

Arboricultural Assessment Survey 2019



Arboricultural Assessment of trees within boundary of Edwardsville School, Edwardsville, Merthyr Tydfil.

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1.0 Introduction

- 1.1 The following report has been commissioned by Merthyr Tydfil County Borough Council Parks department. Its aims to provide a health and safety report and provide viability for tree retention within the boundaries of Edwarsville Primary School, Edwarsville, Merthyr Tydfil.
- 1.2 The report is aimed at creating a balance between existing trees and existing land uses. In particular regarding the maintenance of trees to preserve, protect and prolong tree cover within the school. It will create a catalogue of existing trees for management strategies, recommendations for improvements to specimens and stock.
- 1.3 The trees in question will be individually assessed for physiological and structural conditions and appropriate strategies drawn for sustainable tree management, whilst maintaining the volume of trees and tree cover in the area. Whilst every healthy tree would ideally be retained, other factors such as longevity of contribution, associated damage caused and other issues must also be addressed.
- 1.4 The tree assessments consist of visual inspections at ground level only and are intended to identify hazards, structural flaws or defects that may cause issues to occur within the next 12 months.
- 1.5 It must be clearly emphasized not no tree is entirely safe, even a perfectly healthy tree of symmetrical and uniform composition with no structural flaws may be damaged or uprooted by severe weather anomalies.
- 1.6 This report is based upon data collected by Andrew Taylor; the data was collected on the 16th October 2019. The weather was warm and dry, visibility was good.

- 1.7 It must be made clear that whilst every attempt has been made to provide an accurate assessment of the trees condition at the time of inspection, no responsibility can be accepted for damage or injury sustained as a result of the failure of any tree due to faults that are not apparent upon a visual ground level inspection, or to faults developing subsequent to the survey. Similarly, no liability can be accepted for defects hidden from view by ivy or dense foliage or certain features that may provide evidence of decay, such as fungi or insect emergence holes but may not be evident at the time of inspection. Only those features that are apparent at the time of inspection could be assessed.
- 1.8 The Survey located in the report records each tree in the specified area, Whether they require works or not, each is individually assessed with estimated measurements, defects or other noteworthy characteristics, recommendations for retention, remedial works or removal of the individual tree. Only trees greater than 150mm will be assessed.
- 1.9 Trees are dynamic, living organisms and their condition can change rapidly as they grow and can be affected by external conditions and therefore this report is valid for a period of 12 months. This period may be reduced if significant changes occur to the trees or the ground conditions close to them.

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2.0 Tree Survey Details

Client Name –	Merthyr Tydfil County Borough Council Education department Unit 5, Pentrebach Merthyr Tydfil
Site –	Edwardsville Primary School, Edwardsville , Merthyr Tydfil
Date of Inspection –	16 th October 2019
Surveyor –	Andrew Taylor
Purpose of Survey –	To collect data and implement management recommendations for safe access into the School, increase longevity of current tree stock, replace poor stock and advise to achieve a sustainable tree stock.
Survey method –	This tree assessment comprised a visual inspection carried out at ground level only . It was intended to identify distinct defects and other failure-prone characteristics of the trees, where these features might give rise to hazards within the near future. Measurements and details for classification were also noted.
Weather -	Weather was warm and dry, visibility was good.

Map 1: Overview of area surveyed within school boundaries.



3.0 Tree details

Explanation of terms

Tree I.D Number - Individual identification tag number of each Specimen

Tree Species - Botanical/scientific name for tree species

Tree Height - Approximate height of specimen (Meters (m))

Tree Age Class - Young trees **(Y)** - age less than one third of life expectancy
 Semi Mature trees **(SM)** - One to Two thirds of life expectancy
 Mature trees **(M)** - Over two thirds life expectancy
 Over Mature trees **(OM)** - Over two thirds life expectancy and health in decline
 Veteran **(V)** - trees at or exceeding life expectancy

Tree Width - Measures the diameter at one meter above ground level.

Physiological Condition - Categorised as Dead, Poor, Fair or Good

Structural Condition - More detailed description of tree health including physical defects and levels of decay

Management Recommendations - Details of tree work that is required

Work Priority - Timescale given for recommended works to be completed.

Tree labelling - Trees were tagged sequentially and comprised number tags from 2679 to 2725 for individual identification.

3.1 Classification of severity and reoccurrence of inspection.

- 3.1.1 All trees within the boundaries of the school were assessed have been individually tagged and recorded. These trees should be re-inspected every year and monitored for and significant structural change or pathogen development. These trees are in high footfall areas, which have a high likelihood of incidence if an issue arose.
- 3.1.2 This survey is to a specification regarding the safety and maintenance of council owned trees. Trees interfering with the local highways or footpaths will fall under annual routine maintenance, although a full condition survey will be conducted to investigate any other issues.

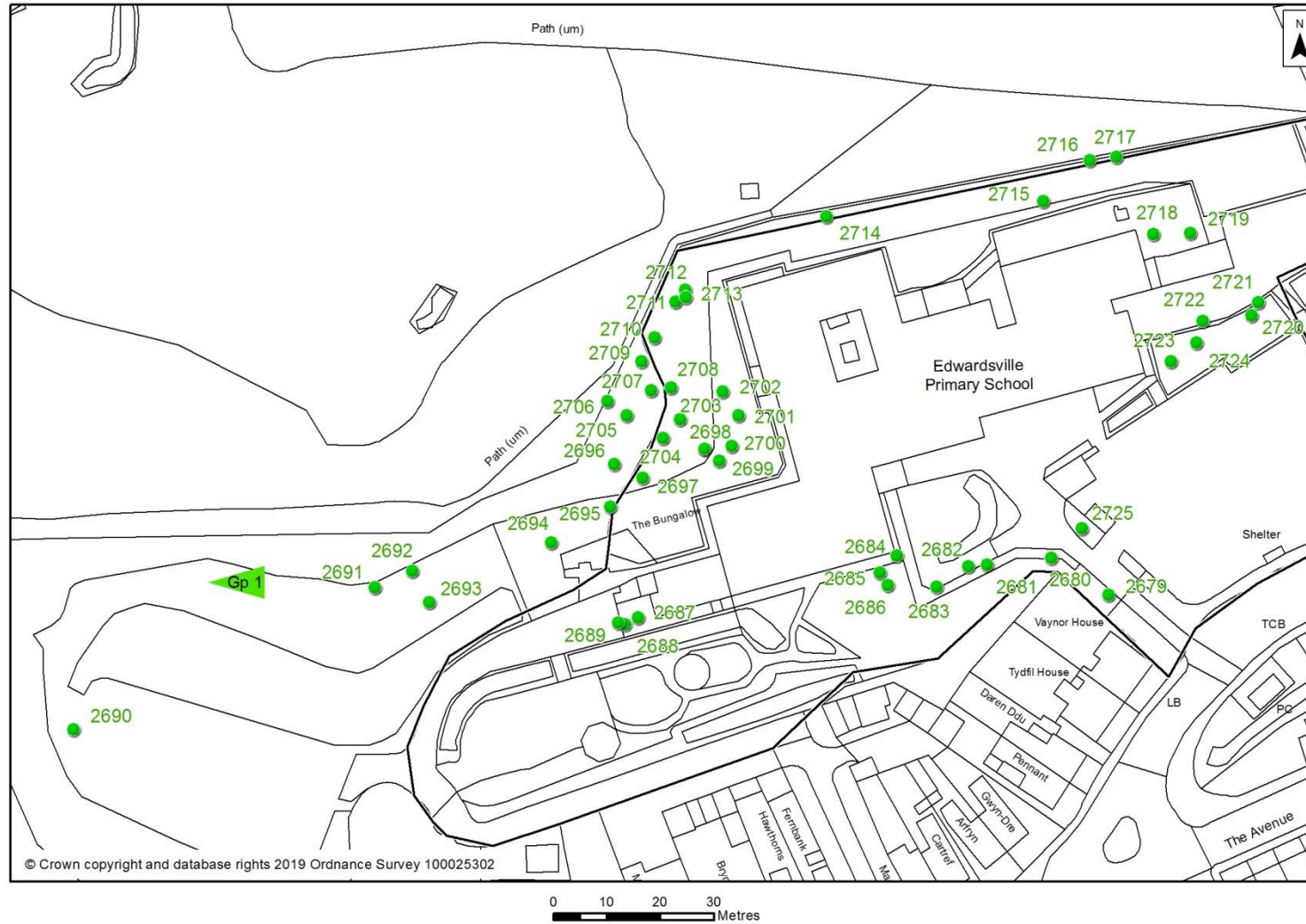
4.0 Re-Planting

The Specification for this survey states that parks and schools should maintain a healthy tree stock that it is sustainable. This survey will assess the spacing, physiological and structural factors of each tree. It is a likely consequence that a number of trees may have to be removed to increase the longevity of others and decrease pathogen effectiveness.

Land use is of upmost importance in amenity areas and a balance must be struck between tree retention and ongoing sustainable usage. Specific replanting schemes/plans should be formulated as a separate document by the landowners, with care taken into species selection, location and final specimen size.

Trees of a good standard and which present little issues and conflict should be retained and protected as much as possible. Some trees may be of a poor standard and some may offer little ecological benefits or long term remaining contributions for the area. Therefore early management and reallocation of tree stock within the boundaries may reduce conflict, increase the longevity of remaining and newly planted trees and insure enjoyment for future generations.

5.0 Tree Survey



5.1 Tables

Tree ID	Height (m)	Age Class	Width (mm)	Priority	Structural Condition	Common Name	Physical Condition	Recommendations	Species
2679	12	M	780		Good, previously reduced, good regrow the, no major issues	Large leaved lime	Good		Tilia platyphyllus
2680	10	M	700		Good, ivy colonisation at base, previously reduced, no major issue	Large leaved lime	Good		Tilia platyphyllus
2681	8	M	500		Good, large specimen for species, no major defects	Cherry plum	Good		Prunus cerasifera
2682	6	M	350	1 year	Poor, significant deadwood and fungal associations	Bird cherry	Poor	Fell	Prunus padus
2683	10	SM	400	1 year	Suppressed from boundary trees, 2 low limbs, larger with significant squirrel damage	Norway maple	Good	Remove 2 lowest limbs towards school	Acer platanoides
2684	5	M	350	1 year	Raised root plate and significant lean towards path.	Bird cherry	Fair	Fell for safety	Prunus padus
2685	6	SM	360	1 year	Good, low branches close to buildings	Norway maple	Good	Raise canopy away from buildings	Acer platanoides
2686	7	SM	400		Good, no major issues	Norway maple	Good		Acer platanoides
2687	5	Y	150		Good, crowded	Aspen	Good		Populus tremula
2688	5	Y	150	1 year	Crowded	Aspen	Good	Remove for spacing	Populus tremula
2689	7	Y	160		Good, crowded, no major issues	Aspen	Good		Populus tremula
2690	12	M	1050		Good, scar at base but good reaction wood, well balanced canopy, no major issues	Sessile oak	Good		Quercus petraea

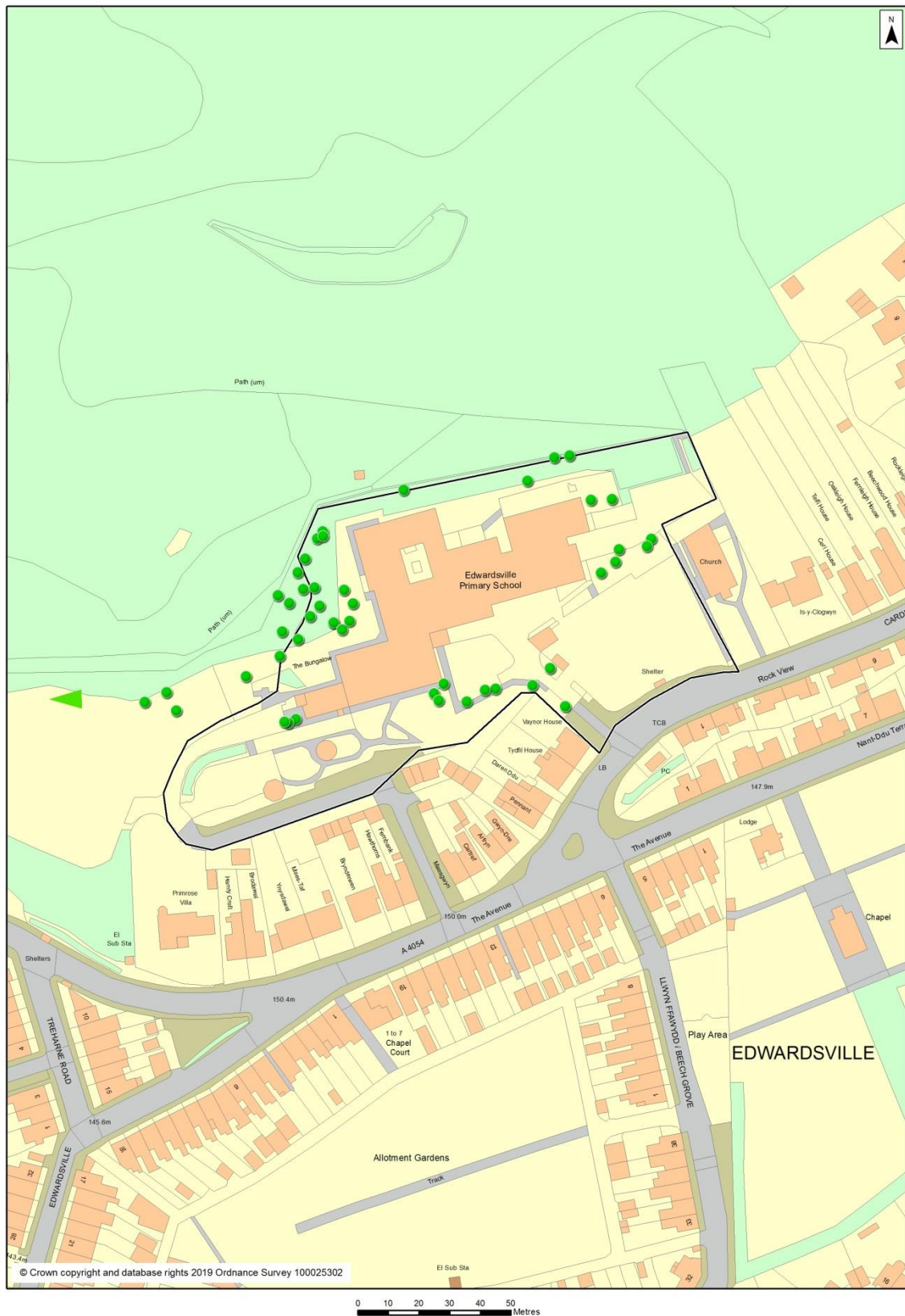
Tree ID	Height (m)	Age Class	Width (mm)	Priority	Structural Condition	Common Name	Physical Condition	Recommendations	Species
2691	7	M	580		Low, unstructured form, area of low usage, good biodiversity	Goat willow	Good		Salix caprea
2692	5	SM	580		Low scrub, multistem , area of low usage , biodiversity area	Goat willow	Good		Salix caprea
2693	13	M	1050		Good, specimen tree, good form good balance	English oak	Good		Quercus robur
2694	9	M	800		3 stemmed from 1 meter, good unions, no major issues	Goat willow	Good		Salix caprea
2695	9	SM	600		Good, good healthy tree with good branch unions	Ash	Good		Fraxinus excelsior
2696	8	SM	400		Good, no major issues	Sycamore	Good		Acer pseudoplatanus
2697	5	SM	350		Good, no major issues	Whitebeam	Good		Sorbus aria
	0		0						
2698	10	SM	500	1 year	Leaning towards building, ash dieback stage 2	Ash	Decline	Fell	Fraxinus excelsior
2699	6	M	400		Tight union at 2 meters. Low mechanical forces, no significant issues	Swedish whitebeam	Good		Sorbus intermedia
2700	7	M	400		Suppressed to south, no major issues , good	Swedish whitebeam	Good		Sorbus intermedia
2701	14	M	600	1 year	Large canopy and limbs, close to and causing conflict with building	Large leaved lime	Good	Remove to prevent incident	Tilia platyphyllos
2702	7	SM	450	1 year	Good, 1 lowest limb extending towards school	Norway maple	Good	Remove lowest limb extending towards school	Acer platanoides

Tree ID	Height (m)	Age Class	Width (mm)	Priority	Structural Condition	Common Name	Physical Condition	Recommendations	Species
2703	12	M	600	1 year	Low large limbs and minor deadwood in canopy	Norway maple	Good	Remove 2 low limbs and deadwood	Acer platanoides
2704	6	SM	300		Good, no major issues	Norway maple	Good		Acer platanoides
2705	12	M	600	1 year	Poor, heavy lean towards bench area, raised root plate and surface roots, minor fungal bodies on buttresses	Norway maple	Good	Fell	Acer platanoides
2706	8	Y	250		Good, no major issues	Sycamore	Good		Acer pseudplatanus
2707	7	Y	200		Tall slender forced growth, no major issues	Whitebeam	Good		Sorbus aria
2708	7	SM	250		Suppressed to south, no major issues	Whitebeam	Good		Sorbus aria
2709	7	SM	300		Good, no major issues	Norway maple	Good		Acer platanoides
2710	8	SM	300		Good, no major issues	Norway maple	Good		Acer platanoides
2711	9	M	550	1 year	Poor, heavy canopy leaning towards building, poor union at 2 meters	Cherry plum	Fair	Fell	Prunus cerasifera
2712	12	M	670	1 year	Good, large dominant tree, large lower codominant limbs	Norway maple	Good	Reduce to single stem, removing large limbs	Acer platanoides
2713	6	M	350	1 year	Heavily suppressed, unsuitable for retention	Cherry plum	Good	Fell	Prunus cerasifera
2714	5	M	400	1 year	Good, lower canopy causing conflict with building	Swedish whitebeam	Good	Raise canopy away from building	Sorbus intermedia
2715	6	SM	400		Good, no major issues	Norway	Good		Acer platanoides

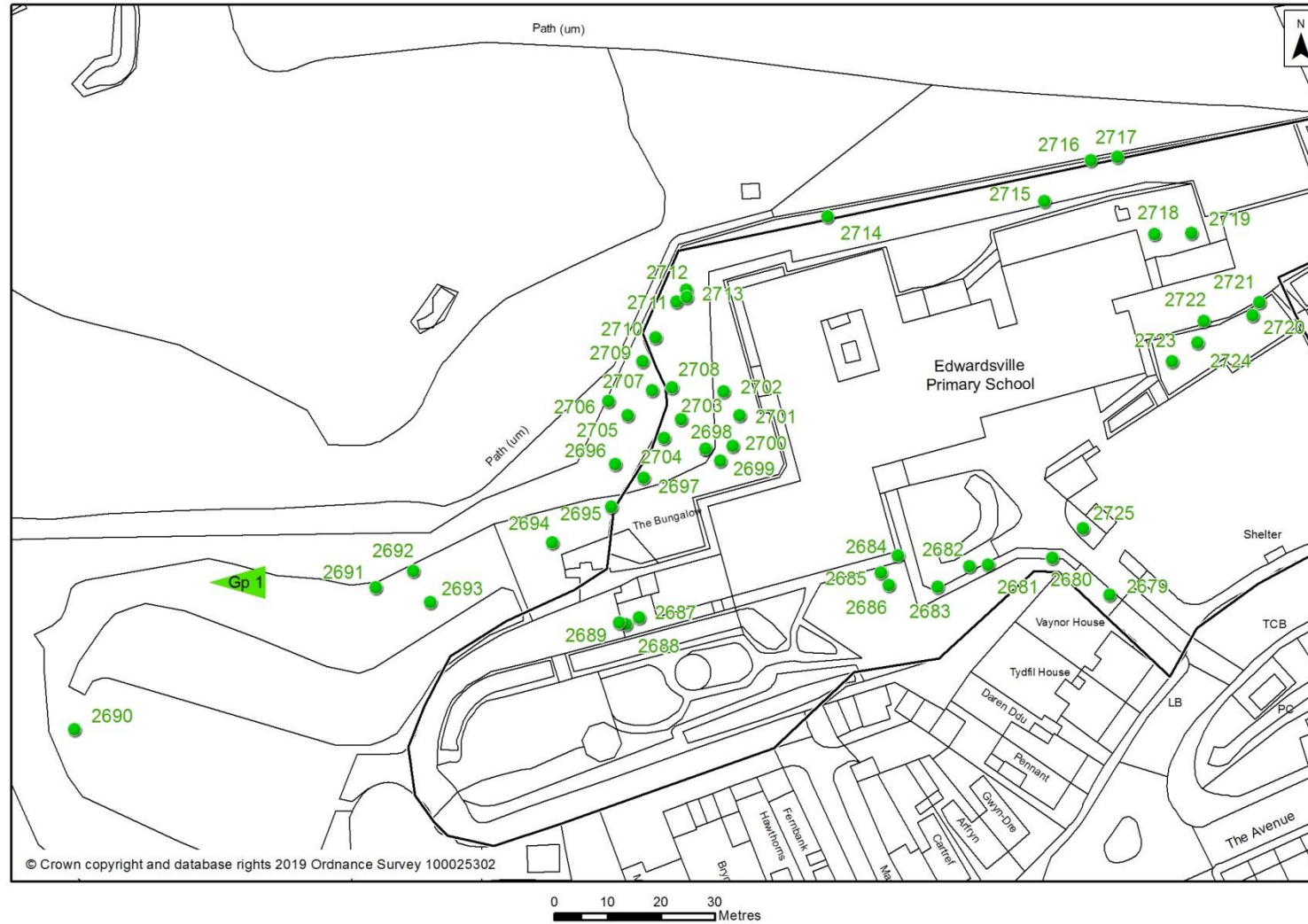
Tree ID	Height (m)	Age Class	Width (mm)	Priority	Structural Condition	Common Name	Physical Condition	Recommendations	Species
						maple			
2716	7	SM	400	1 year	Fair, low large limb toward play area, minor burr at base needs monitoring	Norway maple	Good	Remove lower limb towards play area	Acer platanoides
2717	7	SM	400		Good, swelling around union at 2 meters, no immediate action required	Norway maple	Good		Acer platanoides
2718	7	SM	400		Good, no major issues	Norway maple	Good		Acer platanoides
2719	7	M	450		Good, no major issues	Swedish whitebeam	Good		Sorbus intermedia
2720	7	SM	400	1 year	Poor growth form and poor unions, high chance of failure.	London plane	Good	Fell	Platanus x hispanica
2721	8	SM	450	1 year	Multistem, stem closest to playground has had previous failure and cavity formed.	London plane	Good	Remove limb closet to play area	Platanus x hispanica
2722	8	SM	550	1 year	Previously cut stubs need removing, low canopy interference with play area	Ash	Good	Raise canopy, remove Stubbs and cut back limbs away from play area	Fraxinus excelsior
2723	5	M	400		Good, suppressed towards car park, no major issues	Swedish whitebeam	Good		Sorbus intermedia
2724	5	M	400		Good, no major issues	Swedish whitebeam	Good		Sorbus intermedia
2725	10	M	700		Good, previously reduced, recovering well	Large leaved lime	Good		Tilia platyphyllos

Tree ID	Height (m)	Age Class	Width (mm)	Priority	Structural Condition	Common Name	Physical Condition	Recommendations	Species
Gp 1	4	Y	150		Planted as feature for willow structure, unmaintained	White willow	Good	Cut to 1 meter and reform structure with regrowth	

5.2 Tree location maps



Map 2 – Tree ID Locations



Map 3 – Tree ID Locations from 2421 to 2443

5.3 Photographs

5.3.1 Trees to be felled:



Image 1: Tree ID- 2682 – Dead Cherry near path



Image 2: Tree ID 2684 leaning cherry towards path with raised rooting profile



Image 3: Tree ID 2701. Large leaved lime located close to building will cause future damage and issue.



Image 4: Tree ID 2705. Heavily leaning tree over benches, remove for safety

5.3.2 Trees with remedial action



Image 5: Tree ID 2721, large cavity on London plane close to playground, remove defective limb.



Image 6: Tree ID 2722 , Ash overhanging playground, protruding limbs to be removed to eradicate issues.

6.0 Recommendations

- 6.1 All of the remedial tree works are detailed in the tree survey table and are located in section 5.1. In total 48 individual trees and 1 tree group were surveyed, with 8 trees recommended for removal. Some for safety and spacing, some for reduction of future issues with buildings or infrastructure.
- 6.2 9 trees in the report were detailed for remedial works which involves the reduction of canopies to reduce loads upon tree branch unions, decreasing the likelihood of future failure. This will increase the trees remaining contribution to the area. Remedial works can also be to abate nuisance or reduce likelihood of future incidence.
- 6.3 Most of the trees surveyed were healthy and posed no significant structural or physiological issues.
- 6.4 Some of the trees surveyed have significant raised roots; this may have been caused by incorrect original planting depths, poor ground conditions or the trampling overtime of children playing. This poses a limited current significant risk but trip factors do exist. Solutions to this may include mulching at the base of trees to protect the roots, and mask the trip factors. (This option has been adopted around some trees on site).
- 6.5 Numerous trees were highlighted in the report to be monitored, these trees have been identified as having a defect but it is not serious enough to warrant reactive management. However some present poor union joints which will support heavier loads and increased mechanical forces as the trees develop in size and weight, others with insignificant pathogen association which may develop over time.
- 6.6 A balance must be struck to ensure that equilibrium can be established with the number of tree stock within open areas. Trees are important both aesthetically and ecologically in areas but need to be located in adequate spacing. The correct selection of both tree species and their location are vital components if the tree is to mature. It is recommended that to maintain the tree stock in Edwardsville School

that no trees need to be planted. The school was overplanted originally and the removal of the 8 trees now will balance spacing and land use.

- 6.7 General maintenance of boundary trees needs to be addressed within the site, many trees are growing within fence lines and need to be removed to prevent damage to the fences, areas of the school boundary to the north towards the infants area have significant overhanging limbs from outside the boundary which should be cut back to avoid future issues and maximise the space available with the school.
- 6.8 The 3 lime trees at the main entrance of the school drive are part of a pollard maintenance routine. These trees should be re-pollarded every 8-10 years. They were last pollarded in 2014.
- 6.9 Ash dieback is a very prevalent disease in the U.K at present. A single Ash tree to the rear of the school has been identified to have this disease and therefore it will have to be removed. This will not stop the spread of the disease the removal is entirely for safety purposes.
- 6.10 There are numerous small trees on the site that have not been assessed due to the level of their maturity. Trees over 150mm in width are assessed only, as trees develop they will be added to future surveys.
- 6.11 Numerous willows have been planted on the top of a bank to the Northwest of the site (GP1). These trees were planted to form a structure, at present a lack of maintenance has resulted in poor structure. Advice would be to cut the trees back to 1 meter in height and then reform the required structure with the regrowth after 2 years.
- 6.12 Any Works undertaken from the recommendations in this report should only be undertaken by suitable contractors working in accordance with 'BS 3998' 'British Standard Recommendations for Tree Works 2010'.

7.0 Legal Constraints

TPO's – Prior to any works commencing the client should check with the local authority that the trees are not covered by a tree preservation order or within a conservation area or by any other planning conditions.

Felling licence – even when no specific legal protection exists it may be necessary to obtain a felling licence, these are generally associated with the forestry commission and developed to control the amount of trees/timber in the landscape of particular areas.

Birds and Bats – it is the contractors responsibility to inspect trees prior to carrying out works. Works must commence outside of the bird nesting season (March and July) and comply with the wildlife and countryside act 1981.

Duty of care – Attention is drawn to the provisions of the occupiers liability Acts. Which place a duty of care upon landowners/occupiers to ensure the safety of neighbours and others entering their land. There is a special responsibility to ensure the safety of minors who may be unaware of any dangers. Annual or regimented inspections of trees by a competent person, together with implementation of any recommendations, should ensure compliance with legislation regarding tree safety.

8.0 Glossary of terms

Bark	All tissue outside of the trunk, roots, stems branches and twigs.
Cambium	A layer of actively dividing cells between xylem (wood) and phloem tissues that is responsible for the secondary growth of stems.
Canopy	The part of the tree composed of leaves and twigs.
Cavity	An open wound characterized by the presence of decay and causing a hollow.
Crown	The main foliage carrying part of the tree.
Crown lifting	The removal of lower branches to a specified height.
Crown reduction	The shortening of vertical and lateral branches to proportionally reduce the size of the crown.
Crown Thinning	The balance removal of secondary or minor live branch growth to reduce the density of foliage within the crown, without altering the trees size and shape.
Decay	The process of degradation of woody tissues by fungi and bacteria (Rot).
Dominant	A dominant tree is a tree taking other trees light, dominating the available resources.
Failure	A partial or total fracture of wood tissue or loss of cohesion between soil and root or Limb and main stem.
Hazard	Anything that has the potential to cause harm.
Included bark	Bark of neighbouring parts of the tree that are face to face, resulting in the lack of wood union and a subsequent weakness.
Limb reduction	The shortening of a specific branch usually be a specific amount.

Mature	A plant that will respond to flower inducing conditions and that is fully physiologically developed.
Pruning	The removal of cuttings or twigs, branches or roots.
Risk	The likelihood of potential harm from a hazard becoming actual harm.
Rot	See decay.
Root	Part of the tree that contains woody and non woody tissues to absorb water and minerals from the soil, gases from the atmosphere and support the trunk and crown.
Significant	Relates to health and safety- describing a condition, state, hazard or risk that is deemed to exceed accepted standards requiring remedial or preventative action.
Stem	The principle portion of the woody structure (Trunk) or one of a number of such portions with similar size or status.
Suppressed	Trees that have been over shadowed and whose crown development is restricted by neighbouring trees
Target	The area which is likely to be impacted by total or partial failure
Tree	A woody plant that typically has a single self-supporting stem , attaining a height in excess of 4 meters in maturity.
Trunk	A single main self-supporting stem of a tree.
Union	The joint between limbs or limbs and the main stem.
Wound	An injury that induces a response by the tree to compartmentalize internally.

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