Arboricultural Impact Assessment

Land at
Ysgol Morgan Llwyd
Cefn Road
Wrexham

Ref:
AIA/YMC/04/24
Revision A

Date:
5th February 2025

Commissioned by:
Mr N. Bateman
on behalf of
Wrexham County Borough Council

Prepared by
S. Shields

Shields Arboricultural Consultancy
T: **01691 657189**
M: **07989 626923**
Email: info@shieldsac.co.uk
59 Oakhurst Road Oswestry Shropshire SY11 1BL

Institute of Chartered Foresters
Registered Consultant

Shields Arboricultural Consultancy
Ref: AIA/YMC/04/24 Rev A
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T 01691 657189
M 07989 626923
Email: info@shieldsac.co.uk

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This Arboricultural Impact Assessment has been prepared in accordance with the protocols, standards and procedures set out in BS 5837: 2012 'Trees in relation to design, demolition and construction'.

Planning permission is being is to develop site to provide additional polytunnels and alter and extend the access track.

All trees on and immediately adjacent to the site have been surveyed and assessed following the recommendations of BS5837: 2012. The survey assessed eight individual trees, ranging in quality and amenity value from high (1) medium (4) to low (3).

The proposed development will not have a negative impact on any tree on the site..

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Date	Revision	
15th April 2024		Issued for site design
5th February 2025	A	Issued for planning

Institute of Chartered Foresters
Registered Consultant

T 01691 657189
M 07989 626923
Email: info@shieldsac.co.uk

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T 01691 657189
M 07989 626923
Email: info@shieldsac.co.uk

Instruction

1.1 Shields Arboricultural Consultancy received instructions from Mr N. Bateman on behalf of Wrexham County Borough Council to undertake an arboricultural impact assessment at the above location. The client or their agents may copy and distribute this report as required for applying for planning permission for or preparing any documents or plans for this or future applications at this site.

1.2 Planning permission is being sought to develop the site to provide additional classroom facilities, a site layout plan ref: 12117 Rev PO1 has been provided and is considered in this report.

Scope & Limitations

2.1 The purpose of the report is to assess the environmental and amenity values of all trees on or adjacent to the area affected by the proposed development and is based on a site assessment undertaken on 26th September 2023 by S. Shields, principal consultant Shields Arboricultural Consultancy. The report will assess the long-term contribution that the trees can make to the area and the arboricultural implications of retaining them and seek to find a satisfactory juxtaposition between the trees and the new development. The report will assess the potential impact that may arise as a result of the proposed construction works and make recommendations for protecting trees, hedges and shrubs where appropriate.

2.2 The report is prepared in accordance with the recommendations of the British Standard Document BS 5837: 2012 'Trees in Relation to Construction'.

2.3 This report is not an ecological assessment and does not identify habitats or constitute a protected species survey.

Statutory Controls & Obligations

3.1 Forestry Act; the felling of trees is controlled by the Forestry Act, which requires that a felling licence is obtained prior to cutting down any trees. The Forestry Act does not apply to the felling of trees growing within an orchard, private garden, churchyard or public open space. The Forestry Commission has the responsibility for enforcing the Forestry Act.

3.2 Tree Preservation Orders & Conservation Areas; Local Authorities have specific powers under the Town & Country Planning Act 1990 as amended, to protect trees through the use of Tree Preservation Orders. Where trees are protected under such orders it is a criminal offence (subject to any exemptions for which provision may be made by the act or order) to undertake, cause or permit the cutting down, topping, lopping, uprooting, wilful damage or wilful destruction of trees except with the consent of the local planning authority. Similar controls apply to all trees growing within a designated Conservation Area.

3.3 Bats, wild birds and other protected species; The Wildlife & Countryside Act & the Conservation (Natural Habitats & C.)

T 01691 657189
M 07989 626923
Email: info@shieldsac.co.uk

Regulations make it an offence to disturb or destroy bats and bat roosts and wild birds and their nests. Other species of plant and animal are also protected. These creatures often inhabit trees and sufficient care must be taken to ensure they are not affected during forestry and arboricultural works.

Site description

4.1 The proposed development site is located within the grounds of Ysgol Morgan Llwyd High School. The area was previously the site of Wrexham Council office buildings, but these have now been demolished and the site restored to grass, with the car park retained. Access to the site is via the main school entrance off Cefn Road.

4.2 The site extends to 1700m^2 and is level at an elevation of 85m AOD and is reasonably sheltered. The site is part hard standing and part soft landscape, set to grass with a group of trees in the southeast section.



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Soils

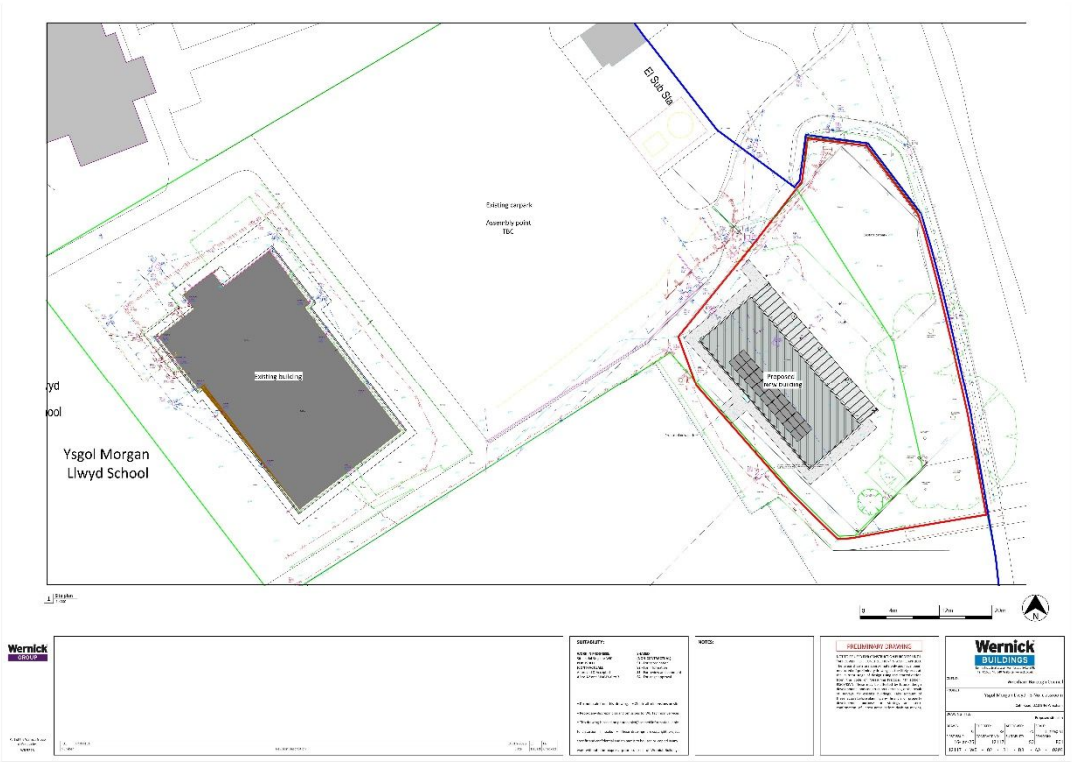
4.3 The site is relatively free-draining cultivated brown earth. Geological maps indicate deposits of sand and gravel over mudstone and siltstone. Th car park and adjacent highway would act as an impediment to root development and the previous structure would also have exerted and influence.

*NB. This soil assessment is undertaken in situ using visual and manual techniques and is **only** for the purpose of establishing the influence of site soils on tree growth. The assessment **must not** be relied upon to inform any engineering decisions.*

T 01691 657189
M 07989 626923
Email: info@shieldsac.co.uk

Development Proposal

5.1 Planning permission is being sought is to develop the site to provide an additional classroom facility.



Tree Survey Methodology

6.1 All trees within and adjacent to the site have been assessed where they are within 15 m of any area that may be disturbed as a result of the proposed development and have a stem diameter over 75mm at 1.5 metres. Measurements have been taken in accordance with the procedures and protocols set out in BS 5837: 2012 and the Forest Mensuration Handbook. Height measurements are approximate unless otherwise stated. Trees have been assessed as individuals, groups or woodlands as appropriate. Where access to trees has been restricted, either as a result of their situation on private land or where vegetation or ground conditions are unfavourable, an estimation of trunk diameter has been made. This entails using a set of callipers to approximate the measurement. Estimates are rounded up to provide a margin. This technique has only been used where there is a sufficient buffer between the RPAs and any area disturbed by development. Where trees are in woodlands or groups only the outside edge trees are assessed unless there are larger trees with RPAs or crowns that would overlap the edge trees.

6.2 BS 5837: 2012 provides the framework through which tree can be categorised in terms of their health, amenity value and long-term

T 01691 657189
M 07989 626923
Email: info@shieldsac.co.uk

viability for retention on a development site. There are four categories, A,B,C & U.

Category A: Trees of high quality with an estimated life expectancy of at least 40 years.

1 Trees that are particularly good examples of their species, or essential components of groups or formal arboricultural features.

2 Trees, groups or woodlands that provide a definite screening or softening effect to the locality in relation to views into or out of the site, or those of particular visual importance.

3 Trees, groups or woodlands of significant conservation, historical, commemorative or other value.

Category B: Trees of moderate quality with an estimated lifespan of at least 20 years.

1 Trees that might be included in a higher category but are downgraded because of impaired condition.

2 Trees present in numbers, usually as groups of woodlands that form distinctive landscape features.

3 Trees with clearly identifiable conservation or other cultural benefits.

Category C: Trees of low quality with an estimated lifespan of at least 10 years or young trees with a stem diameter below 150mm.

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

2 Trees present in groups of woodlands, but without this conferring on them significantly greater collective landscape value; and/or tree offering low or only temporary/transient landscape benefits.

3 Trees with no material conservation or other cultural value.

Category U: Trees in such a condition that their existing value would be lost within 10 years and which should, in the current context be removed for arboricultural reasons.

The most significant or valuable trees are placed in the categories, A & B. Site design should make provision to retain trees in these categories and most Local Planning Authorities will insist upon this (or in exceptional circumstances will require that significant compensation planting is incorporated into the design), whilst trees that should not be a constraint to development are recorded with a C category. Trees categorised as U are in a poor condition and should be removed prior to the commencement of work.

NB. Category U trees can have an existing of potential conservation value which it might be desirable to preserve.

6.3 Where trees are to be retained, it is necessary to ensure that they are suitably protected to avoid damage during the construction phase of

T 01691 657189
M 07989 626923
Email: info@shieldsac.co.uk

the development. It is also important to consider any long term implications, such as issues with shading or leaf litter that may arise as a result of tree retention.

6.4 To ensure that trees are not adversely affected by the construction works it is necessary to:

a. The avoidance of physical damage to the aerial parts of the trees (i.e. Impact and other damage to trunk and branches)

b. The avoidance of damage to retained trees as a result of the severance or other physical damage to their roots

c. Preserve of the character of the soil, through the avoidance of any activity that would cause it to become compacted or otherwise disturbed or disrupted, and to avoid contamination by potentially harmful substances

d. To ensure free gaseous exchange is permitted between the upper layers of soil and the atmosphere

e. To ensure adequate (but not excessive) water supply to the soil and hence to tree roots

This would normally be achieved by establishing an area, known as a construction exclusion zone (CEZ) around each tree. The CEZ is derived from the root protection area (RPA) and the crown spread of the tree. The RPA represents the area occupied by the tree's root system and is calculated for each tree based on its stem diameter and the ground conditions present taking account of and any impediment to rooting. The RPA should represent the most probable position of the tree's root system.

The CEZ must be considered sacrosanct and be maintained completely undisturbed. No construction should take place within this area and it should not be used for storage of materials or fuels. Access for vehicles machinery or personnel is prohibited and to ensure that it is not damaged by construction activity it must be suitably protected during the construction phase, using robust fencing or alternative ground protection methods, to prevent disturbance and damage occurring.

6.5 A rise or reduction in soil level can have major implications on the longevity and health of the trees. Minor changes (up to 100mm) can be tolerated in some cases, but is heavily dependent on tree species, condition and growing environment. Existing ground levels within RPAs should be respected as far as is reasonably practicable. The advice of the project arboriculturalist should be sought if level changes are required.

6.6 In addition to the implications that a new development may have for existing trees it is also important to assess any long-term issues or concerns that may arise as a result of retaining trees close to a new dwelling or structure. This can include problems associated with leaf litter and other debris that may fall from trees, the potential that a tree

T 01691 657189
M 07989 626923
Email: info@shieldsac.co.uk

has to cause damage to a structure in the future, any on-going maintenance requirements that may arise and the level of shade that the tree may cast, it is particularly important to consider the effects of shading where trees are to the south of houses and gardens. Trees can also cause feelings of apprehension to the occupiers of nearby buildings and can have an over-bearing impact on a property if adequate space is not provided.

6.7 Buffer zones and structural stand-offs are advised for continuous canopy tree groups and woodlands along with trees and woodlands of high value. These zones are influenced by numerous factors beyond the provision of sufficient space for future growth. Depending on the development objectives these can include the provision of a safe falling distance for edge trees, prevention of overshadowing, provision of an ecological buffer zone, prevention of fragmentation of group/woodland compartments, and prevention of direct tree root or habitat damage. The following text is taken from the Standing Advice produced by the Forestry Commission and Natural England as included in the National Planning Policy Guidance:

'*A buffer zone's purpose is to protect ancient woodland and individual ancient or veteran trees. The size and type of buffer zone should vary depending on the scale, type and impact of the development'.*

Ancient woodland buffer

'For ancient woodlands, you should have a buffer zone of at least 15 metres to avoid root damage. Where assessment shows other impacts are likely to extend beyond this distance, you're likely to need a larger buffer zone. For example, the effect of air pollution from development that results in a significant increase in traffic'.

Ancient and veteran tree buffer

'A buffer zone around an ancient or veteran tree should be at least 15 times larger than the diameter of the tree. The buffer zone should be 5m from the edge of the tree's canopy if that area is larger than 15 times the tree's diameter'.

6.8 The report assesses all trees with regard to their size, position and natural characteristics, and taking into account of their future growth makes provides recommendations as to their long-term suitability for retention.

Arboricultural Assessment

7.1 Full details of the tree surveyed are provided in appendix A. and their relative positions, crown spreads, root protection areas are indicated on the attached plans.

7.2 No checks have been undertaken to establish the status of the trees with regards to Tree Preservation Orders or Conservation Areas, however all the trees may be subject to the Forestry Act (see section

T 01691 657189
M 07989 626923
Email: info@shieldsac.co.uk

3.1) and some hedges subject to the Hedgerow regulations (see section 3.3). No trees or hedges should be felled, lopped, topped or in otherwise removed or damaged without prior permission from the relevant authority.

7.3 The survey recorded eight individual trees which are categorised as follows:

Category	Quantity
Category A: Trees of high quality with an estimated life expectancy of at least 40 years.	**1**
Category B: Trees of moderate quality with an estimated lifespan of at least 20 years.	**4**
Category C: Trees of low quality with an estimated lifespan of at least 10 years or young trees with a stem diameter below 150mm.	**3**
Category U: Trees in such a condition that their existing value would be lost within 10 years and which should, in the current context be removed for arboricultural reasons. NB. Category U trees can have an existing of potential conservation value which it might be desirable to preserve.	**0**

Arboricultural merits and the significance of the trees in the landscape

7.4 The site is situated on the eastern edge of the town, with the landscape to the west characterised by urban planting and the to the west by agricultural land with scattered trees, hedgerows and small woodlands.

7.5 There are a number of trees on the site that form a visually and aerodynamically cohesive group. These trees link with trees to the south and east.

Veteran Trees, Ancient Woodlands, Protected Trees

7.6 Trees that are particularly notable as high value trees such as ancient trees/woodland or veteran trees. Such trees may be regarded as the principal arboricultural features of a site and pose a significant constraint to potential development.

An ancient tree is one that has passed beyond maturity and is very old compared with other trees of the same species. Very few trees reach the ancient life-stage.

Veteran trees are often very old but not necessarily so; they may be regarded as ‘survivors’ that have developed some of the characteristic features of an ancient tree but have not necessarily lived as long. All ancient trees are veterans but not all veteran trees are ancient.

An ancient woodland is an area that has been wooded continuously since at least 1600 AD. It includes ancient semi-natural woodland

T 01691 657189
M 07989 626923
Email: info@shieldsac.co.uk

(ASNW), plantations on ancient woodland sites (PAWS) and ancient replanted woodland (ARW).

7.7 A search of the ancient tree inventory https://ati.woodlandtrust.org.uk/ and the Lle database Lle - Ancient Woodland Inventory 2021 (gov.wales) indicate that there are no areas of ancient woodland or veteran or ancient trees on or adjacent to the site.

Canopy Cover and Arboricultural Resource Characteristics

7.8 There are reasonable levels of canopy cover across the wider area and the trees on the site contribute to this tree cover.

Pests and Diseases

7.9 Tree pests and diseases are part of a balanced ecosystem and dead, dying and diseased wood is a natural process providing an important contribution to habitat biodiversity. However, in recent years there have been an increasing number of new and serious pests and diseases affecting tree populations across the UK and regular monitoring is essential to check for their presence. Chalara dieback of Ash, Acute/Chronic Oak Decline, Horse Chestnut Bleeding Canker and Phytophthora, are now widely established. These diseases can kill or weaken trees quite rapidly and it will be important to carefully monitor them in order to inform management decisions over the coming years. It will also be important in relation to public safety where dead or dying trees are in proximity to road, footpaths and property.

Wider benefits of Trees

7.10 There is a growing body of evidence that trees bring a wide range of benefits to the places people live.

Some Economic benefits of trees include:

- Trees can increase property values
- As trees grow larger, the lift they give to property values grows proportionately
- They can improve the environmental performance of buildings by reducing heating and cooling costs, thereby cutting bills
- Mature landscapes with trees can be worth more as development sites
- Trees create a positive perception of a place for potential property buyers
- Urban trees improve the health of local populations, reducing healthcare costs

Some Social benefits of trees include:

- Trees help create a sense of place and local identity
- They benefit communities by increasing pride in the local area
- They can create focal points and landmarks

T 01691 657189
M 07989 626923
Email: info@shieldsac.co.uk

- They have a positive impact on people's physical and mental health
- They can have a positive impact on crime reduction

Some Environmental benefits of trees include:

- Urban trees reduce the 'urban heat island effect' of localised temperature extremes
- They provide shade, making streets and buildings cooler in summer
- They help remove dust and particulates from the air
- They help to reduce traffic noise by absorbing and deflecting sound
- They help to reduce wind speeds
- By providing food and shelter for wildlife, they help increase biodiversity
- They can reduce the effects of flash flooding by slowing the rate at which rainfall reaches the ground
- They can help remediate contaminated soil

On new development sites:

Trees bring many benefits to new development. Where retained successfully they can form important and sustainable elements of green infrastructure, contribute to urban cooling and reduce energy demands in buildings. Their importance is acknowledged in relation to adaptation to the effects of climate change. Other benefits brought by trees include:

- Increasing property values
- Visual amenity
- Softening, complementing and adding maturity to built form
- Displaying seasonal change
- Increasing wildlife opportunities in built-up areas
- Contributing to screening and shade
- Reducing wind speed and turbulence

Policy Considerations

7.11 Section 6.4.24 – 6.4.26 of Planning Policy Wales states that:

'Trees, woodlands, copses and hedgerows are of great importance for biodiversity. They are important connecting habitats for resilient ecological networks and make a valuable wider contribution to landscape character, sense of place, air quality, recreation and local climate moderation. They also play a vital role in tackling the climate emergency by locking up carbon, and can provide shade and shelter, a sustainable energy source and building materials. The particular role, siting and design requirements of urban trees in providing health and well-being benefits to communities, now and in the future should be promoted as part of plan making and decision taking.'

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M 07989 626923
Email: info@shieldsac.co.uk

'Planning authorities should protect trees, hedgerows, groups of trees and areas of woodland where they have ecological value, contribute to the character or amenity of a particular locality, or perform a beneficial and identified green infrastructure function. Planning authorities should consider the importance of native woodland and valued trees, and should have regard, where appropriate, to local authority tree strategies or SPG. Permanent removal of woodland should only be permitted where it would achieve significant and clearly defined public benefits. Where woodland or trees are removed as part of a proposed scheme, developers will be expected to provide compensatory planting.'

'Ancient woodland and semi-natural woodlands and individual ancient, veteran and heritage trees are irreplaceable natural resources, and have significant landscape, biodiversity and cultural value. Such trees and woodlands should be afforded protection from development which would result in their loss or deterioration unless there are significant and clearly defined public benefits; this protection should prevent potentially damaging operations and their unnecessary loss. In the case of a site recorded on the Ancient Woodland Inventory, authorities should consider the advice of NRW. Planning authorities should also have regard to the Ancient Tree Inventory.'

'The protection and planting of trees and hedgerows should be delivered, where appropriate, through locally specific strategies and policies, through imposing conditions when granting planning permission, and/or by making Tree Preservation Orders (TPOs). They should also be incorporated into Green Infrastructure Assessments and plans.'

7.12 The Wrexham Unitary Development Plan Policy EC4 – Hedgerows, Trees and Woodland advises that

'Development proposals should provide for the conservation and management of hedgerows, trees, orchards, woodland, wildlife and other natural landscape and water features, and include new planting in order to enhance the character of the landscape and townscape. Development which results in the loss or significant damage to valuable trees, important hedgerows or ancient woodland sites will not be permitted.'

This policy should be considered with reference to Local Planning Guidance Note 17 'Trees & Development' Local Planning Guidance Note No 17 - Trees and Development (wrexham.gov.uk).

Design Considerations

7.13 The site design should, where possible, seek to incorporate all significant trees and features, into the layout and provide space for the planting of new trees where required to mitigate the effects of the development. In this case the notable feature is the wooded area to the south.

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M 07989 626923
Email: info@shieldsac.co.uk

7.14 The starting point of Site Layout Design should be to avoid the RPA of retained trees and provide suitable clearance from above ground constraints [tree canopies]. Where possible building lines should be at least 2m outside the RPA to provide working space for construction. However, protection measures can be taken if such clearance is not achievable.

7.15 Where intrusion within the RPA is unavoidable then its impact on the tree can be mitigated by specialist measures such as foundations that avoid trenching e.g. screw piles, suspended floor slabs or casting at ground level for lightweight structures such as bin and cycle stores.

7.16 Limited use may be made for parking, drives or hard surfaces within the root protection areas, subject to advice from a qualified arboriculturist. Cellular confinement systems and bridging systems that enable hard surfaces to be built above existing soil levels are acceptable methods subject to site-specific soil conditions.

7.17 Service runs should be routed outside RPAs of trees, where this cannot be achieved, a specialist method of installation can be used, for example, thrust boring, directional drilling, air excavation or hand digging. These operations often require supervision by the project arboriculturist.

7.18 Where tree loss is unavoidable, replacement planting can ensure the continuity of tree cover where tree removal is unavoidable or desirable. Off-site provision may be considered in some circumstances but this will require negotiation with the local planning authority.

7.19 In addition to ensuring that the trees are not damaged by the construction process, consideration should also be given to the future implications associated with the retention of the trees in terms of their influence on the new development. To ensure a harmonious relationship between the trees and the proposed new land use it is necessary to allow adequate separation between the retained trees and occupied buildings so that they do not exert an overbearing influence or are so close as to promote worries about tree safety and avoid problems associated with leaf litter and shading.

7.20 It is particularly important to consider the effects of shading where trees are to the south of houses, gardens or other areas that require reasonable levels of sunlight and daylight. Ideally, the layout should take account of existing retained trees and any new planting, with consideration to their ultimate size and density of the foliage and that garden areas should be designed to meet the normal requirement for direct sunlight for at least part of the day. Building Research Establishment guide to good practice (BR209) Site Layout Planning for Daylight and Sunlight advises that, in order to appear reasonably sunlit a dwelling should have at least one main window wall that faces within 90° of due south and that on this wall, all points on a line 2m above ground level are within 4m of a point which receives at least a quarter of the annual probable sunlight hours. The guide also advises that for gardens to appear adequately sunlit, at least half the area should

T 01691 657189
M 07989 626923
Email: info@shieldsac.co.uk

receive no less than 2 hrs of sunlight on 21st March, although this recommendation is for shade cast by buildings and not that cast by trees, which can be less oppressive.

7.21 To ensure that trees do not become overbearing or exert a dominating effect it may be necessary to provide a structural stand-off, particularly where trees are large or in groups or woodlands and any residential dwelling or permanently occupied building. It is advised that no residential property be sited within a distance equivalent to 50% of the mature height of a tree (see Appendix A), which should be increased to 60% if the tree is directly to the south of a property. There should also be a distance of at least 1.5 metres from the edge of the crown to the building at the closest point, this must take account of the ultimate spread of the tree. No more than 40% of a garden area should be beneath the crown of a tree, and the remaining area should not be shaded by the tree.

Arboricultural Impact

Impact	Category A	Category B	Category C	Category U
Tree Removal				
Facilitative Pruning Required				
RPA Encroachment				
Potential Shading				
Proximity Issues				

7.22 The proposed development can be undertaken without negatively impacting on any tree retained on the site..

Sustainability

7.23 In respect of trees, a sustainable development will be one whereby the total number, value or function provided by trees is maintained or increased or where the long-term prospects of the existing tree stock can be substantially improved. Key principles will include, the right tree species selection, providing beneficial conditions for healthy tree establishment and regular and appropriate management.

Arboricultural Operations

Permission to remove any tree must be obtained from the Local Planning Authority and must not be undertaken until a Full Planning Permission has been granted and all pre-commencement conditions have been discharged. In cases where trees are protected by Tree Preservation Orders or Conservation Areas additional consent may be required.

T 01691 657189
M 07989 626923
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8.1 The proposal may require the removal/pruning of trees/hedgerows and subject to obtaining any required permissions it is recommended that the work should be undertaken by a suitably qualified person, holding public liability insurance for the sum of £5,000 000. All operators must hold relevant NPTC certificates. A site-specific risk assessment must be prepared and operators must work to a health and safety method statement. The use of Arboricultural Association Approved Contractors www.trees.org.uk/find-a-professional/Directory-of-Tree-Surgeons is recommended.

8.2 The contractor undertaking the work is responsible for any loss or damage arising as a result of the operations and agrees to indemnify the owner against such occurrences.

Arboricultural Method Statement

9.1 This arboricultural method statement (AMS) sets out the details of tree protection measures afforded to the retained trees on and adjacent to the site.

9.2 This AMS should be read in conjunction with the Tree Protection Plan ref: YMC/TPP/OL/04/24. The TPP indicates the construction exclusion zone (CEZ) that must be maintained around each retained tree. These areas must remain undisturbed during the construction process and must be protected using suitable fencing or ground protection as specified.

9.3 Copies of the TPP & the AMS must be available on-site and all tree protection requirements must be explained to all persons undertaking activities on the site during the site induction process.

9.4 All general tree protection measures must be installed and inspected prior to bringing onto the site any plant, materials or equipment or undertaking any construction works or demolition or any arboricultural works. The LPA must be informed in writing once the tree protection measures are installed.

9.5 The site is to be inspected by the consulting arboriculturalist following the schedule of inspections (see section 10.17).

9.6 All measurements are given in metric using standard abbreviations.

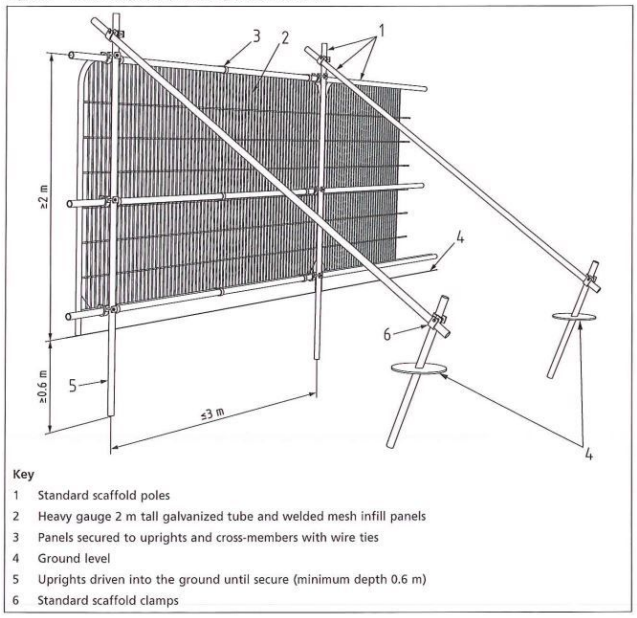
Fencing and Ground Protection

9.7 The TPP indicates the position all protective fences.

9.8 Protective fencing will comprise herras fencing, securely fixed into place and braced to resist impact, or as otherwise agreed with the Local Planning Authority.

T 01691 657189
M 07989 626923
Email: info@shieldsac.co.uk

Figure 2 **Default specification for protective barrier**



Key
1 Standard scaffold poles
2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
3 Panels secured to uprights and cross-members with wire ties
4 Ground level
5 Uprights driven into the ground until secure (minimum depth 0.6 m)
6 Standard scaffold clamps

Figure 3 Illustration of Tree Protection Barriers/Fencing

9.9 Ground protection, if required will consist of a proprietary system such as Ground Guard protective plates, for loads up to 40 tonnes.

9.10 The protective fencing and ground protection must be inspected on installation and will remain in place until completion of the construction phase and then only removed with the consent of the LPA.

9.11 Other than works approved in writing by the LPA, no works including storage or dumping of materials shall take place within the exclusion zones defined by the protective fencing.

General Precautions

9.12 No materials that are likely to harm tree health such as oil, bitumen or cement will be stored or discharged within 10m of the trunk of a tree that is to be retained or within any part of the CEZ. Spills kits, suitable for the type fluids, fuels and chemicals stored on site must be available on site and site operatives must have training in their use.

9.13 No fires will be lit within 20m of the trunk of any tree that is to be retained.

9.14 Storage and mixing areas, contactor parking and all site huts must be outside the CEZ.

9.15 Access to the work area is via the main site entrance and must not traverse the CEZ.

9.16 All service and drainage routes, below or above ground must avoid the CEZ. All services are to be installed in accordance with NJUG volume 4 Guidelines.

9.17 To ensure that all tree protection measures are properly installed and maintained the site shall be monitored by Shields Arboricultural Consultancy to the following schedule. Details of the findings and

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M 07989 626923
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photographic evidence of the site inspection visits will be reported to the LPA by email within 24 hrs of the visit. All tree protection measures must remain in place until development work is completed and only removed after receiving written confirmation from the LPA.

Schedule of Inspection

1. TBA

9.18 Prior to the commencement on site of any work, a competent person is to be appointed to monitor the day to day activities on site. In the case of a tree being damaged or where an unexpected event arises it will be for this person to contact Shields Arboricultural Consultancy to seek advice on contingency measures.

Conclusion

10.1 The proposed development will not have a negative impact on any tree on the site.

S.J.A. Shields

Uni Cert For. & F.P. (Bangor)
P. Dip. Arb. (RFS), MSc. Arb. & Urban For. (UCLan)
M.Arbor.A, MICFor.
Chartered Forester

5th February 2025

T 01691 657189
M 07989 626923
Email: info@shieldsac.co.uk

Arboricultural Assessment

Ref. No.	Species	Top Height	Stem Dia mm	N	E	S	W	CC	Age	Rem Cont	Cat.	RPA m^2	Notes	AIA
T1	Betula pendula (Silver Birch)	17	510	4	1.5	4.6	5.7	1	M	20+	B2	118	**Condition:** Good **Notes:**	Forms aerodynamic and visual group with other trees T2 – T9. The group is an important element of the street scene and landscape and character of the area. Group links with trees to the south.
T2	Betula pendula (Silver Birch)	18	360	5	3.9	2.2	5.6	4	OM	20+	B2	59	**Condition:** Fair **Notes:**	As T1
T3	Aesculus hippocastanum (Horse Chestnut)	18	800	9	7	7	6.2	2	M	20+	B2	290	**Condition:** Fair **Notes:** Early indications of bleeding canker.	As T1
T4	Fagus sylvatica (Beech)	18	1,150	7	7	7.8	5.5	1	M	40+	A2	598	**Condition:** Good **Notes:** RPA influenced by adjacent highway and area of hard standing to north.	As T1

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T5	Betula pendula (Silver Birch)	19	640	8	5.2	7.2	7.4	2.5	OM	20+	B2	185	**Condition:** Fair **Notes:**	As T1
T6	Acer pseudoplatanus (Sycamore)	5	210	3	3	3	3	0	M	20+	C1	20	**Condition:** Good **Notes:**	Minor specimen that is part of the background landscape without conveying any specific amenity value to the area.
T7	Ulmus glabra (Wych Elm)	19	700	4	7	5.3	5	7	M	10+	C2	222	**Condition:** Fair **Notes:** Minor component of group of trees, vulnerable to DED. RPA influenced by adjacent highway.	As T1
T8	Prunus avium (Wild Cherry)	9	190	3	3	3	3	1	EM	10+	C1	16	**Condition:** Good **Notes:** Minor component of group of trees.	As T1

Ultimate Heights of Main Species

Birch 19 Beech 18 Horse Chestnut 18

T 01691 657189
M 07989 626923
Email: info@shieldsac.co.uk

Notes

BS 5837: 2012 provides the framework through which tree can be categorised in terms of their health, amenity value and long-term viability for retention on a development site. There are four categories, A,B,C & U.

Category A: Trees of high quality with an estimated life expectancy of at least 40 years.

1 Trees that are particularly good examples of their species, or essential components of groups or formal arboricultural features.
2 Trees, groups or woodlands that provide a definite screening or softening effect to the locality in relation to views into or out of the site, or those of particular visual importance.
3 Trees, groups or woodlands of significant conservation, historical, commemorative or other value.

Category B: Trees of moderate quality with an estimated lifespan of at least 20 years

1 Trees that might be included in a higher category but are downgraded because of impaired condition.
2 Trees present in numbers, usually as groups of woodlands that form distinctive landscape features.
3 Trees with clearly identifiable conservation or other cultural benefits.

Category C: Trees of low quality with an estimated lifespan of at least 10 years or young trees with a stem diameter below 150mm.

Category U: Trees in such a condition that they cannot realistically be retained as living in the context of the current land use for longer than 10 years. *NB. Category U trees can have an existing of potential conservation value which it might be desirable to preserve.*

Bat potential has been assessed in accordance with the guidance provided in BS 8596:2015 and is at the level of a non-specialist scoping survey. This assessment is for preliminary advice and does not negate the requirement for a specialist ecological survey

Institute of Chartered Foresters
Registered Consultant

T 01691 657189
M 07989 626923
Email: info@shieldsac.co.uk

Key

Tag No	Identification number for tree	**Species**	Species of tree
Top Height	Estimated height of tree	**Stem Dia.**	Diameter of stem at 1.5 metres
Stems	Number of stems	**N, E, S, W**	Crown spread at compass points
CC	Crown Clearance	**FSB**	Direction of first significant branch
Rem. Cont	Remaining safe life expectancy in years	**RPA**	Root protection area in m^2
Cat.	BS Category (see above)	**AIA**	Arboricultural Implication Assessment

Age	**Y -**	Young Trees
	SM	Semi Mature
	EM	Early Mature
	M	Mature
	LM	Late Mature exceeds normal life expectancy for species
	VET	Veteran Tree
Condition	**Good**	Relatively free from defects and / or major pests and diseases
	Fair	Some defects, which could be addressed through tree surgery or minor pests or early symptoms of diseases
	Poor	Substantial defects or terminal decline
	Dead	Dead
Abbreviations	*	Maximum
	#	Average
	e	estimate

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North

El Sub Sta

Tank

T4-A2

T5-B2

ED Bdy

T2-B2

T3-B2

T1-B2

T7-C2

T8-C1

T6-C1

Shields Arboricultural Consultancy

Tree & Woodland Management Solutions

Tree Constraints Plan

Land at
Ysgol Morgan Llwyd

Wrexham

Key

- Tree Cat A
- Cat B Tree
- Cat C Tree
- Tree Cat U
- Canopy Spread
- RPA
- RPA Cat C

Drawing No: YMC/TCP/04/24/

Drawn By: S. Shields

Scale: 1:200 @ A2

Date: 15th April 2024

Revision:

Do not scale from this drawing all dimensions to be checked on site
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North

Sub Sta

Existing carpark

Proposed
New building

Proposed new path

T1-B2

T2-B2

T3-B2

T4-A2

T5-B2

T6-C1

T7-C2

T8-C1

Shields Arboricultural Consultancy

Tree & Woodland Management Solutions

Tree Constraints Plan
Overlay
Land at
Ysgol Morgan Llwyd

Wrexham

Key

- Cat A Tree
- Cat B Tree
- Cat C Tree
- Cat U Tree
- Tree Canopy Spread
- RPA
- RPA Cat C

Drawing No: YMC/TCP/OL/04/24/

Drawn By: S. Shields

Scale: 1:200 @ A2

Date: 5th February 2025

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North

Sub Sta

Existing carpark

Proposed
New building

Proposed new path

T1-B2

T2-B2

T3-B2

T4-A2

T5-B2

T6-C1

T7-C2

T8-C1

Shields Arboricultural Consultancy

Tree & Woodland Management Solutions

Tree Protection Plan
Overlay
Land at
Ysgol Morgan Llwyd

Wrexham

- Cat A Tree
- Cat B Tree
- Cat C Tree
- Cat U Tree
- CEZ
- Precautionary Area
- Tree Protection Fencing

Drawing No: YMC/TPP/OL/04/24/

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