Findings for each of the trees surveyed are detailed in the Tree Survey Schedule (see **Appendix 4**). This provides a tabulated record of the trees surveyed, including; reference numbers, species composition, tree dimensions, life stage, physiological and structural condition, and the arboricultural value of each survey entry.

Tree Survey Summary

- 2.4 A total of eight individual trees and three tree groups were identified during the BS5837 Tree Quality Survey site visit. Findings for each of the trees are detailed in the Tree Survey Schedule found in Appendix 2 and their distribution is illustrated on the Tree Constraints Plan (TCP) located to the rear of this report.
- 2.5 The trees within the car park are standard street trees surrounded by hard landscaping where maintenance and works to lift lower canopies over pedestrian and vehicular use was evident. This has ensured a degree of structural well-being; however, there was evidence of decline in the majority of trees which was visible through deadwood and dieback within the upper crown as well as root and stem damage through general pedestrian mistreatment. This is all evidence that shows that the trees were struggling with the planting condition which was ultimately affecting their physiological and structural condition and therefore their life span and opportunity for retention.

¹ The value of arboricultural features surveyed in accordance with the methodology set-out in Appendix 3.

² A layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority. See further explanation at Appendix 3.

³ Dimensions of the trees crown spread and clearance from ground level. See further explanation at Appendix 3.

⁴ Shade cast by existing trees which may affect the availability of sunlight and daylight within a new development. See further explanation at Appendix 3.



Tree Grading Summary

- 2.6 The trees surveyed have been categorised using the 'cascade chart for tree quality assessment' (**see Appendix 4**) recommended by the BS5837. The grading system allows informed decisions to be made concerning the design and impact of the development in relation to the arboricultural value of the trees surveyed.
- 2.7 The category gradings for each survey is detailed in the table below:

Table 1: Category grading of arboricultural features

	Category U	Category C	Category B	Category A
Individual Trees	None	T1, T2, T3, T4, T6, T7, T8	T5	None
Groups of Trees	None	G2	G1, G3	None

Tree-related Designations

- 2.8 Following a background check of available Merthyr Tydfil County Borough Council online mapping (10th March 2021), the presence or absence of tree-related designations is detailed in the table below:

Table 2: Tree-related designations / tree reference numbers

Designation Type	TG Tree Reference Number (s)
Tree Preservation Order ¹	None
Conservation Area ²	None
Ancient Woodland ³	None
Woodland Habitat ⁴	None

¹ A Tree Preservation Order is an order made by a local planning authority in England to protect specific trees, groups of trees or woodlands in the interests of amenity. An Order prohibits the any works and damage to trees (with some exceptions) without the local planning authority's written consent. More information can be found online <https://www.gov.uk/guidance/tree-preservation-orders-and-trees-in-conservation-areas#tree-preservation-orders--general>

² Trees in a conservation area that are not protected by an Order are protected by the provisions in section 211 of the Town and Country Planning Act 1990. These provisions require people to notify the local planning authority, using a 'section 211 notice', 6 weeks before carrying out certain work on such trees, unless an exception applies. More information can be found online <https://www.gov.uk/guidance/tree-preservation-orders-and-trees-in-conservation-areas#tree-preservation-orders--general>

³ Ancient woods are areas of woodland that have persisted since 1600 in England and Wales, and 1750 in Scotland. The Magic Maps website <https://magic.defra.gov.uk/MagicMap.aspx> has been used to search for ancient woodland on or adjacent to a site.

⁴ Spatial data of woodlands identified under the Priority Habitat Inventory (England) Published by Natural England. The Magic Maps website <https://magic.defra.gov.uk/MagicMap.aspx> has been used to search for woodland on or adjacent to a site.



Section 3: Arboricultural Impact Assessment

- 3.1. This Arboricultural Impact Assessment has been undertaken to address the development proposals in relation to existing trees. The assessment is informed by a composite overlay of the tree survey information and proposed site plan which is shown on the **Arboricultural Method Statement** (Ref: 13892/P02a) located to the rear of this report.

Tree Retention and Removal

- 3.2. The removal of trees T1-T4 and G1 is required to facilitate the extension of the building and car park. These trees were categorised as low to moderate value and are yet to hit full maturity. G1 is a row of early mature trees that form a moderate value as a collective feature with individuals of lesser value. T1 and T2 are low value specimens on the ends of row G1 that are separated from the group and displaying physiological and structural defects. T3 and T4 are low value trees established in tree pits within in the central area of the car park. These trees also show evidence of decline with visible dieback in the upper crown and decay forming within the stem and around the base.
- 3.3. The trees proposed to be lost will be replaced with a street tree species that is fitting with the surrounding area and therefore the nature of the site will be preserved. Additional shrub and ornamental planting will bolster this tree planting to form the Green Infrastructure and create points of interest within the car park and at the entrance. The species identified have been chosen to give annual amenity interest as well as beneficial effects for pollinators to increase the biodiversity level of the site. The planting scheme is illustrated on the Soft Landscape Proposals that accompany the application (TG Ref: 13892/P03 - See appendix 1). 9 trees are proposed to be removed and replaced with 4 extra heavy standard trees (*Alnus incana* 'Aurea'), 3 large specimen shrubs (*Amelanchier lamarckii*) and 514 shrubs planted in 4 large beds. These beds are larger than what is existing and therefore the trees that are proposed have a better chance of establishing and reaching maturity due to the increased soil volume and rooting area. The shrubs surrounding the trees will also form a cohesive structure to provide natural protection from pedestrians and vehicles as well as retaining moisture and other physiological benefits that groundcover around trees provides.

Construction Mitigation for Retained Trees

- 3.4. It is necessary to demonstrate how the above and below ground structures of retained tree cover will be protected during the site preparation and construction phases of development in accordance with BS5837. Therefore, an Arboricultural Method Statement (See Plan 2) has also been prepared to discharge an applicable and suitably worded planning condition should consent be granted.
- 3.5. The AMS sets out a practical and robust methodology for the protection of retained trees for the site preparation and construction of the proposed development. It includes:
- Specification for tree protection fencing and ground protection;
 - Procedures for specialist construction techniques and sensitive excavation methods with the RPA's of trees T5-T8 (summarised below);



- Phasing of Work; and
- An auditable system of site monitoring

3.6. Should resurfacing work be required within the RPAs of T5-T7, the following procedures will be adopted to avoid damage to tree roots potentially present beneath the top layer surface:

- The top surface layer will be shattered by a small machine or hand-held breaker. No excavation using machines will surpass the top surface layer and into the sub-base where roots may be present.
- The sub-base will be retained in-situ for the new surfacing. Where the existing sub-base requires minor re-levelling or to be 'made-good', this must be undertaken by hand using hand-held tools only.
- All tree roots (if encountered) must be retained and not damaged where possible in the first instance.
- Where single roots smaller than 25mm require removal, they will be cleanly pruned back using a suitable sharp hand tool.
- Roots found over 25mm and where occurring as clumps will be not be immediately pruned back, the advice of the LPAs Tree Officer or a suitably qualified Arboriculturist must be sought to determine the roots' significance to tree health, and specify proceedings accordingly.
- Any exposed roots will be covered with top soil or a hessian sack to avoid root desiccation.

Conclusion

- 3.7. The site's tree cover is relatively typical of an urban setting and comprises trees within hard landscaping surrounding a car park. The tree stock is of low to moderate value with visible defects which provided evidence that several of the trees were not establishing well within their current setting and planting conditions.
- 3.8. T1, T2, T3, T4 and G1 are proposed to be removed to facilitate the extension of the car parking area. Loss of this vegetation will be compensated for by the provision of new tree and shrub planting within the soft landscape scheme to form a diverse GI network within the site, in line with Policy EnW1 relevant to enhancing biodiversity interests. This includes the provision of 4 extra heavy standard trees, 3 large specimen shrubs and 514 new shrubs within large planting beds that allow space for the trees to establish and hit full maturity.
- 3.9. The retained tree stock on the outskirts of the car park (T5-T7) will be protected through the implementation of our Arboricultural Method Statement in accordance with BS5837 to ensure the longevity and establishment of these trees.
- 3.10. Given the limited extent of removal of low to moderate value vegetation and the opportunity for new tree and shrub planting within ample space, a net-gain in vegetation cover will likely be achieved through the development.



Appendix 1: Proposed Soft Landscape Proposals



PLANTING SCHEDULE

TREES

Number	Species	Height	Girth	Specification
4 -	Alnus incana 'Aurea'	400-450cm	14-16cm	Extra Heavy Standard; Clear stem minimum 200cm; Double Staked
Total :4 -				

SPECIMEN SHRUBS

Number	Species	Height	Pot Size	Specification	Density
3 -	Amelanchier lamarckii	150-175cm	25-45L	Multi-stem; Bushy; 3 stems minimum	Counted
Total :3 -					

SHRUBS

Number	Species	Height	Pot Size	Specification	Density
22 -	Ceanothus 'Blue Mound'	20-30cm	2L	Branched; 4 breaks	3/m ²
40 -	Choisya 'Aztec Pearl'	20-30cm	2L	Bushy; 5 breaks	3/m ²
32 -	Cornus sanguinea 'Midwinter Fire'	40-60cm	2L	Branched; 3 breaks	4/m ²
49 -	Cornus stolonifera 'Flaviramea'	40-60cm	2L	Branched; 3 breaks	4/m ²
32 -	Elaeagnus ebbingei	40-60cm	2L	Branched; 3 breaks	2/m ²
44 -	Euonymus fortunei 'Emerald 'n' Gold'	20-30cm	2L	Bushy; 5 breaks	4/m ²
40 -	Hebe 'Amy'	20-30cm	3L	Bushy; 5 breaks	3/m ²
37 -	Hypericum 'Hidcote'	30-40cm	3L	Bushy; 5 breaks	3/m ²
10 -	Lavandula angustifolia 'Hidcote'	20-30cm	3L	Bushy; 5 breaks	2/m ²
5 -	Lonicera nitida 'Baggesen's Gold'	20-30cm	2L	Bushy; 3 breaks	3/m ²
70 -	Osmanthus burkwoodii	20-30cm	2L	Bushy; 3 breaks	4/m ²
37 -	Photinia fraseri 'Red Robin'	20-30cm	2L	Branched; 3 breaks	3/m ²
24 -	Pinus mugo	20-30cm	3L	Bushy	3/m ²
52 -	Pyracantha coccinea 'Red Cushion'	20-30cm	2L	Bushy; 3 breaks	3/m ²
20 -	Vinca minor 'Gertrude Jekyll'	20-30cm	2L	Several shoots; 5 breaks	5/m ²
Total :514 -					

SPECIFICATION NOTES

GENERAL

- Proposals to be read in conjunction with Architects and Engineers Drawings;
- All landscape operations to be in accordance with all relevant and current British Standard Codes;
- All stock (other than container grown) shall be planted between November 30th and 28th February. Planting operations shall be carried out in suitable open weather and all plants re-irrigated if lifted by frost during the contract. No planting shall take place in dry, hot and sunny weather or indeed of frost and snow are present, or in cold east winds, regardless of the stock specified
- Any plant material planted outside the recognised planting season (Nov-Feb), to be containerised stock and supplied at the sizes specified;

SOIL AND MULCH

- Where the landscape subcontractor is obliged to handle topsoil or scrape and remove topsoil (e.g. for any hard works constructed) store such topsoil on site, in an area agreed with the Employer, storing in heaps no greater than 2 metres high. Cover with sacking, or geotextile sheeting until used, to prevent excessive weed growth and drying. Any weed growth shall be removed before utilising the topsoil for fill through the application of suitable herbicides;
- Beds found to have inadequately broken up sub-grades, are prone to water-logging in wet periods, causing plants to die. Such beds should be reported immediately to the Site Manager, Surveyor, Design Manager and the Landscape Architect. Landscape Subcontractor's should allow for breaking up excavated bottoms, or piercing with an auger at 500mm centres, to ensure they are free draining; wherever there is any evidence of residual compaction or poor drainage;
- On site topsoil shall be as close as possible to BS3882:2015, but free from subsoil, clay and debris. Where a landscape subcontractor has concerns about the quality of on-site topsoil supplied by others, a representative sample should be sent to the consultant Landscape Architect for comment;
- Topsoil shall be evenly and thoroughly cultivated to depths as follows incorporating any specified ameliorates to full depths of cultivation;
- Extra Heavy Standard trees - Pits generally 1.2 x 1.2 metres square and 1 metres deep;
- Shrubs & Hedge Planting - 400mm deep;
- Backfill for trees with suitable topsoil mixed with 50 Litres of suitable non-peat based compost and slow release fertiliser as per manufacturers instruction. Fill to within 85mm of surface (soil level of grass adjacent);
- All planting areas to be covered with a 75mm depth of medium grade bark mulch.

PLANT MATERIAL TREATMENT

- All trees and shrubs are to be supplied from nurseries in the UK and to be of local provenance and to conform to BS3936 and the HTA 'National Plant Specification'. The consultant Landscape Architect is to approve the nursery selected by the Landscape Subcontractor for the supply of plants. The landscape subcontractor is responsible for the protection of plant material being hardened off or grown at their nursery and shall make good defects;
- Tree Stakes and Ties - Stakes to be pressure treated larch poles with RCO by 'PermaWood' or other similar and approved. The stakes shall be 700mm apart (each side of the root ball, taking care to avoid the root ball), with a half rounded cross brace positioned at the top of the posts (level and horizontal), nailed to the stakes with 2 No. galvanised nails at each end. Secure the stem to the tree using a rubber tie with spacing device or sackcloth (and several turns to form a good spacing knot) positioned 25mm maximum from the top of the post.

EXISTING TREES AND SHRUBS

- Existing trees to be retained shall be protected in accordance with the requirements and specifications set out in BS5857:2012 paragraph 6.2.2 figure 3 and BS7722 : Part 4 and shall be positioned in accordance with TG's Riboricultural Method Statement (15892_P02)

PROPOSED TREES

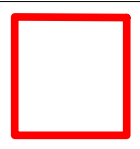
- Contractor to ascertain the location of all sewers and services prior to tree planting;
- No trees to be planted within 3 metres of sewers or services or other easement recommended by the relevant statutory undertaker without the use of tree root barriers. All tree pits with root barriers are subject to engineer's approval;
- Extra Heavy Standard Trees in soft landscape to be double staked and fixed in accordance with the tree pit detail.
- Where necessary increase tree pit dimensions to ensure that tree pits are at least 75mm deeper and 150mm wider than the rootball. Break up bottom of pits to a depth of 150mm. Compacted glazed sides of pits should be roughened;
- Cut back any broken or damaged roots to sound growth;
- Plant trees upright, in the centre of the pit and at original soil depth;

SHRUBS

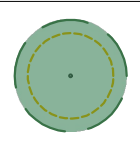
- Plant shrubs exactly in accordance with the landscape drawings. All non-perishable containers shall be removed and any damaged roots carefully pruned. Excavate planting holes 75mm wider than the root spread. Each plant shall be planted at it's correct depth, to the original soil or nursery mark, to BS4428:1989. Compost and sand additives shall be worked well into backfill whilst backfilling is in progress, taking care not to raise general levels of the soil so that bed edges are less than 65-80mm below the adjacent pavement edges;
- Gaps around the root ball shall be filled to half its depth and firmed by hand, but avoiding damage to the roots. Further soil can then be used to fill the voids to the surface and firmed by treading, taking care not to over firm and damage roots;
- Water in all plants within 2 hours of planting with 25 litres minimum per metre squared;
- Prune back leggy growth immediately after planting;
- Approved bark mulch to a depth of 75mm.

WATERING & MAINTENANCE

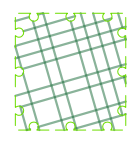
- All planting is to be watered and maintained up to Practical Completion and for a period of 12 months from that date. Any plant which dies, or is not thriving during this period is to be replaced.
- Remove all weed growth by hand as necessary to ensure weed free and tidy planting beds. Take great care not to disturb sheet or bark mulch. All weeds shall be removed from the site. Two visits are required per growing season where sheet mulch is specified, and 6 visits per growing season are required where no sheet mulch is specified. Visits should occur approximately monthly, subject to weather conditions.
- Remove all litter and debris at each visit, leaving the site clean and tidy. Firm in and straighten out plants loosened and prune out dead, leggy and broken branches, without damage to natural habit of the plant. In the case of trees, a suitably skilled and qualified arboriculturalist shall carry out such pruning. Tree stakes and ties shall be checked, adjusted and replaced as necessary. Prune hedges back to an even hedge line to encourage thickening, twice within the first growing season after planting.



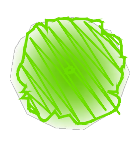
Site Boundary



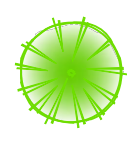
Existing Tree to be retained with associated RPA



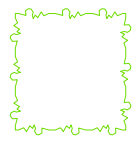
Existing Ornamental Shrub Planting Area to be retained



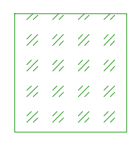
Proposed Tree



Proposed Specimen Shrub



Proposed Ornamental Shrub Planting Area



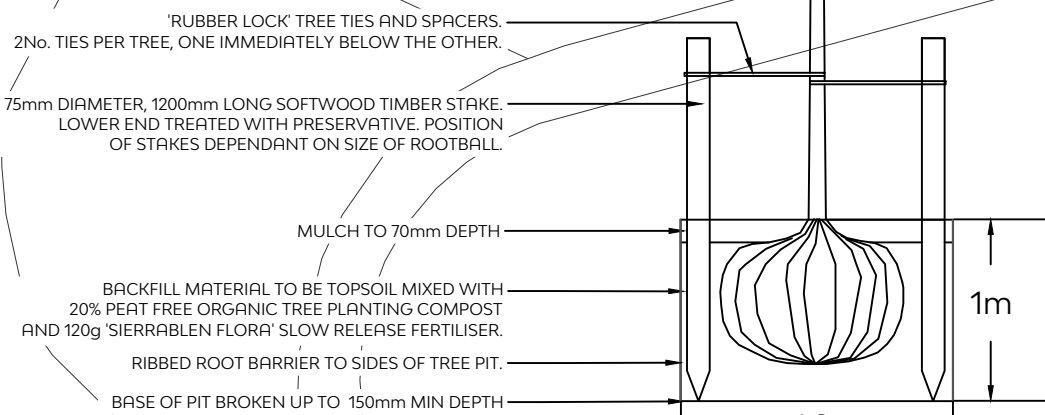
Proposed General Purpose Meadow Mix (Emorsgate EM2) Sowing Rate - 4g/m2

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EXTRA HEAVY STANDARD TREES IN SOFT LANDSCAPE AREAS
SCALE 1:25 @ A1



A Site boundary change 14.06.2021
Rev Description Date



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Project title
Aldi, Merthyr Tydfil

Drawing title
Soft Landscape Proposals

PLAN TO BE PRINTED IN COLOUR

Scale 1:200 @ A1
Date 14.06.2021

Drawn LS
Checked AW
CDM Review AW

Drawing number
13892_P03

Revision
A

Appendix 2: Planning Policy Context

- A2.1. Under the Town and Country Planning Act 1990 (as amended) the requirement to consider trees as part of development is a material planning consideration and will be taken into account in the determination of planning applications. Applicable arboricultural planning policy that relates to the site is set out below at a National and Local level.

National Planning Policy

- A2.2. The National Planning Policy Framework (NPPF) is a material consideration in planning decisions and outlines the Government's planning policies for England, setting out how these are expected to be applied. The consideration for existing trees and woodlands in the context of planning and new development is set out within Section 15 'Conservation and Enhancing the Natural Environment'.
- A2.3. Paragraph 170 provides a series of prerequisites to inform how planning policies and decisions should contribute to and enhance the natural and local environment. This includes "*protecting and enhancing valued landscapes*" and "*recognising the intrinsic character and beauty of the countryside*". The value of ecosystem services is also noted, including the "*economic and other benefits of the best and most versatile agricultural land, and of trees and woodland*".
- A2.4. Paragraph 170 also recognises the consideration for "*minimising impacts on and providing net gains for biodiversity*". This includes the need to establish cohesive ecological networks that are "*more resilient to current and future pressures*".
- A2.5. Paragraph 171 addresses the need to take a "*strategic approach to maintaining and enhancing networks of habitats and green infrastructure*" adding that plans should be made for the "*enhancement of natural capital at the catchment or landscape scale across local authority boundaries*".
- A2.6. Paragraph 174 includes ways in which biodiversity should be protected and enhanced, such as plans that "*identify, map and safeguard components of local wildlife-rich habitats*", as well as "*wildlife corridors and stepping stones that connect them*".
- A2.7. Paragraph 175 highlights a series of principles that local planning authorities should apply when determining planning applications, stating that "*if significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused*".
- A2.8. Paragraph 175 also adds that "*development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensatory strategy exists*".
- A2.9. At a national level, the consideration for trees is recognised in the context of their contribution to green infrastructure and biodiversity networks, and also in terms of their contribution in landscape terms to the local setting and character. Great weight is also applied to the importance of conserving existing aged trees, including ancient woodland and trees and trees considered to be 'veterans'. No ancient woodland, ancient trees or veteran trees were identified within influence of the application site and therefore para 175 is not considered applicable to the application as it relates to these features.



Local Planning Policy

A2.10. The site lies within the administrative remit of South Oxfordshire District Council. A summary of local planning policy relating to arboriculture is provided below.

South Oxfordshire Local Plan 2034

Policy ENV1 – Landscape and Countryside

A2.11. South Oxfordshire's landscape, countryside and rural areas will be protected against harmful development. Development will only be permitted where it protects and, where possible enhance, features that contribute to the nature and quality of South Oxfordshire's valued landscapes, in particular:

- i. Trees (including individual trees, groups of trees and woodlands), hedgerows and field boundaries.

Policy ENV8 – Conservation Areas

A2.12. Proposed development within or affecting the setting of a Conservation Area must conserve or enhance its special interest, character, setting and appearance.



Appendix 3: Methodology, Constraints, Mapping and Limitations

Field Work

- A3.1 In accordance BS5837, the tree survey included all trees within / in influence of the site and the site boundaries that were over 75mm diameter at breast height (1.5m). Measured topographical survey data (supplied by others) was used to inform tree locations their surrounding context. Any trees not identified on the topographical survey are prefixed with (*) and their locations have been approximated using measurements during the tree survey and further informed by aerial photography where required.
- A3.2 The trees surveyed were visually inspected from ground level only. No invasive investigations or climbing inspections were necessary to confirm visual or audible signs of defect or debility and no tissue or soil samples were undertaken. For further clarification please refer to the tree survey explanatory notes in below.

Tree Numbers

'T' prefixes have been used to identify individual trees and commence with 'T1'.

'G' prefixes have been used to identify groups of trees.

'H' prefixes have been used to identify hedgerows.

'W' prefixes have been used to identify woodlands.

Species

- A3.3 Species are listed by their common name, both in the schedule and in the report text.

Height and Stem Diameter

- A3.4 The stem diameter is measured at 1.5m above ground level and given in millimetres (mm). Tree heights are measured in metres (m) using a clinometer where access and land typography allowed. In instances where access to tree's stem and height measurements were not possible, the dimensions have been estimated by eye.

Crown Spread and Height of Crown Clearance

- A3.5 Radial crown spread is measured in metres and is listed for each of the four cardinal points where access has been possible to obtain a measurement. Where access was not possible to measure the spread of the canopy, such distances have been estimated by eye or informed by aerial photography.
- A3.6 The measured canopy shapes have been plotted on the **Tree Constraints Plan** at the four cardinal points. For groups of trees, the extent of the canopy has been measured as an average across the group and plotted using the topographical survey mapping. In some instances, Tyler Grange will use aerial photography to inform the canopy spread of larger tree groups and woodlands where topographical data is limited for such features.



- A3.7 The distance between the ground level and the first significant branch or radial tree crown, whichever is the lower, has been measured in metres.

Age Class

- A3.8 The age of each tree is defined as follows:

Young - within the first third of reaching full maturity;

Semi-Mature - within the second third of reaching full maturity;

Early-Mature - within the last third of reaching full maturity;

Mature - specimen at full maturity; and

Veteran – tree that, by recognised criteria, shows features of biological, cultural or aesthetic value that are characteristic of, but not exclusive to, individuals surviving beyond the typical age range for the species concerned.

Physiological and Structural Condition

- A3.9 The physiological or structural condition of each tree is defined as either; good, fair, poor or dead. For each tree, where appropriate, notes on the structural integrity are provided on form, taper, forking habit, storm damage, decay, fungi, pests, etc.

- A3.10 An assessment of a tree's physiological condition is defined as:

Good – fully functioning biological system showing expectant vitality for the species i.e. normal bud growth, leaf size, crown density and wound closure.

Fair – fully functioning biological system showing below average vitality i.e. reduced bud growth, smaller leaf size, lower crown density and reduced wound closure.

Poor – a biological system with limited functionality showing clear physiological decline, disease or significantly below average vitality i.e. limited bud growth, small and chlorotic leaves, low crown density and limited wound closure.

Dead – tree observed to fully dead with no living parts.

- A3.11 An assessment of a tree's structural condition is defined as:

Good – no significant structural defects.

Fair – structural defects which could be alleviated through remedial tree surgery or arboricultural management practices

Poor – structural defects which cannot be alleviated through tree surgery or arboricultural management practices.



Tree Quality Gradings

- A3.12 The value of trees have been assessed in accordance with the BS5837 Cascade Chart for Tree Quality Assessment (See **Appendix 4**). Grading subcategories (1, 2 and 3) reflect arboricultural, landscape and cultural values, respectively.

Root Protection Areas

- A3.13 The **Tree Constraints Plan** shows the approximate extent of Root Protection Areas (RPAs). The RPAs have been plotted and calculated in accordance with the methodology set out in Appendices C and D of BS5837, using the tree stem diameter dimensions obtained during the site visit.
- A3.14 Plotted RPAs serve as a layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority.
- A3.15 Where pre-existing site conditions or other factors indicate that rooting may occur asymmetrically, a polygon of equivalent area should be produced. Modifications to the shape of the RPA should reflect a soundly based arboricultural assessment of likely root distribution observed on-site. Any deviation in the RPA from the original circular plot should take account of the following factors whilst still providing adequate protection for the root system:
- a) the morphology and disposition of the roots, when influenced by past or existing site conditions (e.g. the presence of roads, structures and underground apparatus);
 - b) topography and drainage;
 - c) the soil type and structure; and
 - d) the likely tolerance of the tree to root disturbance or damage, based on factors such as species, age, condition and past management.
- A3.16 The plotted RPAs have therefore informed the design of the proposed development where possible. While developing within RPAs should be avoided, special working methods can be adopted to alleviate the RPA disturbance for cases where the development is considered necessary and unavoidable.

Tree Canopies and Shading

- A3.17 The distribution of tree canopy cover on and within influence of the site is illustrated on the **TCP**. Canopies have been plotted at cardinal points for individual and groups of trees. The Tree Survey Schedule included at **Appendix 5** to the rear of this report lists the vertical clearance from site ground level to significant tree branching of individual trees. This measurement informs the impacts of accessibility and development beneath tree canopies.
- A3.18 The principal tree shadow constraints are shown on the **TCP** and have been plotted in accordance with BS5837 using the current height of surveyed trees. The indicative shade cast by existing surveyed trees signifies the area within which the amenity interests of shading, available daylight and the proximity of trees to any future site uses may be impacted upon should a tree be retained as part of development.



A3.19 Where shading is unavoidable, the potential adverse impact of shadowing should also be reviewed on balance with the positive aspects of retaining a degree of canopy shade. BS5837:2012 (para. 5.3.4, a) NOTE 1) states that "shading can be desirable to reduce glare or excessive solar heating, or to provide comfort during hot weather. The combination of shading, wind speed/turbulence reduction and evapotranspiration effects of trees can be utilised in conjunction with the design of buildings and spaces to provide local microclimatic benefits".

Limitations

A3.20 The comments made are based on observable factors present at the time of inspection. Although the health and stability of trees in their current context is an integral part of their suitability for retention, it must be understood that this report is not a tree risk assessment and should not be construed as such. While every attempt has been made to provide a realistic and accurate assessment of the trees' condition at the time of inspection, it may have not been appropriate, or possible, to view all parts or all sides of every tree to fulfil the assessment criteria of a risk assessment.

A3.21 No tree can be considered entirely safe, given the possibility that exceptionally strong winds could damage or uproot even a mechanically 'perfect' specimen. It is therefore usually accepted that hazards are only recognisable from distinct defects or from other failure-prone characteristics of the tree or the site. An assessment of the potential influence of trees upon existing buildings or other structures resulting from the effects of trees upon shrinkable load-bearing soils or the effects of incremental root or branch growth, are specifically excluded from this report.

Un-assessable Risks

A3.22 Any alteration to the application site or development proposals could change the current circumstances and may invalidate this report and any recommendations made.

A3.23 The Wildlife and Countryside Act (WCA) 1981 (as amended) makes it an offence to disturb nesting birds or recklessly endanger a bat or its roost. Bats are also a European protected species and are additionally protected under the Conservation (Habitats & c) Regulations 1994 and 2010 (as amended). The survey findings, constraints, opportunities and design or mitigation recommendations included within that report must be read alongside this document.

A3.24 A lack of recommended work does not imply that a tree does not pose an unacceptable level of risk and likewise, it should not be implied that a tree will present an acceptable level of risk following the completion of any recommended work.



Appendix 4: BS5837 Cascade Chart for Tree Quality Assessment



Appendix 4: BS5837 Cascade Chart for Tree Quality Assessment

TREES FOR REMOVAL				
Category and Definition	Criteria			Identification on Plan
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 (i.e. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning).			DARK RED
	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)			
TREES TO BE CONSIDERED FOR RETENTION				
Category and Definition	Criteria - Subcategories			Identification on Plan
	1. Mainly Arboricultural Values	2. Mainly Landscape Values	3. Mainly Cultural Values, including Conservation	
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	LIGHT GREEN



TREES TO BE CONSIDERED FOR RETENTION

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 remedial defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation.	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural benefits.	MID BLUE
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 150mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories.	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or temporary/transient landscape benefit.	Trees with no material conservation or other cultural value.	GREY



Appendix 5: Tree Survey Schedule (Ref: 13892/TSS01)



Tree Number	Common Species Name	Height (m)	Trunk Diameter (mm)	Crown Spread (m)				Height of Crown Clearance (m)	Age Class	Physiological Condition	Structural Condition	BS5837 Category	Comments/Preliminary Management Recommendations	RPA Radius (m)	Root Protection Area (m2)
				N	E	S	W								
T1	Hornbeam	5.0	3x75	1.50	2.50	2.50	2.00	2.50	Early Mature	Fair	Fair	C.1.2	Multi-stem tree established within northern border, poor union structure and limited overall merit.	1.6	8
T2	Hornbeam	5.0	170	1.50	2.00	3.00	3.25	2.50	Early Mature	Fair	Fair	C.1.2	Established in northern border, deadwood throughout crown with stunted growth, buttress rooting evident, previously crown lifted.	2.0	13
T3	Alder	8.0	380	3.75	4.00	4.00	3.50	2.50	Mature	Fair	Fair	C.1.2	Established in car park, minor epicormic growth around base, bark peeling away from main stem, cavities and rot from previous crown lifting wounds, deadwood and dieback in upper canopy.	4.6	65
T4	Alder	8.0	280	3.75	2.50	3.00	3.50	2.50	Mature	Fair	Fair	C.1.2	Established in car park, minor epicormic growth around base with girdling roots visible, previously crown lifted.	3.4	35
T5	Hornbeam	8.0	280	3.50	4.00	2.00	3.00	2.50	Mature	Fair	Fair	B2	Established to west of car park, previously crown lifted, no significant defects noted.	3.4	35
T6	Hornbeam	6.0	220	2.00	2.75	2.50	2.75	3.00	Early Mature	Fair	Fair	C.1.2	Established to west of car park, previously crown lifted, no significant defects noted.	2.6	22
T7	Hornbeam	4.0	140	1.50	1.50	1.50	1.50	2.00	Semi mature	Fair	Fair	C.1.2	Established to west of car park, previously crown lifted, no significant defects noted.	1.7	9
T8	Cherry	9.0	300	4.50	5.00	3.00	4.00	3.50	Early Mature	Poor	Fair	C.1.2	Poor budding with deadwood and dieback throughout crown, wound around base with multiple lacerations from landscape works, previously crown lifted.	3.6	41

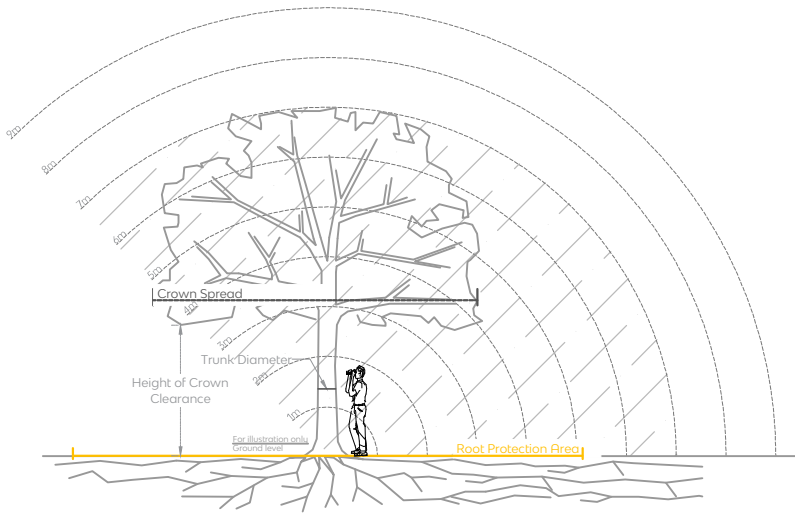
Tree Number	Common Species Name	Height (m)	Trunk Diameter (mm)	Crown Spread (m)				Height of Crown Clearance (m)	Age Class	Physiological Condition	Structural Condition	BS5837 Category	Comments/Preliminary Management Recommendations	RPA Radius (m)	Root Protection Area (m2)
				N	E	S	W								
G1	1xCherry, 4xHornbeam	7.0	220 av.	3.50	3.50	3.50	3.50	3.00	Early Mature	Fair	Good	B2	Tree line established within northern border, minor epicormic growth around base, previously crown lifted, moderate value as collective feature.	2.6	N/A
G2	Ornamental Pear 'Chanticleer'	4.0	75	1.50	1.50	1.50	1.50	2.00	Young	Good	Good	C.1.2	Young ornamental tree planting established within amenity area to west of site, no significant defects noted.	.9	N/A
G3	Alder	10.0	200	4.00	4.00	4.00	4.00	3.00	Semi-Mature to Mature	Fair	Good	B2	Stand of trees along river to south of site, no significant defects noted, moderate value as collective feature.	2.4	N/A

Plans:

Tree Constraints Plan (Ref: 13892/P01a)

Arboricultural Method Statement (Ref: 13892/P02a)





- Site Boundary
- Category B - Trees of Moderate Quality and Value
- Category C - Trees of Low Quality and Value
- Root Protection Areas
- Tree Shading Constraints

**Denotes trees and groups not identified on topographical survey. Locations approximated using measurements taken on site.*

This document should not be relied on or used in circumstances other than those for which it was prepared and for which Tyler Grange was appointed.

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A	Site boundary change	14.06.2021
Rev	Description	Date

**Tyler Grange**
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Project title	
Aldi, Merthyr Tydfil	
Drawing title	
Tree Constraints Plan	
Scale	1:500 @ A3
Date	14.06.2021
Drawn	LB
Checked	LS
CDM Review-	
Drawing number	Revision
13892_P01	A

ARBORICULTURAL METHOD STATEMENT

This Arboricultural Method Statement (AMS) has been prepared to accompany a full planning application for proposed development to Aldi, Plymouth Street, Methyr Tyfil.

Copies of this AMS must be available for inspection on site and all personnel must be made aware of the key implications of this AMS during the construction phase(s) of the development. The site manager and all other personnel must be provided with this document to ensure that:

- All requirements of this Tree Protection Scheme are adhered to
- The site manager and site personnel are updated of any approved changes or variations to this document (approval for alterations must be obtained in writing from the LPA);
- Site personnel must work in accordance with this document at all times, or in accordance with any approved variation; and
- The tree protection measures are left in place until the construction phase of development is completed, except with the written consent of the LPA.

TREE PROTECTION BARRIERS:

In order to protect the above and below ground features and characteristics of retained trees from damage during construction, tree protection fencing will be installed as illustrated by a **solid purple line**. The locations of tree protection barriers have been informed by the Root Protection Areas and canopies of retained trees and groups of trees. Tree protection barriers will be fully installed **before** the arrival of any plant or construction activity on-site. The barriers will serve to prohibit any access into the RPAs, and unless otherwise stated in this AMS, tree protection barriers will remain in place for the duration of construction work until is deemed completed. Tree protection fencing will consist of the default specification recommended within BS5837:2012, comprising a scaffold framework, well braced to resist impacts, with vertical tubes spaced at a maximum of 3m to add further stability. Onto this, weldmesh panels will be securely fixed with wire or scaffold clamps (see extract of BS 5837 - Figure A). Special attention is essential in maintaining the protective barriers during the construction, ensuring that it remains rigid and complete as well as fit for the purpose intended. To avoid disturbances to the protective barriers once installed, they will be inspected frequently, including during site visits by the project Arboriculturist. Repairs shall be made immediately where required.

GENERAL SITE PRECAUTIONS:

The following points must be observed during both advanced works and the construction process:

- No fires will be lit on-site;
- Cutting down, uprooting, damaging or otherwise destroying any retained tree is prohibited;
- No access will be permitted inside RPAs (unless authorisation is obtained in writing from the LPA);
- No materials, equipment or debris will be stored within the RPA at any time;
- If during construction, there are any excessive levels of dust build-up on retained trees then trees must be hosed down immediately with a clean water supply;
- Notice boards, telephone wires or other services must not be attached to any part of retained trees; and;
- Materials which will contaminate the soil (e.g. concrete, cement, chemical toilets, diesel oil, vehicle washings etc.) must not be permitted within, or close to RPAs of retained trees. Consideration must be given to any sloping ground on-site to ensure that contamination of soil in the RPA would not occur if there were spillage, seepage or displacement elsewhere on-site. To avoid any associated damage or injury occurring to the trees as a direct result of contact with contaminants, works including cement mixing, re-fuelling and tool or machine washing will not be permitted within 20m uphill of any retained tree.

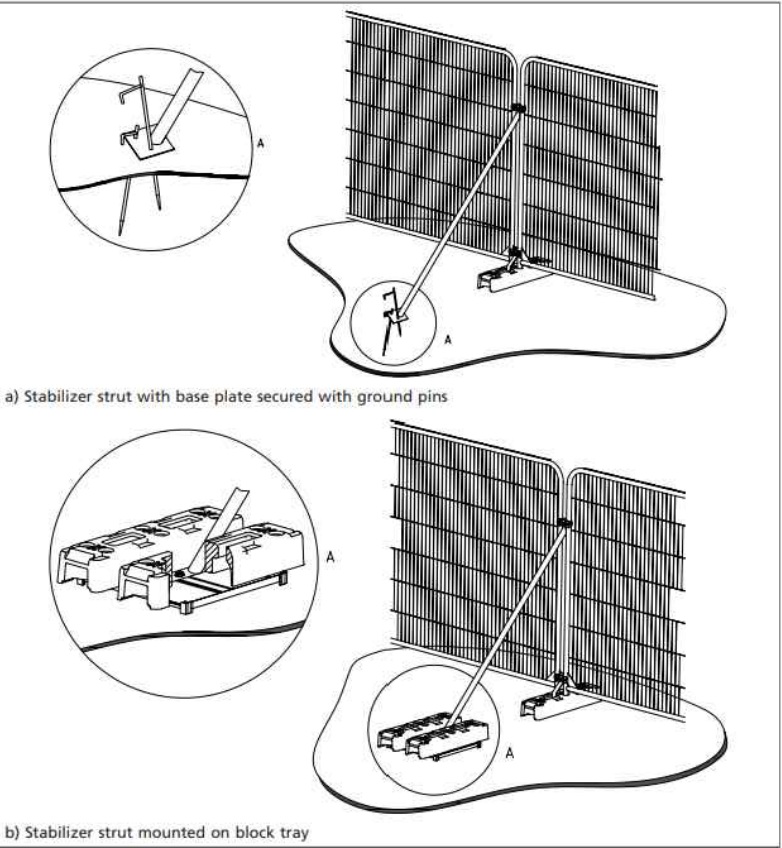
PROCEDURES FOR INCIDENTS:

If any breach of the approved tree protection measures occurs:

- The site manager must be informed immediately;
- The Local Planning Authority Tree officer (or other Planning Officer) must be informed, as well as the appointed project Arboriculturist at the earliest opportunity;
- Swift action must be taken to halt the breach and prevent any further breaches; and
- All preventative action and details of agreed remedial works must be recorded and reported to the LPA.

-  Site Boundary
-  Moderate Value Trees to be Retained
-  Low Value Trees to be Retained
-  Moderate Value Trees to be Removed
-  Low Value Trees to be Removed
-  Root Protection Areas
-  Existing hard-surfacing within plotted RPA
-  Tree Protection Barrier Locations

*Denotes trees and groups not identified on topographical survey. Locations approximated using measurements taken on site.



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A Site boundary change
Rev Description Date
14.06.2021

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Arboricultural Method Statement

Scale Date
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Checked JP
CDM Review-

Revision
A



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