



Bury Interchange

Phase 1 - Southern Access

Arboricultural Impact Assessment

Prepared For: Willmott Dixon

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Executive Summary

1. TEP has been commissioned by Willmott Dixon (WD) on behalf of Transport for Greater Manchester (TfGM) to prepare an Arboricultural Impact Assessment ('AIA') in support of a full planning application for the first phase (known as 'Phase 1 Bury Tram Stop') of the redevelopment of Bury Interchange. There are two main elements to the planning application:
 - Creation of a new Southern Footbridge Access and Metrolink Crossing to allow access between Knowsley Place, the existing Metrolink platform and Pyramid Park.
 - Refurbishment of the existing Metrolink platforms including replacement of the existing platform canopy and enhanced passenger amenities/facilities.
2. The construction of the new Southern Access is key to enable Bury Tram Stop to continue operating during Phase 2 works which includes the demolition and replacement of the existing Interchange Building.
3. This report presents the results and effects on arboriculture that would arise in connection with the proposed scheme and ultimately the grant of full planning permission.
4. The arboricultural survey identified 33 individual trees and 23 groups of trees were recorded within influencing distance of the application site. The majority of these are growing in the former Pyramid Park to the east of the existing Metrolink line and include a mixture of planted, formally arranged trees, and areas of denser tree cover interspersed and expanded by self-set trees since cessation of site management. Outside the Park, trees are present in formal rows along the public footpaths and roads.
5. The desktop review and site survey identified no Tree Preservation Orders; no trees within a Conservation Area; no ancient woodland; no veteran trees; and no arboreal Habitats of Principal Importance including Deciduous Woodland, Traditional Orchard, Wood Pasture and Parkland and Hedgerow. The site is within the City of Trees Community Forest.
6. In total, tree groups comprising 0.16ha of the area within the defined redline boundary of the planning application would be removed to facilitate the proposals. These are a mixture of low quality (Category C) and moderate quality (Category B) trees, predominantly within the former Pyramid Park. A further individual tree and two groups of trees may require pruning to facilitate site access and machinery movement.

7. The development would give rise to no adverse effects that cannot be mitigated or offset. An indicative scheme of new planting is proposed on the Planting Strategy Plan. A detailed scheme of tree planting should be produced and implemented in accordance with the Strategy, and provision made for the maintenance of new planting for a period of at least 5 years.
8. A Preliminary Tree Protection Plan is provided at Drawing 3. It shows the general arrangement of temporary protection measures that would be installed prior to the commencement of any works, including ground investigation, setting out, compound establishment or delivery of any plant or materials. These should be confirmed during the production of an Arboricultural Method Statement once the final construction detail is known and should be a condition of any planning consent.
9. This report constitutes a valid basis for the evaluation of impacts on trees resulting from the proposed development for a period not exceeding 2 years from the date of the survey. After this, it would be necessary to review baseline data and conclusions to ensure reliability.

1.0 Scope

- 1.1 TEP has been commissioned by Willmott Dixon (WD) on behalf of Transport for Greater Manchester (TfGM) to prepare an Arboricultural Impact Assessment ('AIA') in support of a full planning application for the first phase (known as 'Phase 1 Bury Tram Stop') of the redevelopment of Bury Interchange.
- 1.2 The assessment has been made in accordance with BS 5837:2012 Trees in relation to design, demolition and construction - Recommendations. It describes the findings of field and desktop surveys; the effects that granting planning permission would have on arboriculture; and measures that are and/or should be incorporated in the proposed development.
- 1.3 There are two main elements to the planning application:
 - Creation of a new Southern Footbridge Access and Metrolink Crossing to allow access between Knowsley Place, the existing Metrolink platform and Pyramid Park.
 - Refurbishment of the existing Metrolink platforms including replacement of the existing platform canopy and enhanced passenger amenities/facilities.
- 1.4 The construction of the new Southern Access is key to enable Bury Tram Stop to continue operating during Phase 2 works which includes the demolition and replacement of the existing Interchange Building.
- 1.5 Specific works within Phase 1 include (relevant to arboriculture):
 - Infill of the existing Metrolink underpass and associated pump room. Relocation of the pump room.
 - Erection of a new Footbridge linking Union Square and Pyramid Park with vertical circulation leading to the southern end of the existing Metrolink Platform(s).
 - New accessible graded footpath (illuminated and drained) connecting the bridge to Pyramid Park development area ground level (post remediation level).
 - Engineering works, including land re-profiling, within Pyramid Park to tie into existing/proposed levels.
 - Vegetation clearance with replacement landscaping and associated biodiversity enhancement works.

Survey

- 1.6 The survey was undertaken on November 2024 in accordance with BS 5837 by a qualified arboriculturist. The survey method is included at Appendix B.
- 1.7 A topographical survey was provided to record the position of trees and vegetation (no reference). Where trees were not shown on the topographical survey, their locations were estimated¹.
- 1.8 Trees on private land outside the application boundary, and at inaccessible locations² were surveyed insofar as was practicable. Whilst reasonable effort has been made to ensure the accuracy and comprehensiveness of such records, it cannot be guaranteed.

Limitation

- 1.9 This report relates to a specific development proposal (Bury Interchange - Phase 1 Southern Access) and should not be interpreted as advice in any other circumstance, including but not limited to the promotion or assessment of alternative schemes; the design of buildings and foundations; management of tree risk; and tree-related subsidence.
- 1.10 This report constitutes a valid basis for the evaluation of impacts on trees resulting from the proposed development for a period not exceeding 2 years from the date of the survey. After this, it would be necessary to review baseline data and conclusions to ensure reliability.
- 1.11 Conclusions are drawn based on professional judgement, experience and the information provided. If the proposed development changes, the conclusions of this report may cease to be reliable.
- 1.12 Where the recommendations of this report have been followed, any future deterioration in tree condition shall not be attributable to the development.

Other assessments

- 1.13 Woody vegetation may be described and evaluated by other assessments, including ecology, landscape, heritage and for biodiversity net gain calculations. It should be noted that these follow different methodologies and sometimes use the same terms to describe different parts of the treescape (e.g. 'hedgerow', and 'woodland'). Care should be taken when reading across or comparing assessments

¹ Estimated feature locations are marked on Drawing 1

² Limitations to the survey are described at Appendix A

to ensure that comparisons are reliable. Specialist advice may be needed to understand apparent discrepancies in definition or measurement.

2.0 Baseline

The site

- 2.1 The application site is bounded by Pyramid Park/Market Street to the east, the East Lancashire railway line to the south, Duke Street/Knowsley Place to the west and Bury Interchange to the north (platforms located below existing interchange building and associated road infrastructure including Angouleme Way).
- 2.2 The approximate central grid reference of the site is SD 80377 10386.
- 2.3 Pyramid Park, a Victorian public park reconstructed in 1970 but now disused, lies partially within the southern and eastern section of the site. Planning permission was recently granted (December 2024) for the clearance of existing vegetation and the subsequent remediation of a significant part of the Pyramid Park site west of Market Street.
- 2.4 In terms of the wider locality, the land west of the Metrolink line comprises the Union Square scheme which includes a Premier Inn hotel, Q-Park and commercial/residential uses. Bury College is located north of Pyramid Park.

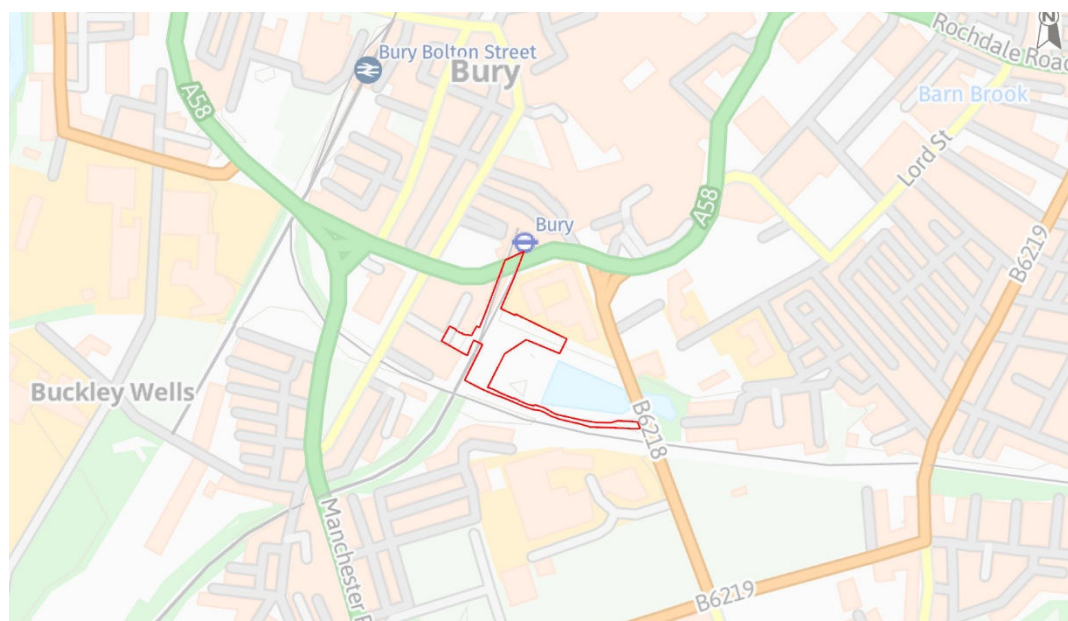


Figure 1 Site location and approximate boundary

(Contains Ordnance Survey data © Crown copyright and database right 2025)

Pyramid Park

- 2.5

The proposed new Southern Access footbridge lands on to the Pyramid Park site. Bury Council, as applicant, has recently secured full planning permission (LPA ref. 70903/Full) for the remediation of the Pyramid Park site which was formerly a railway station and sidings before being reclaimed as public open space in the 1970’s. Whilst the site is allocated as an opportunity site for development in the adopted UDP, the central part of the site is designated as a Grade B Site of Biological Importance (SBI), which is a non-statutory local wildlife designation, and a Wildlife Corridor is located east-to-west to the south of the site following the East Lancashire Railway line.
- 2.6

The planning application was informed by a suite of reports, including ecology and bio-diversity net gain (BNG) reports prepared by TEP on behalf of the applicant.
- 2.7

Planning permission was subsequently granted in December 2024 subject to a suite of planning conditions including a pre-development requirement to prepare and submit for approval a precaution measures working method statement prior to any earthworks or vegetation clearance.

Tree survey (Application Site)

- 2.8

26 individual trees (T1-T15, T22-T31 and T33) and 21 groups of trees (G1-G9 and G12-G23) were recorded within influencing distance of the application site. No woodland or hedges are present.
- 2.9

Trees, Groups, Woodland and Hedgerow are collectively referred to by this assessment as ‘Features’. These provide the resolution of the tree survey, and are defined according to Appendix B. Feature locations, their quality categories, canopy spreads and root protection areas are shown on Drawing 1.
- 2.10

Canopy cover, rather than number of features, is used by this assessment to describe the quantum of trees. The following table provides the aggregated canopy area for mapped trees and the total length of mapped hedgerow on Drawing 1. In some cases, this may be more than the absolute area due to canopy overlap between adjacent features.

Table 1: Existing canopy cover and hedgerow length

Trees	Groups	Woodland	Hedgerow
0.1072 ha	0.8647 ha	0.0 ha	0.0 m

- 2.11

All arboricultural information recorded during the survey is presented at Appendix A.

Overview

- 2.12 The majority of the trees included in the survey are growing in the former Pyramid Park. These include a mixture of planted, open grown or formally arranged trees, and areas of denser tree cover interspersed and expanded by self-set trees since cessation of site management. The most visually prominent group is a double row of hybrid black polar trees (G1) lining a former desire line and part the sites vehicular access track. These trees are in fair condition, containing deadwood commensurate with their age, and attain heights of around 24m.



Figure 2 View east through Group G1 (November 2024)

- 2.13 At the western end of Pyramid Park are several groups of denser, mixed species trees of planted (G2 to G4) and natural origin to (G5 to G9). The former include a mixture of sycamore, bird cherry, alder, hazel, hawthorn, holly and rowan, and are beginning to develop early woodland characteristics. The latter contain a high proportion of pioneer species that have colonised the degraded soils, including silver birch, aspen, goat willow and grey willow.



Figure 3 View west at groups G2 (left of frame) and G3 (right of frame) (May 2022)

- 2.14 A row of middle-aged to mature trees are present along the northern boundary of Pyramid Park, at the top of a steep bank rising up to the grounds of Bury College (T4 to T14). Species include silver birch, ash, sycamore, rowan and goat willow, with some of the taller birch having increased public amenity value due to their location and good form.
- 2.15 Outside the Park, trees are present in formal rows along the public footpaths and roads. These include rows of small-leaved lime around car parking off Haymarket Street (G18 and G21) and a row of Chanticleer Pear along Duke Street (T22 to T29). One tree of merit is a mature elm tree growing adjacent to the stepped access to Bury Interchange (T33).



Figure 4 View west along Duke Street (November 2024)

Tree quality

- 2.16 Under BS 5837 trees are objectively assigned one of four categories to describe their quality. The table below includes a description of each category and the amount of canopy cover meeting the classification. Hedgerows have not been categorised.

Table 2: Summary of BS 5837 quality categorisation³

Category	Description	Total existing
A	Trees of high quality, typically with a long remaining life expectancy; and with clear and identified merit as specimens, visually, culturally or for conservation.	0.0653 ha
B	Trees of moderate quality, typically with at least a medium remaining life expectancy; with remediable defects only; or low quality but with collective merit.	0.6049 ha
C	Trees of low quality, typically with at least a short remaining lift expectancy; unremarkable trees of limited merit or impaired condition; or young and small trees that could be replaced.	0.3643 ha

³ Refer to Appendix B for the full table

Category	Description	Total existing
U	Trees that cannot realistically be retained in the context of current land use for more than ten years; with serious and irremediable defects, pathogens or decline.	0.0 ha

Root Protection Areas

- 2.17 Using the results of the field survey a Root Protection Area (RPA) has been calculated in accordance with BS 5837 using each tree's stem diameter⁴. The RPA represents the minimum area around each tree that must be left undisturbed to ensure its survival.
- 2.18 Where a tree's rooting pattern is expected to have been influenced by site conditions, the RPA has been adjusted or offset to represent the anticipated spread of roots⁵. On this site influences on root morphology include hard surfacing and ground level changes.

⁴ Refer to Appendix A for stem diameters and Appendix B for further information on methodology

⁵ See Drawing 1 for RPA shapes

3.0 Policy, designations and protection

Planning policy

- 3.1 All trees are a material consideration in the planning process. Effects on trees will therefore be considered by the consenting authority. Adverse effects that cannot be mitigated and which are not acceptable on balance against other benefits may weigh against the granting of planning permission.
- 3.2 There should be a common-sense ambition to limit tree loss to that which is strictly necessary to facilitate the proposal, and to achieve a good design. Trees which are retained should not be harmed and the proposal should present a reasonable account of the prospects for tree retention in accordance with BS 5837.
- 3.3 Section 38(6) of the Planning and Compulsory Purchase Act 2004 and Section 70(2) of the Town and Country Planning Act 1990 require planning applications to be determined in accordance with the statutory development plan, unless material considerations indicate otherwise.
- 3.4 The statutory development plan for Bury presently comprises:
- Saved policies of the Unitary Development Plan (1997); and
 - Places for Everyone Joint DPD (adopted March 2024).
- 3.5 The NPPF is a material consideration along with supplementary guidance published by the Council. Accordingly, this section starts with an overview of local planning policy prior to summarising national policy.

Local planning policy

- 3.6 Bury Council has an adopted Unitary Development Plan (August 1997) that contains policies of relevance to trees and this site. In particular, the policies of relevance are H2/2, EN8 and EN8/2. The most relevant parts of each policy are recreated below.

EN8 – Woodland and Trees

The Council will support the retention of trees, woods, copses and hedgerows and encourage natural regeneration and new and replacement tree planting throughout the Borough.

EN8/2 - Woodland and Tree Planting

The Council will support and encourage new woodland and tree planting in the Borough. In considering development proposals, the Council will encourage the planting of hedges, trees and woodlands using locally native species.

- 3.7 With respect to the Places for Everyone (PfE) joint DPD, policy JP-G7 is relevant:

Policy JP-G7 - Trees and Woodland

We will work to deliver the aims and objectives of the Greater Manchester Tree and Woodland Strategy, aiming to significantly increase tree cover, protect and enhance woodland, and connect people to the trees and woodland around them.

This will be done through local planning and associated activities such as:

- 1. Protecting and expanding the mosaic of woodland habitats, linking fragmented areas of woodland, in particular wooded cloughs and pockets of ancient and riverside (riparian) woodland;*
- 2. Encouraging habitat diversity through conserving and managing existing woodland and trees that are of heritage, cultural and/or aesthetic value, including ancient woodland and veteran trees;*
- 3. Aiming to plant a tree for every resident in the plan area over the next 25 years as part of the City of Trees initiative;*
- 4. Targeting tree-planting at the areas of greatest need where the green infrastructure benefits can be maximised, whilst avoiding the loss of, or harm to, other priority habitats, including encouraging woodland planting schemes on areas of low-grade agricultural land and land in need of remediation;*
- 5. Establishing a new City Forest Park in Salford, Bolton and Bury, which will provide a vast urban forest close to the City Centre;*
- 6. Considerably increasing the provision of street trees within urban areas;*
- 7. Promoting the provision of community orchards to increase fruit consumption;*
- 8. Promoting the opportunity for woodland conservation to raise awareness for the sustainable use of timber;*
- 9. Securing a diversification of broadleaved species, in order to increase biodiversity and disease resilience;*

10. Improving public access to woodland and trees particularly by sustainable travel models to capture the health and wellbeing benefits whilst managing the associated pressures;

11. Encouraging the positive management of woodland to bring it into a more productive state, improve habitat diversity, and more effectively contribute to important green infrastructure functions such as flood risk management, urban cooling and carbon storage/sequestration;

And through development as follows:

12. Where development would result in the loss of existing trees, requiring replacement on the basis of two new trees for each tree lost, or other measures that would also result in a net enhancement in the character and quality of the treescape and biodiversity value in the local area, with a preference for on-site provision; and

13. Protecting trees and woodland during the construction phase of development.

National Planning Policy Framework

- 3.8 The National Planning Policy Framework (NPPF) has an overarching environmental objective. This embeds protecting and enhancing the natural environment, improving biodiversity, and adapting to climate change in decision making⁶.
- 3.9 NPPF states that existing trees should be retained wherever possible⁷.
- 3.10 Planning policies and decision making should recognise the wider benefits from natural capital and ecosystem services, including those provided by trees and woodland, and minimise impacts on and provide net gains for biodiversity⁸.
- 3.11 Where significant harm to biodiversity cannot be avoided, mitigated, or compensation provided, planning permission should be refused⁹. Loss or fragmentation of trees and woodland may constitute or give rise to significant harm to biodiversity.
- 3.12 There is a strong policy presumption against loss or deterioration of irreplaceable habitats, such as ancient woodland and ancient or veteran trees. Development resulting in the loss or deterioration of irreplaceable habitats should be refused unless there are wholly exceptional reasons, and a suitable compensation strategy exists¹⁰.

⁶ NPPF paragraph 8 (c)

⁷ NPPF paragraph 136

⁸ NPPF paragraph 187 (b) (d)

⁹ NPPF paragraph 193 (a)

¹⁰ NPPF paragraph 193 (c)

- 3.13 Opportunities should be taken to incorporate trees in developments, with appropriate measures to secure the long-term maintenance of new planting. Planning decisions should ensure that new streets are tree-lined unless there are clear, justifiable and compelling reasons why this would be inappropriate¹¹.

Environment Act

- 3.14 The Environment Act places a duty on public bodies, including planning authorities, to conserve and enhance biodiversity through the exercise of their functions¹².
- 3.15 The Act makes provision for biodiversity gain to be a condition of planning permission in England. The assessment of baseline biodiversity includes trees, and any measures to offset losses may also include tree planting or enhancement. Biodiversity Net Gain (BNG) is not covered by this report, although data from this assessment may inform a BNG assessment and calculations.
- 3.16 Biodiversity is only one of the benefits provided by trees. Tree removal and planting may affect other functions or objectives, and the BNG assessment process does not provide a comprehensive means of either evaluating, mitigating or offsetting effects on arboriculture.
- 3.17 Tree planting or enhancement for biodiversity net gain should be regarded as part of arboricultural mitigation and offsetting measures and supplemented as necessary by other measures to render all adverse arboricultural effects acceptable.

Tree Preservation Orders

- 3.18 A check with Bury Council was undertaken on 6th March 2025. Their online mapping system (CADCorp) confirmed that no trees within or adjacent to the site are protected by Tree Preservation Order.

Conservation Areas

- 3.19 A check with Bury Council local authority was undertaken on 6th March 2025. Their online mapping system confirmed that no trees within or adjacent to the site are within a Conservation Area.

Ancient woodland

- 3.20 Ancient woodland is defined in England as any area that has been wooded continuously since at least 1600 AD; it is regarded as 'irreplaceable'¹³. The

¹¹ NPPF paragraph 136

¹² Environment Act 2021 Section 102 (1) and (2)

¹³ NPPF Annex 2: Glossary

presence of ancient woodland has been identified based on Natural England's Ancient Woodland Inventory (Provisional) for England¹⁴.

3.21 The tree survey identified no features or characteristics to suggest that the Natural England mapping is unreliable.

3.22 There is no ancient woodland within or adjacent to the site.

Veteran trees

3.23 Veteran is a term that is used within arboriculture to describe a classification of trees with superlative significance and value. Various definitions exist. In the context of planning, the applicable definition is in NPPF¹⁵.

3.24 NPPF defines veteran trees as those which, because of age¹⁶, size¹⁷ and condition¹⁸, are of exceptional biodiversity, cultural or heritage value. Not all veteran trees are ancient, though they tend to be relatively old for the species. Veteran trees with exceptional biodiversity value are an irreplaceable habitat¹⁹.

3.25 Trees that are not irreplaceable habitats, but which meet other definitions of veteran are likely to be trees of significance to culture, heritage and habitats, and may also merit significant conservation efforts.

3.26 There is no comprehensive national register of veteran trees. The Woodland Trust maintains an inventory of old and large trees, some of which meet the NPPF definition²⁰. At the time of writing, it contained no records of relevance to the site.

3.27 An assessment of each tree was made by a qualified arboriculturist as part of the tree survey. There are no veteran trees within or adjacent to the site.

Community Forests

3.28 Online mapping²¹ confirmed that the site is within the City of Trees Community Forest.

¹⁴ <https://magic.defra.gov.uk/magicmap.aspx>

¹⁵ NPPF Annex 2: Glossary

¹⁶ See Forestry Commission Information Note (FCIN12) 1998

¹⁷ See Appendix A

¹⁸ See Fay, N. & De Berker, N. (1997) Specialist Survey Method. Veteran Trees Initiative, English Nature

¹⁹ See NPPF Annex 2: Glossary

²⁰ <https://ati.woodlandtrust.org.uk/>

²¹ <https://englandscommunityforests.org.uk/where-are-the-forests/>

Habitats of Principal Importance

- 3.29 A list²² of habitats which are of principal importance for the purpose of conserving²³ biodiversity is maintained by the Secretary of State²⁴. The list includes habitat types that are defined by woody vegetation, which are listed below. The geographical extent and location of these habitats (excluding Hedgerow) is mapped by Natural England on the Priority Habitat Inventory²⁵. Observations were also made to corroborate the mapping during the site survey.
- 3.30 All public authorities, including local planning authorities and statutory undertakers have a duty to have regard to the purpose of conserving and enhancing biodiversity²⁶. Habitats of Principal Importance provide a means of evaluating effects on biodiversity, and relevant to the discharge of this duty. In the context of planning, adverse effects on Habitats of Principal Importance that cannot be mitigated are material to decision making.

Deciduous Woodland

- 3.31 Six distinct types of woodland²⁷ are amalgamated in the Inventory under the habitat type 'Deciduous Woodland'.
- 3.32 The Inventory has no records of Deciduous Woodland at the site and observations made during the survey support this.

Wood Pasture and Parkland²⁸

- 3.33 Wood Pasture and Parkland are mosaic habitats valued for their trees, especially veteran and ancient trees, and the plants and animals that they support. They are exclusively associated with some species of insects, lichens and fungi which depend on dead and decaying wood. Grazing animals and continuity of management are fundamental to the existence of the habitat, and it can be a type of ancient woodland.
- 3.34 The Inventory has no records of Wood Pasture and Parkland at the site.

²² <https://www.gov.uk/government/publications/habitats-and-species-of-principal-importance-in-england>

²³ The Environment Act 2021, 102 (1) and (2) amends this duty to include enhancement

²⁴ Natural Environment and Rural Communities Act 2006, 41 (1)

²⁵ <https://magic.defra.gov.uk/MagicMap.aspx>

²⁶ Natural Environment and Rural Communities Act 2006, 40 (1)

²⁷ Upland Oakwood; Lowland Beech and Yew Woodland; Upland Mixed Ashwoods; Wet Woodland; Lowland Mixed Deciduous Woodland; Upland Birchwoods

²⁸ UK BAP Priority habitat Description for Wood-Pasture and Parkland

Traditional Orchards²⁹

- 3.35 Traditional Orchards are defined, for priority habitat purposes, as groups of fruit and nut trees planted on vigorous rootstocks at low densities in permanent grassland; and managed in a low intensity way. Habitat structure rather than vegetation type, topography or soils, is the defining feature of the habitat.
- 3.36 The Inventory has no records of Traditional Orchards at the site.

Hedgerows³⁰

- 3.37 Hedgerow is any boundary line of trees or shrubs over 20m long and less than 5m wide, and where any gaps are less than 20m wide. It may include banks, walls, ditches, herbaceous vegetation, climbing plants or trees within 2m of the centre line. All hedgerows which comprise at least 80% woody native species are included.
- 3.38 The survey identified no Hedgerows³¹.

Biodiversity Net Gain and arboriculture

- 3.39 Woody vegetation that is included in this assessment has also be mapped and classified as part of an ecological assessment (reference: 10580.003) and Biodiversity Net Gain report (reference: 10580.004).
- 3.40 Biodiversity gain assessments and calculations use *Broad Habitat Types* and *Habitat Definitions* derived from UKHab³² to classify woody vegetation. These include *Individual trees*, *Hedgerow*, *Heathland and Shrub*, and *Woodland and Forest*. These terms may be used with different definitions in other assessments, including tree surveys.
- 3.41 The sub-division of woody vegetation into assessment units or features may differ between ecological and arboricultural assessments; the former being a classification of habitats, and the latter being a classification that reflects management history and opportunities, landscape, amenity, culture, and heritage, as well as habitats.
- 3.42 The table below sets out the relationship between arboricultural and ecological classification of woody vegetation in general terms.

²⁹ UK BAP Priority habitat Description for Traditional Orchards

³⁰ UK BAP Priority habitat Description for Hedgerows

³¹ See Appendix A

³² See, The UK Habitat Classification Habitat Definitions Version 2.1 (July 2023)

Table 3: Arboricultural and ecological classification of woody vegetation

Tree survey classification	Habitat Classification (UKHab)
Trees	Normally recorded as <i>Individual trees</i> (Urban tree or Rural tree) except where within another habitat (e.g. within a woodland, line or trees, or as a hedgerow tree), in which case trees may be part of the surrounding habitat ³³
Groups	No equivalent classification exists. Groups may comprise any combination of <i>Individual trees</i> ; <i>Hedgerows</i> , (including <i>Lines of trees</i>); <i>Woodland and forest</i> Habitat Types with moderate or low distinctiveness ³⁴ ; and some <i>Heathland and shrub</i> habitats ³⁵ , especially where young or with developing composition
Woodlands	Typically, Woodland and forest Habitat Types with high distinctiveness ³⁶ (e.g. Lowland Mixed Deciduous); also, less commonly, <i>Heathland and shrub</i> habitats comprising woody species, where representing the natural climax vegetation ³⁷
Hedgerow/Hedges	Typically, <i>Hedgerow</i> or <i>Line of trees</i> ; less commonly may be mapped as <i>Woodland and forest</i> habitats, especially where within or on the edge of areas of trees or scrub

- 3.43 The term Woodland within the tree survey tends to correspond with Woodland Habitats of Principal Importance, and Woodland Habitat Types with high distinctiveness. It is reserved for areas of tree cover with that have or are clearly developing the species, age and structural composition and characteristics of semi-natural woodland and represent a stable and naturally regenerating climax vegetation. This tends to exclude woodland and shrub habitats with moderate or low distinctiveness, such as plantation.
- 3.44 Under the Statutory Biodiversity Metric, Individual Trees are treated as having a habitat area based on the diameter of the stem. Small, Medium, Large and Very Large trees are defined as those with stem diameters between 75mm and 300mm, 300mm and 600mm, 600 and 900mm, and above 900mm respectively³⁸. The data

³³ Tree surveys may isolate and record trees individually for a wide range of reasons that do not relate to habitat

³⁴ Loosely, 'Other Woodland' types, including UKHab Classifications w1g, w1h and their sub-classifications

³⁵ All types of Dense scrub h3 except h3d (Bramble scrub)

³⁶ For Very High distinctiveness, see Section 2.0 Habitats of Principal Importance, Wood Pasture and Parkland

³⁷ All types of Dense scrub h3, except h3d (Bramble scrub), and h3g (Rhododendron scrub)

³⁸ Stem diameters of 300mm (Small), 600mm (Medium), 900mm (Large) and 1,300mm (Very Large) are assumed

tables at Appendix A include stem diameter measurements for trees that were recorded as individuals by the tree survey, and stem diameter ranges for features containing multiple trees³⁹.

- 3.45 Irreplaceable habitats, including ancient woodland and veteran trees, must be recorded separately within the Statutory Biodiversity Metric. Accounting for loss or deterioration of irreplaceable habitats cannot be done using the Metric. Enhancement may contribute towards biodiversity where there is no loss or deterioration⁴⁰. On this site, no ancient woodland and veteran trees were found and therefore this is not relevant to the BNG assessment prepared as part of this planning application submission.

Protected species

- 3.46 Works to and around trees have the capacity to affect protected species where present, particularly including birds, bats, great crested newts, badgers, dormice, otters and water voles. Contractors should be familiar with the locations and sensitivities of any protected species that are present and take reasonable avoidance measures or comply with the requirements of any licence agreement in accordance with the advice of an ecologist.

Birds

- 3.47 Intentional harm to a wild bird, egg, or a nest that is in use or being built is an offence⁴¹. Disturbance of certain wild birds that are building a nest, or are in, on or near a nest containing eggs or young, or disturbance of dependent young is also an offence⁴².
- 3.48 All trees are a potential habitat for nesting birds so tree work should ideally, but not essentially, be undertaken outside the bird nesting season. Between March and August, a detailed inspection of each tree should be undertaken by a qualified ecologist to confirm the absence of nesting birds immediately prior to works.
- 3.49 Some birds nest outside the core nesting season. If an active nest is found at any time of year, work likely to affect the nest must be halted until the nest becomes inactive. This will vary depending on the species of bird but is typically up to six weeks. The advice of an ecologist regarding the duration and size of a protection buffer around the nest should be sought.

³⁹ Calculated according to BS5837 in the case of multi-stemmed trees

⁴⁰ See Biodiversity Metric User Guide, Section 3.5

⁴¹ Wildlife and Countryside Act 1981, 1 (1)

⁴² Wildlife and Countryside Act 1981, 1 (5)

Bats

- 3.50 It is an offence to damage, destroy or obstruct access to any structure or place which is used for shelter or protection⁴³, or breeding or resting⁴⁴ by a bat. Mature trees often contain cavities, splits and ivy, which may be attractive to bats.
- 3.51 The Ecological Impact Assessment (report reference: 16102-TEP-ZZZ-ZZZ-M-EN-000003, TEP 10850.003) found no trees within the site that have features to support roosting bats. The site offers suitable foraging habitat for bats, especially the scrub and woodland areas within the Pyramid Park site
- 3.52 If the presence of a bat, or a roost or resting site is suspected whilst undertaking works on any trees, operations must be halted, and the advice of appropriately licensed ecologist should be sought.

⁴³ Wildlife and Countryside Act 1981, 9 (4)

⁴⁴ The Conservation of Habitats and Species Regulations 2017, 43 (1)

4.0 Effects

- 4.1 In simple terms, the effects on arboriculture comprise an account of which existing trees, groups of trees, hedgerow and woodland would not be retained within the proposed development; what significance they have; and whether adverse effects would or can be mitigated or offset.
- 4.2 Effects may also include changes to the prospects, qualities and/or future management of remaining trees.

Proposed development

- 4.3 A detailed overview of the scope of works comprising the first phase of the wider Bury Interchange proposal, known as 'Southern Access', is provided in the Introduction Section of this report. However, in summary, the application proposal seeks to create a southern access and Metrolink footbridge crossing to allow access between Union Square/Knowsley Place, the Metrolink platform and Pyramid Park, including infill of the existing Metrolink underpass. Upgrades to the Metrolink platform and associated infrastructure are also proposed.
- 4.4 The proposed layout is shown on Drawing 2 and Drawing 3 and is based on the Site Plan (drawing reference: 16012-OOB-ZZZ-ZZZ-M-LA-100000) provided by the client.
- 4.5 This assessment was also informed by a Framework Construction Management Plan (CMP), prepared by Willmott Dixon (contractor) which shows the proposed arrangement of site logistics and the proposed hard standing working areas. An extract of these is shown in Figures 6 and 7. As set out earlier in the report, the Framework CMP will be conditioned with a requirement to provide a detailed CMP, including best practicable means, to be submitted and approved by the Council, as local planning authority, in advance of development formally commencing.

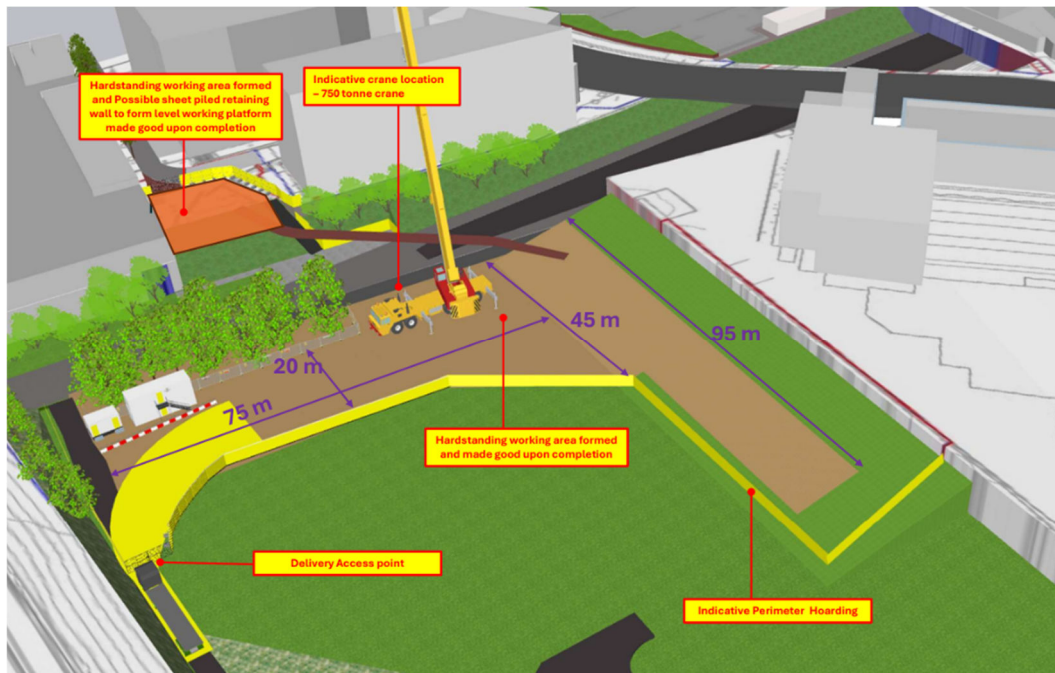


Figure 5 Proposed work areas within Pyramid Park

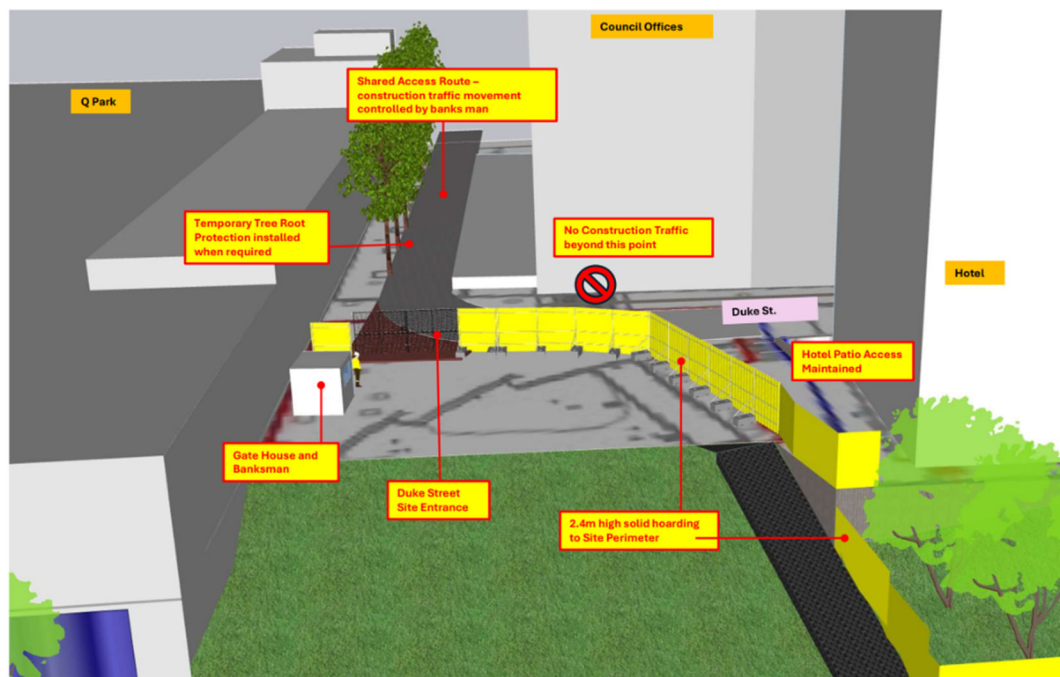


Figure 6 Duke Street site set up

4.6 The following information was also available and has informed this assessment:

- External Works Plan (drawing reference: 16012- OOB- ZZZ- ZZZ- D- LA- 080003)
- Existing & Proposed Indicative Levels (drawing reference: 16012- OOB- ZZZ- ZZZ- D- LA- 080010).
- Proposed Site Sections (drawing reference: 16012- OOB- ZZZ- ZZZ- D- LA- 080050)
- Below Ground Drainage (drawing reference: 16012-REN-BRY-XXX-D-CE- 131100 P)
- Planting Strategy (drawing reference: 16012- OOB- ZZZ- ZZZ- D- LA- 080040)

Tree removal

4.7 This section details all tree removal which is proposed as part of the development. All trees not identified for removal can be retained in accordance with BS 5837. Planning decisions should ensure that existing trees are retained wherever possible⁴⁵.

4.8 In total, tree groups comprising just 0.16ha would be removed. These are a mixture of low quality (Category C) and moderate quality (Category B) trees, predominantly within the former Pyramid Park. This figure however, excludes trees already consented for removal as part of the approve Pyramid Park remediations planning application to avoid double counting.

Table 4: Reference number and location of features that would be removed

Trees	Groups	Woodland	Hedgerow
-	(G3); (G4); (G5); (G6); G7; (G8); (G9); G12; G14	-	-

(Features in brackets are those of which a part would be removed, and part retained)

4.9 If planning permission is granted with reference to this report, the removal of any feature not listed above and shown on Drawing 2 for removal may constitute a material amendment and may therefore require further permission⁴⁶.

⁴⁵ NPPF paragraph 136

⁴⁶ E.g. Town and Country Planning Act s.73

- 4.10 The following table provides an overview of the quantity and the percentage of trees that would be removed and a breakdown of the number of instances of removal by quality category. The total (gross) areas may be higher than the absolute area of tree cover on the site due to overlap between adjacent features.

Table 5: Quantity and percentage of trees that would be removed

Feature	Number of features affected				
	Category A	Category B	Category C	Category U	Hedges
Trees	-	-	-	-	-
Groups	-	4	5	-	
Woodland	-	-	-	-	
Total loss	0.0ha	0.1097ha	0.0539ha	0.0ha	0m
Proportion of existing	0%	19.5%	14.8%	0%	0%

- 4.11 The vast majority of tree removal is required with the former Pyramid Park to create the working platform for the crane. This would remove several small shrubby, self-set groups but also over half of the established trees forming group G3.

Tree pruning

- 4.12 The works shown on Drawing 2 would be undertaken by a qualified contractor in accordance with British Standard 3998:2010 Tree work – Recommendations.
- 4.13 These include the pruning of trees that would be retained as follows:
- Tree T3 - the crown of which may need to be lifted and pruned back to the existing chain-link fence to facilitate site access off Market Street.
 - Group G1- the lower branches of trees towards the western of the group may need to be removed or reduced where they overhang the existing access track to provide c.5m ground clearance to facilitate machinery movement.
 - Group G2 - the branches of trees on the northern edge of the group may need to be lifted and pruned back to provide clearance over existing access track to facilitate compound access.

Effects on designated or protected features

- 4.14 The proposed development would not result in the removal or pruning of any trees with specific arboricultural designations or protected status.

5.0 Mitigation

5.1 This section describes opportunities to mitigate or offset adverse effects described by the previous section⁴⁷. It summarises measures that are part of the proposed development and which are relied upon by this report, and measures that are not proposed but could be secured by planning condition or agreement. Conclusions are drawn regarding overall effects, and the requirements that should be imposed in order to secure the outcomes that are described.

5.2 The table below provides an overview of effects on the receptors described in the preceding sections.

Table 6: Summary of effects and mitigation associated with the proposed development

Receptor	Would this proposal have any adverse effect*?	Can effects be mitigated or offset within the site?	Is mitigation or offsetting proposed in detail now?	Net effect of the proposed development
Canopy Cover	Yes	Yes	No	Negative
Tree Condition ⁴⁸	Yes	Yes	No	Pending
Ancient Woodland	No	N/A	N/A	Neutral
Veteran Trees	No	N/A	N/A	Neutral
Deciduous Woodland	No	N/A	N/A	Neutral
Wood Pasture and Parkland	No	N/A	N/A	Neutral
Traditional Orchard	No	N/A	N/A	Neutral
Hedgerow ⁴⁹	No	N/A	N/A	Neutral

**Without mitigation*

5.3 **Positive** residual effects represent benefits that would be delivered by the proposed development.

5.4 **Neutral**⁵⁰ residual effects are those that should have no weight in decision making.

⁴⁷ For simplicity, 'mitigation' is used in this report to mean both mitigation (measures to reduce or avoid adverse effects) and offsetting (measures to counterbalance remaining adverse effects)

⁴⁸ In this context, whether there would be a risk of harm to remaining trees during development (without protection)

⁴⁹ Habitat of Principal Importance

⁵⁰ Including negligible and non-material effects

- 5.5 **Negative** residual effects cannot be mitigated or offset and represent adverse effects of the proposed development. They may be acceptable in the planning balance on consideration of other benefits delivered by the proposed development.
- 5.6 **Pending** residual effects are those for which mitigation or offsetting can be secured after consent has been granted, typically by planning condition. It is assumed by this report that they would be.

Proposed measures

- 5.7 The following measures are proposed and would be secured by a planning permission referencing and requiring compliance with this report. They may also be secured by planning condition, or other agreement.

Layout

- 5.8 The retention of trees that has been assessed as possible within the proposed layout would be observed by the applicant and all appointed contractors; tree removal would be limited to that illustrated on Drawing 2.

Tree protection

- 5.9 A Preliminary Tree Protection Plan is provided at Drawing 3. It shows the general arrangement of temporary protection measures that would be installed prior to the commencement of any works, including ground investigation, setting out, compound establishment or delivery of any plant or materials. These should be confirmed during the production of an Arboricultural Method Statement as a condition of any planning approval once the final construction detail is known (see below).
- 5.10 Once approved, temporary protection measures would be maintained as shown during the entire construction process and would not be removed or realigned until all buildings, structures, hard surfaces, utilities, drainage and the removal of scaffolding, plant, compounds and surplus material has been completed.

Tree planting

- 5.11 New planting is shown indicatively on the Planting Strategy Plan (reference: 16012-OOB- ZZZ- ZZZ- D- LA- 080040) produced by Oobe. It includes areas of woodland planting (including whips and larger specimen trees); native shrub planting; and ornamental trees.
- 5.12 This planting would be within the area of the application site within Pyramid Park and would remediate the land used for the working platform for the crane.

Recommended measures

- 5.13 The following measures are recommended and should be secured by planning condition or other agreement.

Arboricultural Method Statement

- 5.14 An Arboricultural Method Statement should be produced in accordance with BS5837 and linked to the CMP. It should include:
- The location, size and buffer zones for all trees that would be retained in the context of the final layout and associated construction activities
 - The arrangement of temporary protection measures that would be installed prior to commencement and maintained during construction
 - The location of all proposed ground remodelling, new structures and surfaces, level changes, excavations and access requirements that could harm retained trees
 - A methodology and/or details for all such activities that will be followed to avoid harm to retained trees
 - Details for all temporary protection measures, construction measures, products or construction methods that are specified, including:
 - Temporary barrier fencing
 - Tree trunk protection
 - Ground protection
 - A schedule of monitoring during construction and reporting on compliance
- 5.15 The scope of the Arboricultural Method Statement and the locations of activities that cannot be completed without it are illustrated on a Preliminary Tree Protection Plan at Drawing 3.

Planting

- 5.16 A detailed scheme of tree planting should be produced and implemented, in accordance with Planting Strategy Plan.
- 5.17 Provision should be made for the maintenance of new planting in accordance with British Standard 8545:2014 Trees: from nursery to independence in the landscape - Recommendations, and replacement of failures for a period of at least 5 years.

Drawings

Drawing 1: Tree Constraints Plan

Drawing 2: Tree Works Plan

Drawing 3: Preliminary Tree Protection Plan



KEY

[This drawing must be reproduced in colour]

-   T1/G1/W1 Trees Shrubs
-  Root Protection Area (RPA)
-  Phase 1 Works Boundary
-  # Approximate location
(Feature not shown on supplied topographical survey)

Tree Quality Categorisation

(Based on BS 5837:2012 Trees in relation to design, demolition and construction - Recommendations)

-   Category A (High quality) Category B (Moderate quality)
-  Category C (Low quality)
-  Category U (Unsuitable for retention)

NOTE: This drawing should be read in conjunction with the respective Arboricultural Survey Data (Appendix A).



Rev	Description	Drawn	Approved	Date
A	Trees outside Phase 1 influence removed	JGS	RMG	20/03/25

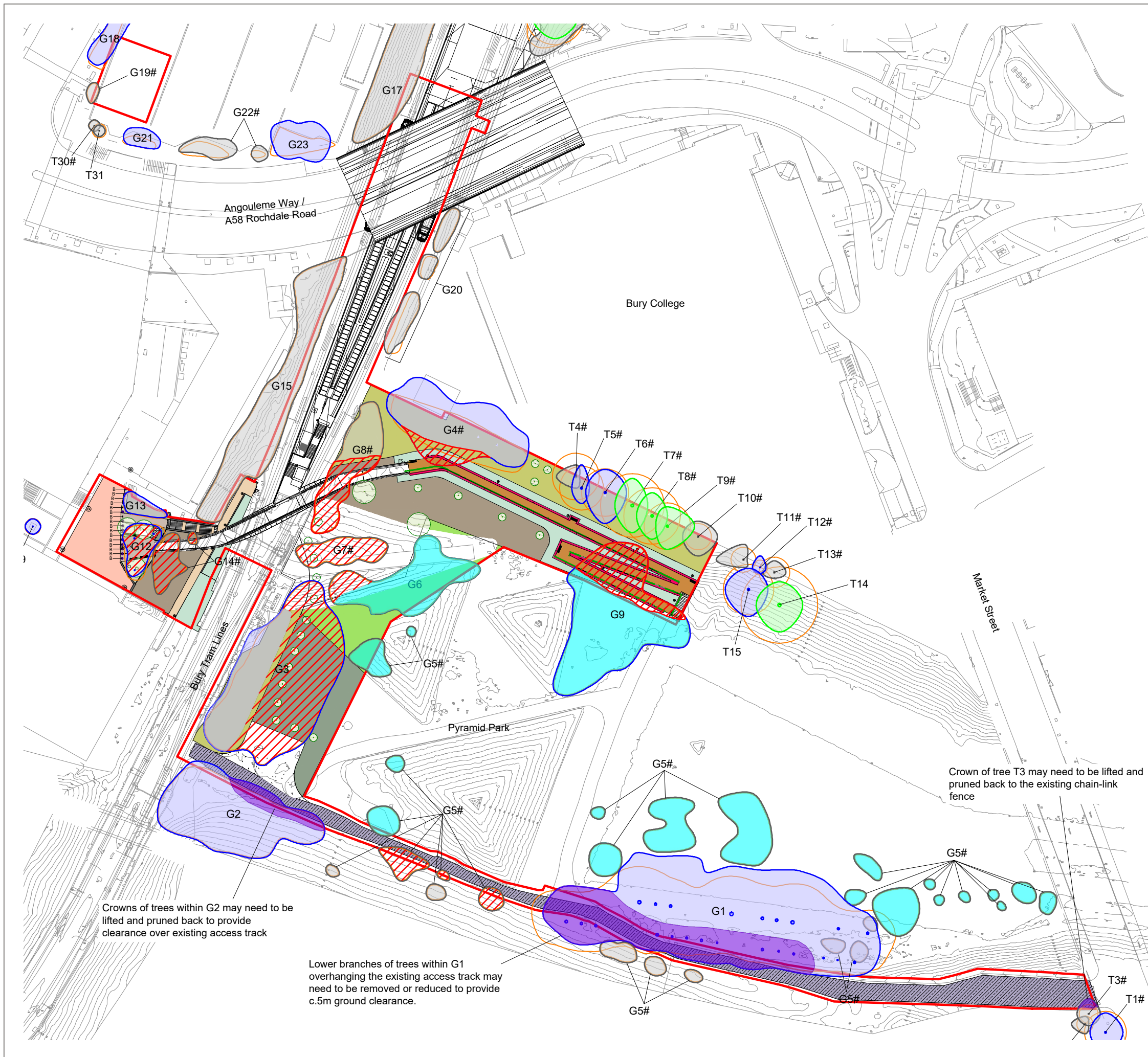


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Project
**Bury Interchange
Phase 1 - Southern Access**
Title
Drawing 1: Tree Constraints Plan [BASELINE]

Drawing Number
10612-TEP-ZZZ-ZZZ-D-EN-000006 (TEP D10850.01.001)

Drawn	Checked	Approved	Scale	Date
RK	JGS	RMG	1:1,250 @ A3	05/03/2025



KEY

[This drawing must be reproduced in colour]

- T1/G1/W1 Trees
- Root Protection Area (RPA)
- Phase 1 Works Boundary
- # Approximate location
(Feature not shown on supplied topographical survey)

Trees to be retained and protected

- Category A
(High quality)
- Category B
(Moderate quality)
- Category C
(Low quality)
- Category U
(May be retained for habitat value)

Tree works proposed as part of Phase 1 - Southern Access application

- Trees to be removed
(Canopy outline denotes tree quality category)
- Trees to be pruned
(Canopy outline denotes tree quality category)

Tree removal already consented by Pyramid Park remediation application

- Trees removed

NOTE: This drawing should be read in conjunction with the respective Arboricultural Survey Data (Appendix A).



A	Updated tree removal based on additional design detail	JGS	RMG	20/03/25
Rev	Description	Drawn	Approved	Date



THE ENVIRONMENT PARTNERSHIP

401 Faraday Street, Birchwood Park, Warrington WA3 6GA
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Project
Bury Interchange
Phase 1 - Southern Access

Title
Drawing 2: Tree Works Plan [EFFECTS]

Drawing Number
10612-TEP-ZZZ-ZZZ-D-EN-000007 (TEP D10850.01.002)

Drawn	Checked	Approved	Scale	Date
JGS	HEE	RMG	1:1,000 @ A3	18/03/2025

Preliminary Tree Protection Plan

Preliminary tree protection measures and area where further detail is required to design the final protection are highlighted opposite. Additional information and assessment on the following elements will be required in the form of an Arboricultural Method Statement, as a minimum, to ensure adequate protection is afforded to trees during and post construction.

- (a) An arboriculturist should be appointed to prepare the Arboricultural Method Statement prior to development commencement. They may thereafter be required to supervise certain activities as specified by the Method Statement.
- (b) Detailed methods should be specified for the implementation of construction in proximity to retained trees determined in consultation with other project specialists.
- (c) The build programme and confirmed site logistics plan should be reviewed in relation to retained trees.
- (d) The alignment and specification of temporary protection measures for the satisfactory retention of trees during the build phase (barrier fencing and ground protection) should be confirmed.
- (e) Details of general precautions that should be exercised during the construction phase to minimise impact on retained trees should be provided.
- (f) A system of monitoring and compliance of contractor performance, materials and workmanship according to the AMS should be established.
- (g) The AMS should be submitted to the local planning authority for approval and implemented in full.

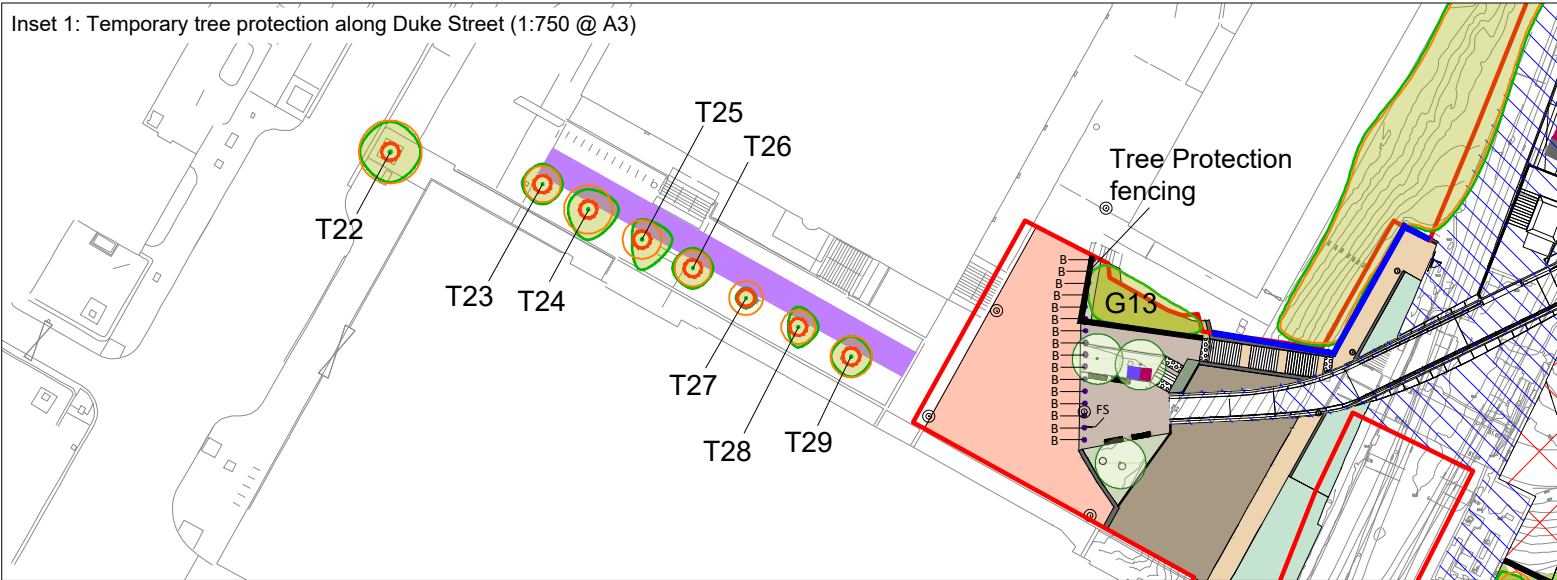


KEY

[This drawing must be reproduced in colour]

- T1/G1/W1 Retained trees
- Root Protection Area (RPA)
- Phase 1 Works Boundary
- Trunk Protection
(Green Grid Trunk Protecta 1.8m or approved alternative)
- Tree Protection Fencing
- Site perimeter hoarding as tree protection
(To be replaced by Tree Protection Fencing if removed or realigned)
- Ground Protection
- Appropriate ground treatment and protection to be determined between construction contractor and arboriculturist

Inset 1: Temporary tree protection along Duke Street (1:750 @ A3)



A	Updated tree retention based on additional design detail	JGS	RMG	20/03/25
Rev	Description	Drawn	Approved	Date

THE ENVIRONMENT PARTNERSHIP

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Project
Bury Interchange
Phase 1 - Southern Access

Title
Drawing 3: Preliminary Tree Protection Plan [MITIGATION]

Drawing Number
10612-TEP-ZZZ-ZZZ-D-EN-000008 (TEP: D10850.01.003)

Drawn	Checked	Approved	Scale	Date
JGS	HEE	RMG	1:1,000 @ A3	18/03/2025

Appendix A: Arboricultural Survey Data



Surveyor Ryan Kearney and Paul Jones
Survey Date 25/11/2024
Site Bury Interchange
Drawing Ref 10850.01.001

Italicised Feature Ref: Inspection of this feature was restricted
Italicised Values: Feature value was estimated

APPENDIX A: Arboricultural Survey Data Sheets

Ref	Species	Height	Canopy Ground Clearance	Stem Diameter (or range)	No. of stems/ individuals	Crown Spread North	Crown Spread South	Crown Spread East	Crown Spread West	Lowest Branch Height	Lowest Branch Direction	Maturity	Condition	Comments on form, condition, health and significant defects	Management recommendations in current context	BS 5837 Quality Category	Estimated Remaining Contribution
		(m)	(m)	(mm)	arising below 1.5m	(m)	(m)	(m)	(m)	(m)	(N,S,E,W)	Young, Middle Age, Mature	Good, Fair, Poor, Veteran			A,B,C,U (1,2,3)	Long, Medium, Short, Very Short
Trees																	
T1	Goat willow	7.0	1.0	450	12	5.0	5.0	4.5	4.0	0.5	W	Mature	Good	Basally multi-stemmed but with attractive rounded crown. Increased visual amenity value due to location adjacent public footpath. Inspection restricted to behind railway boundary fence.		B ,1	Medium
T2	Sycamore	7.0	1.0	177	2	2.0	2.5	1.0	3.5	1.0	SW	Middle Age	Fair	Basally twin-stemmed. Growing on railway embankment. Asymmetric crown due to dominant willow tree to east. Inspection restricted by chain-link fence.		C ,1	Long
T3	Common ash	9.0	1.0	202	3	4.0	3.0	3.0	3.0	2.0	N	Middle Age	Fair	Basally tri-stemmed. Growing on railway embankment. Asymmetric crown due to dominant willow tree to east. Inspection restricted by chain-link fence.		C ,1	Long
T4	Sycamore	8.0	1.0	503	7	3.0	3.0	1.0	5.0	1.0	N	Middle Age	Fair	Basally multi-stemmed with poor, squat form. Stems and branches cut back over adjacent car park leaving stubs.		C ,1	Long
T5	Common alder	12.0	3.0	475	2	6.0	4.0	2.0	2.5	2.5	W	Middle Age	Fair	Basally twin-stemmed but both rooted independently. Compact crown with twiggy growth on main stem and branches indicating low vigour. Minor deadwood commensurate with age and species.		B ,2	Medium
T6	Common ash	14.0	1.5	510	1	6.0	8.0	5.5	5.0	2.5	W	Middle Age	Fair	Reasonable overall form. Branch removals and failures from lower and mid crown. Lowest branches are dead but bud distribution in upper crown appears good.		B ,1	Medium
T7	Silver birch	15.0	2.0	686	2	7.0	7.0	4.0	4.5	2.5	S	Mature	Good	Prominent tree at top of steep bank. Increased public amenity due to location adjacent car park. One of a row of well formed mature trees.		A ,1, 2	Long
T8	Silver birch	14.0	2.0	610	1	6.0	6.0	4.0	4.0	2.5	S	Mature	Good	Prominent tree at top of steep bank. Increased public amenity due to location adjacent car park. One of a row of well formed mature trees.		A ,1, 2	Long
T9	Silver birch	15.0	2.0	500	1	5.0	6.0	7.0	3.0	2.0	SE	Middle Age	Good	Prominent tree at top of steep bank. Increased public amenity due to location adjacent car park. One of a row of well formed mature trees.		A ,1, 2	Long
T10	Common ash	9.0	1.5	284	2	4.0	5.0	5.0	4.0	1.5	E	Middle Age	Fair	Inspection restricted from afar due to bramble covered bank. Balanced rounded form and vigorous appearance.		C ,2	Short
T11	Grey willow	5.0	1.0	266	2	4.0	2.0	1.0	7.0	1.0	SW	Middle Age	Fair	Stem have previously failed West and are now near horizontal. Healthy crown regeneration. Growing within an area of mixed shrubs that limit access and visibility.		C ,1	Medium
T12	Rowan	6.0	3.0	160	1	3.0	1.5	1.5	2.0	3.0	N	Middle Age	Fair	Compact balanced crown. Stem bow north-East. Increased public amenity due to location adjacent to car park.		B ,1	Medium
T13	Common ash	11.0	5.0	330	1	3.0	1.5	3.0	3.0	4.5	SW	Middle Age	Fair	Advanced dieback. Small cherry at base.		C ,2	Short
T14	Sycamore	15.0	1.0	824	3	6.0	7.0	6.0	6.0	0.5	S	Mature	Fair	Large tri-stemmed basal union; eastern stem becoming enveloped by the others but all appear to be rooted independently. Minor shade deadwood in Crown interior. Growing on steep slope.		A ,1	Long
T15	Sycamore	12.0	1.0	543	3	5.5	7.0	5.0	6.0	1.0	SW	Middle Age	Fair	Basally tri-stemmed but all rooted independently. Asymmetric lower crown due to the absence if lower branches on northern side. Minor shade deadwood.		B ,1	Long
T22	Red oak	8.0	4.0	260	1	3.0	3.0	3.0	3.0	3.0	E	Middle Age	Good	Medium sized roadside tree positioned next to busy road. Growing out of grated tree pit. Good vigour. No obvious defects.		B ,2	Long
T23	Chanticleer pear	7.0	3.0	150	1	2.0	2.0	2.0	2.0	3.0	E	Middle Age	Good	Small to medium sized in pedestrianised area. Growing out of grated tree pit. Good vigour. No obvious defects.		B ,2	Long
T24	Chanticleer pear	7.0	3.0	150	1	2.0	3.0	3.0	2.0	3.0	W	Middle Age	Good	Small to medium sized in pedestrianised area. Growing out of grated tree pit. Good vigour. No obvious defects. Slight eastern lean.		B ,2	Long
T25	Chanticleer pear	6.0	3.0	160	1	2.0	3.0	3.0	1.0	3.0	W	Middle Age	Good	Small to medium sized in pedestrianised area. Growing out of grated tree pit. Good vigour. No obvious defects. Slight eastern lean.		B ,2	Long
T26	Chanticleer pear	6.0	3.0	150	1	2.0	2.0	2.0	2.0	2.0	W	Middle Age	Good	Small to medium sized in pedestrianised area. Growing out of grated tree pit. Good vigour. No obvious defects. Slight eastern lean.		B ,2	Long
T27	Chanticleer pear	6.0	3.0	140	1	1.0	1.0	1.0	1.0	2.0	E	Middle Age	Fair	Small to medium sized in pedestrianised area. Growing out of grated tree pit. Reduced canopy density compared to neighbouring trees.		B ,2	Long
T28	Chanticleer pear	6.0	3.0	140	1	2.0	2.0	2.0	1.0	2.0	W	Middle Age	Fair	Small to medium sized in pedestrianised area. Growing out of grated tree pit. Reduced canopy density compared to neighbouring trees.		B ,2	Long



Surveyor **Ryan Kearney and Paul Jones**

Survey Date **25/11/2024**

Site **Bury Interchange**

Drawing Ref **10850.01.001**

Italicised Feature Ref: Inspection of this feature was restricted

Italicised Values: Feature value was estimated

APPENDIX A: Arboricultural Survey Data Sheets

Ref	Species	Height	Canopy Ground Clearance	Stem Diameter (or range)	No. of stems/ individuals	Crown Spread North	Crown Spread South	Crown Spread East	Crown Spread West	Lowest Branch Height	Lowest Branch Direction	Maturity	Condition	Comments on form, condition, health and significant defects	Management recommendations in current context	BS 5837 Quality Category	Estimated Remaining Contribution
		(m)	(m)	(mm)	arising below 1.5m	(m)	(m)	(m)	(m)	(m)	(N,S,E,W)	Young, Middle Age, Mature	Good, Fair, Poor, Veteran			A,B,C,U (1,2,3)	Long, Medium, Short, Very Short
T29	Chanticleer pear	7.0	3.0	170	1	2.0	2.0	2.0	2.0	2.0	W	Middle Age	Good	Small to medium sized in pedestrianised area. Growing out of grated tree pit. Reduced canopy density compared to neighbouring trees.		B ,2	Long
T30	Silver birch	6.0	2.0	110	1	1.5	1.5	1.5	1.5	2.0	E	Young	Good	Small ornamental tree in raised planting pit.		C ,1, 2	Medium
T31	Silver birch	6.0	2.0	150	1	1.5	1.5	1.5	1.5	2.0	E	Young	Fair	Small ornamental tree in raised planting pit. Minor deadwood.		C ,1, 2	Medium
#REF!																	
T33	English elm	15.0	5.0	632	2	6.0	6.0	6.0	6.0	2.0	SE	Mature	Fair	Large elm tree positioned next to footpath and within influencing distance of tram lines and buildings. Compacted union at 1m on main stem. Moderate deadwood within canopy. Spreading canopy. Unique species for area.		A ,1, 2	Medium
Groups																	
G1	Hybrid black poplar	20 to 24	5.0	380 to 900	23							Mature	Fair	Double row of planted trees either side of a former desire line. Deadwood throughout commensurate with age and species. More dominant trees at north-Eastern end.		B ,1, 2	Medium
G2	Common alder, Common hazel, English holly, Bird cherry, Goat willow, Grey willow	3 to 13	1.0	80 to 400	35							Middle Age	Fair	Dense group providing screening to adjacent tram line and railway. Older better quality trees towards the centre.		B ,2	Long
G3	Sycamore, Common alder, Grey alder, Common hazel, Tree cotoneaster, Common hawthorn, English holly, Rowan	4 to 12	1.0	80 to 320	60							Middle Age	Fair	Mixed species firming a dense screen to adjacent tram lines. Early woodland characteristics but strewn with litter.		B ,2	Long
G4	Cherry laurel, Bird cherry, Elder	6 to 9	0.0	170 to 250	10							Middle Age to Mature	Good	Assumed remnant ornamental planting of former site use, now forming a dense screen atop a steep bramble covered bank.		B ,2	Long
G5	Silver birch, Common hazel, Wild cherry, Pedunculate oak, Goat willow, Grey willow	2 to 6	0.5	75 to 200	45							Young to Middle Age	Good	Scattered self-set trees that have colonised the site following clearance and cessation of management. Some with good future prospects.		C ,2, 3	Long
G6	Grey alder, Common hazel, Cherry laurel, Grey willow	2 to 6	0.5	80 to 110	12							Young	Good	Vigorous self-set trees that have colonised the land following site clearance. The exception is one established laurel at western end.		C ,2	Long
G7	Grey alder	6 to 8	2.0	60 to 180	12							Young	Good	Vigorous self-set trees growing in northern side of abandoned track leading to tramline underpass.		C ,2	Long
G8	Common ash, Goat willow, Elder	3 to 7	0.5	100 to 160	8							Middle Age	Mixed	Scrubby trees growing at foot of tram track retaining wall. Ivy throughout. Inspection restricted from afar due to dense bramble.		C ,2	Medium
G9	Common alder, Grey alder, Silver birch, Hybrid black poplar, Aspen, Goat willow	3 to 12	1.0	75 to 350	35							Young to Middle Age	Fair	Dense group of young to middle age pioneer trees. Fly tipping within group.		B ,2, 3	Long
G12	Holm oak	6 to 7	2.0	220 to 250	3							Middle Age	Fair	Situated in soft landscaping area. Well established. Slight loss in leaf turgor due to fungal infection associated with canopies.		B ,1, 2	Medium
G13	Himalayan birch	6 to 7	1.0	180 to 250	4							Middle Age	Good	Four multi-stem birch situated in shrub. Well established, good vigour.		B ,2	Medium
G14	Himalayan birch, Goat willow	6 to 7	1.0	150 to 250	12							Middle Age	Good	Sparse group of planted and self seeded multi-stem trees. Dense cotoneaster understory.		C ,2	Medium
G15	Norway maple, Italian alder, Himalayan birch, Common hazel, European medlar, Goat willow	5 to 13	1.0	80 to 200	40							Young to Middle Age	Good	Access restricted due to positioning between private property and tram line. Dense group of mostly smaller developing trees with a small number of middle aged trees located to the west of group.		C ,2	Long
G16	Tree cotoneaster, Common ash, Rowan, Swedish whitebeam, English elm	5 to 15	3.0	260 to 880	6							Middle Age to Mature	Fair	Small group of smaller developing trees positioned between road and footpath. Compacted unions and multi-stemmed trees within group.		C ,2	Medium
G17	Sycamore, Silver birch, Common hazel, Wild cherry, Goat willow	6 to 13	2.0	75 to 650	30							Young to Middle Age	Fair	Access restricted due to positioning between fence and tram lines. Group positioned on embankment behind retaining wall. Dieback present throughout group. Ivy covering some stems and canopies. Multi-stemmed trees and compacted unions within group.		C ,2	Medium
G18	Small-leaved lime	6 to 7	2.0	180 to 310	4							Middle Age	Good	Linear group of lime situated in raised soft landscaping area. Good form and vigour.		B ,1, 2	Long
G19	Silver birch, Common pear	3 to 4	2.0	75 to 100	2							Young to Middle Age	Fair	Two small ornamental trees in raised pit.		C ,2	Medium
G20	Sycamore, Goat willow	5 to 12	3.0	80 to 250	8							Middle Age	Good	Group of self sown tree growing between 2 retaining walls and adjacent to tram lines. Despite location trees have developed well. Good vigour. Access restricted due to location.		C ,2	Medium
G21	Small-leaved lime	5 to 6	3.0	180 to 220	3							Middle Age	Good	Linear group of lime situated in raised soft landscaping area. Good form and vigour.		B ,1, 2	Long



Surveyor **Ryan Kearney and Paul Jones**
Survey Date **25/11/2024**
Site **Bury Interchange**
Drawing Ref **10850.01.001**
Italicised Feature Ref: Inspection of this feature was restricted
Italicised Values: Feature value was estimated

APPENDIX A: Arboricultural Survey Data Sheets

Ref	Species	Height	Canopy Ground Clearance	Stem Diameter (or range)	No. of stems/ individuals	Crown Spread North	Crown Spread South	Crown Spread East	Crown Spread West	Lowest Branch Height	Lowest Branch Direction	Maturity	Condition	Comments on form, condition, health and significant defects	Management recommendations in current context	BS 5837 Quality Category	Estimated Remaining Contribution
		(m)	(m)	(mm)	arising below 1.5m	(m)	(m)	(m)	(m)	(m)	(N,S,E,W)	Young, Middle Age, Mature	Good, Fair, Poor, Veteran			A,B,C,U (1,2,3)	Long, Medium, Short, Very Short
G22	Silver birch, Cherry species, Goat willow	3 to 4	2.0	150 to 210	7							Young to Middle Age	Mixed	Mixture of self seeded and planted ornamental trees. Situated in raised planting area. Dense shrub understory with ivy and bhudlia.		C , 1, 2	Medium
G23	Small-leaved lime	6 to 7	3.0	290 to 400	5							Middle Age	Mixed	Group of lime situated in raised soft landscaping area. Good form and vigour. One tree on south west with moderate deadwood within centre of crown.		B , 1, 2	Long

Appendix B: Survey Method

Limitation

Trees are dynamic living organisms with a constantly changing structure; even healthy trees can change or decline. Survey information is presented as being correct at the time of survey. Limitations to the reliability of the survey data are noted within Appendix A and the main report text.

Scope

All woody vegetation with a stem diameter exceeding 75mm is recorded. Below this threshold, vegetation may also be recorded at the discretion of the surveyor. The survey includes woody vegetation within a defined boundary, and on adjacent land where the characteristics, location or context of the tree mean that activity within the boundary could affect the tree, or be influenced by it. This is typically up to 15m outside the boundary.

Resolution

Vegetation is recorded as either an individual *Tree*, *Group* of trees, *Woodland*, or *Hedgerow*. This is done at the discretion of the surveyor to provide a useful resolution to the survey data, to differentiate between features with varying attributes and group those with common attributes, and collective value or function.

Typically, *Trees* are recorded where they are arranged separately; different from adjacent trees; or where the assessment would benefit from greater detail. *Groups* are coherent arboricultural features comprising trees with a collective form, function, history or management opportunities. *Woodland* is recorded where areas of tree cover have the qualities of a woodland habitat, including age and species structure, natural regeneration, and associated non-arboreal features. *Hedgerow* describes linear features largely comprising woody vegetation that are under, or could be returned to, regular hedgerow management. It should be noted that these terms are also used in other assessment types, sometimes with different definitions.

Tree locations

The location of trees is based on stem locations and canopy spreads taken from a topographical survey, where available. Where this information is not available, this is noted in Appendix A and locations should be regarded as approximate. Approximate locations are based on one or more of: GPS data captured during the survey; aerial photographs; and measurement from known points of reference. Approximate stem locations are typically accurate to within a few metres. Stem locations are shown for all *Trees*.

Groups, *Woodland* and *Hedges* are principally described in terms of their canopy outline, although stem locations may also be shown. Individual tree canopy outlines are projected on Drawings based on measurements taken as described below (see Crown Spread). *Groups*, *Woodland* and *Hedges* canopy outlines are projected based on the same hierarchy of source data as stem locations.

Tree survey

The survey is conducted from ground level by an arboriculturist, taking account of the tree, and its context. The nature of the soil is not assessed. Non-invasive assessment tools may be used as appropriate, including hypsometer, measuring tape, probe and nylon mallet.

The following attributes are recorded for each feature (see Arboricultural Survey Data Sheets at Appendix A):

Reference Number	A unique code per feature, typically but not necessarily a chronological sequence, in the form <i>Tn</i> for <i>Trees</i> ; <i>Gn</i> for <i>Groups</i> ; <i>Wn</i> for <i>Woodlands</i> ; and <i>Hn</i> for <i>Hedgerows</i>
Species	The common name is given. All species are listed for <i>Groups</i> , <i>Woodland</i> and <i>Hedgerows</i> . The Latin name may also be given if further clarification is required.
Height	Top height recorded in metres, or the range for <i>Groups</i> , <i>Woodland</i> and <i>Hedgerows</i>
Canopy Ground Clearance	The height of the canopy above ground level in metres
Stem Diameter	A measurement taken at 1.5 metres above ground level, or the nearest representative point below, in millimetres. For multi-stemmed trees a single figure is calculated according to BS5837 4.6. For <i>Groups</i> , <i>Woodland</i> and <i>Hedgerows</i> , the range of diameters

No. of Stems / Individuals	The number of stems arising below a height of 1.5 metres, or for <i>Groups</i> , <i>Woodland</i> and <i>Hedgerows</i> an estimate or count of the number of trees
Crown Spread	Radial branch spread in metres at cardinal points (N, S, E, W) from the location of the <i>Tree</i> stem at ground level (for <i>Groups</i> , <i>Woodland</i> and <i>Hedgerows</i> , see <i>Tree Locations</i>)
Lowest Branch Height	The height of the first significant branch at the point of attachment (<i>Trees</i> only)
Lowest Branch Direction	The direction of growth of the first significant branch from the point of attachment (<i>Trees</i> only)
Maturity	Classification describing age relative to the species, and size and growth potential, in order to inform management decisions • Young means small and/or recently planted and could be relocated, or replaced on a like for like basis • Middle Age means established and independent, within the growth stage of life, and with potential to continue increasing in height and/or spread • Mature means having reached ultimate height and/or spread, given the location and surroundings; further increases will be slow or limited • Mixed Age (<i>Groups</i>, <i>Woodland</i> and <i>Hedgerows</i> only) means comprising all three maturity classes
Condition	An overall assessment of a feature's physiological and structural state, informing longevity and quality categorisation, and supported by <i>Comments</i> • Good condition means with vitality and resilience commensurate with species and age, and without significant defects or pathogens • Fair condition means with tolerable reduction of vitality and resilience, and/or remediable or tolerable defects and/or pathogens • Poor condition means with declining or significant loss of vitality and resilience, and/or significant and irreparable defects and/or pathogens • Dead condition means without photosynthetic or metabolic capacity, or moribund and in imminent terminal decline • Mixed (<i>Groups</i> and <i>Woodland</i>) means comprising more than one condition class • Veteran means trees of exceptional value, meeting recognised criteria including age, size and characteristics. Classification is partly informed by the sustained presence of structural defects, physiological decline, and pathogens, and their contribution to biodiversity. Undesirable characteristics in ordinary trees may be desirable in veteran trees, therefore <i>Veteran</i> can be understood as a superlative <i>Condition</i> that supersedes other categories (excluding <i>Dead</i>).
Comments	A description of all significant characteristics of the feature and its context that are not described by other attribute fields; including observations to support the classification of <i>Condition</i> , <i>Quality Category</i> and <i>Estimated Remaining Contribution</i> as appropriate
Management Recommendations	Recommendations for arboricultural works based on the current land use, in the interests of good arboricultural practice. These are incidental to the primary survey purpose, and not a comprehensive schedule in pursuit of any particular objective.
BS 5837 Quality Category	Tree quality assessment based on Table 1 of BS 5837:2012 (see below) comprising quality categories A , B , C and U and sub-categories 1 , 2 and 3
Estimated Remaining Contribution	A forecast of the durability of the feature in its current form and context, and therefore the reliance that can be placed on any benefits or functions it provides. This is influenced by <i>Species</i> and <i>Condition</i>, and is not necessarily a forecast of life expectancy. • Long means more than 40 years • Medium means 20 to 40 years • Short means 10 to 20 years • Very Short means less than 10 years

Table 1 Cascade chart for tree quality assessment

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	- Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) - Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline - Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality <i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</i>			See Table 2
	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation	
Trees to be considered for retention				
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of 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)	See Table 2
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	See Table 2
Category C Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	See Table 2

Table 1: Extract from **British Standards Institution (2012) BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations**, page 9

Note on Root Protection Areas:

Data is captured during the survey to inform the design of Root Protection Areas (RPA). These are a design tool, representing the area around a tree in which restrictions to some activities may be required to avoid significant harm, particularly to roots and soil. The RPA is a function of *Stem Diameter*, and additional considerations including management history, barriers to root growth, topography, ground conditions and tree characteristics. These factors are combined by an arboriculturist to produce a buffer zone for each feature from which the exclusion of construction activities would ensure the continued reliability of the survey data at Appendix A, including *Condition*, *BS 5837 Quality Category* and *Estimated Remaining Contribution*.

For *Trees*, RPA is defined as a circle with a radius 12 times the *Stem Diameter*, which may be modified to reflect the considerations above.

For *Groups* and *Woodland* RPA is based on the size and location of peripheral constituent trees, and presented as an offset from the canopy edge giving equivalent or greater protection to all trees of any size, or modified to reflect significant variation in constituent tree sizes and/or the considerations above.

For *Hedgerow*, no RPA is shown. Typically, hedgerow requires a smaller stand-off than trees due to reduced crown dimensions. Any stand-off should include sufficient space for access and ongoing management and should therefore normally be based on the canopy spread rather than root spread.



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