

Castlefields Tree Strategy

January 2008



'Trees are part of the living landscape which is not constant, but is changing with time. It is inevitable that some trees will be lost each year, for one reason or another, and a sustained effort is therefore needed to establish enough young trees to keep the numbers at an acceptable level. This is fundamental to the concept of sustainability and should be regarded as our responsibility to future generations. Just as we are able to enjoy the trees which our forefathers planted, so must we ensure that our successors will have the opportunity to appreciate trees which were planted during our era of land custodianship' (from Halton's Natural Assets Strategy para. 3.5.1).

Castlefields has a distinctly 'green' character that contributes greatly to the area. To ensure the urban tree population is sustained through the re-development process an active system of measured planting, maintenance and management is required. This strategy is aimed at providing the structure to achieve a sustainable tree population through co-operative and consistent management.



Halton Borough Council (HBC)

TBC

Liverpool Housing Trust (LHT)

TBC

Co-operative Development Services (CDS)

TBC

Castlefields is a housing area in Halton that was developed as part of the Runcorn New Town in the late 1960s. Castlefields has an extensive landscaped character that contributes greatly to the local environment. Despite the green surroundings, the general prosperity of the area declined during the 1990s, when wide-reaching socio-economic problems began to develop.

Consequently, in 2003 the Castlefields Regeneration Programme was initiated, tasked to address the problems that contributed to the area's decline. The Castlefields Masterplan sets out ambitious projects to change the area's fortunes and deliver a sustainable community for the future. Radical changes to the physical form of the estate have been necessary to deliver this aim, both in terms of housing and infrastructure.

Unfortunately, due to the confined nature of the sites designated for development, these improvements have so far resulted in the unavoidable loss of around 466 trees. There is a diverse mixture of trees within Castlefields, some of which are inappropriate to their location and/or in poor condition due to the management practices undertaken in an attempt to 'fit' the tree to its location.

The need for a tree strategy has been identified to work alongside and beyond the regeneration programme to ensure Castlefields retains a sustainable tree population.

Part I of this Tree Strategy assesses the current policy framework for tree management, appraises the tree stock as it was before regeneration and evaluates the consequences of the development schemes for the tree cover. Part II provides management principles and action plans, identifies planting opportunities and gives guidance for the establishment of new trees on those sites.

The four guiding management principles of this Tree Strategy are:

- 1. To promote the value and benefits of trees to the local community;*
- 2. To ensure that trees are managed in accordance with good arboricultural practice;*
- 3. To ensure that the current tree and woodland coverage is sustained for future generations;*
- 4. To ensure that new development schemes make provision for retaining the best of the existing trees, and provide for new planting to compensate for any that have to be felled.*

Detailed action plans for each of the four principles commit to providing replacement tree planting at least on a 2:1 policy but striving to achieve 3:1 where possible. To facilitate this, areas of opportunity for new planting within the regeneration masterplan are identified by the strategy. A planting palette has been compiled to guide users' species choice to be appropriate to the location.

To be successful the key stakeholders need to take the tree strategy forward; Halton Borough Council in assessing planning applications and managing its own woodland and landscape areas; Liverpool Housing Trust and CDS Housing in developing their own sites and in managing their own landscape areas; also private developers and local residents on a smaller scale.

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THE CASTLEFIELDS REGENERATION PROGRAMME

- 1.1 Castlefields is a housing area in Runcorn, Halton, originally of some 2400 predominantly social-rented properties. It was developed by the Runcorn New Town Development Corporation between 1968 and 1972 to alleviate overcrowded urban areas in Merseyside. The original housing stock comprised 350 traditional brick-built bungalows, 500 two-storey concrete panel houses, and 1,397 deck-access flats of the same concrete panel construction system.



Photo 1 – Example of deck-access flats

- 1.2 Designed according to the Radburn Model and influenced by the Bauhaus principles, Castlefields is a classic example of 'modernist' town planning. In addition to the innovative construction methods employed, the estate had a number of other distinct features, including: - segregated pedestrian and vehicle routes, elevated walkways linking residential blocks to the local centre and an extensive landscaped setting including a lake and a canal.
- 1.3 At the time of its development, the estate was lauded as the future of sustainable living that offered a radical alternative to the crowded industrial suburbs. However, despite its credentials and early popularity, the 1980s and 1990s saw a change in fortunes for the estate due to both physical and wider socio-economic factors. As a result, the area developed wide-reaching housing, environmental, economic, health and social problems. By the start of the millennium, Castlefields was the Borough's most deprived ward.
- 1.4 Castlefields is a key regeneration area for the Borough. In 2003, a Partnership was formed to drive forward the areas regeneration, between English Partnerships, the Housing Corporation, Halton Borough Council and two registered social landlords, CDS Housing and Liverpool Housing Trust.
- 1.5 In 2004, a Masterplan (Figure 5) proposing over 50 individual projects to regenerate the area was produced by consultants Taylor Young. Each of the Partners adopted the masterplan and have since been working together to deliver it. Since then, Castlefields has undergone massive changes. Over 800 of the deck access flats have been removed and replaced with a more desirable mix of modern apartments and traditional family housing. A new 8-acre Youth Activity park has been created, which has extensively improved the public space provision.

- 1.6 In the future, the Partnership will be continuing to renew the old housing stock, and will also redevelop the dilapidated local centre. Several other sites will be released to private-sector housing developers.
- 1.7 The key priorities of the regeneration programme have been to improve the housing, economic and social wellbeing of Castlefields. However, three years into the programme, the necessary step-change has been achieved and the project now has its own momentum. The purpose of this Tree Strategy is to ensure that the remaining valuable landscaped setting is managed appropriately and does not suffer unnecessarily through the redevelopment process.
- 1.8 This Tree Strategy is an integral part of the Regeneration Programme, and should be read in conjunction with several other strategic documents produced for the programme, namely:
- the Borough's Unitary Development Plan (UDP), adopted by Halton Borough Council in April 2005, which has specific policies relating to the area (www.halton-borough.gov.uk);
 - the Castlefields Masterplan and Delivery Strategy prepared by Taylor Young (September 2003), approved by the Council (Figure 5) (www.castlefields.info);
 - the Castlefields Supplementary Planning Document (SPD) for the area, which was adopted by the Council in July 2005 (www.castlefields.info); and
 - a general Design Palette for Castlefields prepared by The Environment Partnership (TEP, Ref TEP.931.001 2005) and approved by the Council (www.castlefields.info)
 - the Castlefields Biodiversity Appraisal prepared by The Environment Partnership (TEP, Ref TEP1058.04.001 2005) and approved by the Council (www.castlefields.info)

- 2.1 Castlefields covers 117ha and is part of the Runcorn New Town. In keeping with the New Towns ethos the area has an intense landscape setting, with an estimated 6500 trees situated within swathes of structure planting along roads and in areas of public open space interspersed between residential areas and other land uses. Its attractive setting is one of the area's key assets and requires significant resources to manage.



Photo 2 – Castlefields Town Park

- 2.2 In 2003, the Castlefields Regeneration Programme was initiated to address the problems that contributed to the area's decline during the 1990s. The overarching priorities of the programme were to improve the housing, economic and social well being of the area. Unfortunately this has, in some instances, been to the detriment of the original landscaped setting, with some unavoidable tree loss to allow new homes and infrastructure to be built, estimated at around 466 trees lost so far.
- 2.3 With the desired 'step-change' in the area's social, housing and economic profile having been achieved, it has been possible to redress the balance in the programme's priorities, to place greater emphasis on the protection and enhancement of the landscape and vegetation. Some replacement trees have been planted where regeneration projects have been completed.
- 2.4 In 2005/6 TEP undertook a Biodiversity Appraisal for Castlefields (ref: TEP.1058.04.001) to examine what impact physical regeneration in the form of the housing renewal projects (Figure 5) would have on the area.
- 2.5 The Biodiversity Appraisal concluded that the Castlefields development would have a detrimental impact on biodiversity through the loss of grassland and trees. Although there would be some new tree planting associated with the development, this would not be sufficient to offset the tree losses. It was therefore recommended that an assessment of the potential for new planting opportunities be made, and the management recommendations for the existing trees be set out in the form of a strategy document.

2.6 This Tree Strategy aims to achieve the following:

Part I

- i. assess the current policy framework that affects trees and their management;*
- ii. appraise the current tree stock of Castlefields as it stands before regeneration providing detail on tree species, age and health;*
- iii. evaluate the implications of the development schemes for existing trees;*

Part II

- iv. provide management principles and action plans linked to relevant policies;*
- v. highlight the benefits of trees to residents and provide guidance to managers;*
- vi. identify planting opportunities and provide guidance for the assessment of new planting sites within the regeneration programme.*

2.7 This working document sets out *long-term strategic aims* and *short-term action plan objectives* as ready reference for the persons responsible for tree maintenance and management in Castlefields.

Partners of Castlefields Tree Strategy

2.8 The following organisations that have contributed to this document and will take on the role of implementing the principles herein are:

- ***Halton Borough Council (HBC)***
- ***CDS Housing (Co-operative Development Services)***
- ***Liverpool Housing Trust (LHT)***

These stakeholders have endorsed the Tree Strategy Principles, and are committed to its implementation (see page ii of this strategy).

2.9 Other partners in the Programme, English Partnerships and the Housing Corporation, are supportive of the Tree Strategy. However, the three aforementioned organisations are most relevant, as they have actual management responsibilities for the landscaped areas in Castlefields. Halton Borough Council is responsible for the verges alongside its adopted public highways and for the New Town Park that runs through Castlefields. CDS and LHT are the two Registered Social Landlords (RSL) that have responsibility for much of the housing stock and surrounding landscaped areas (Figure 2).

2.10 Although the tree strategy is a technical document for use by the partners, it is envisaged that it will also be used by professionals within the council, developers and interested members of the public as a reference and guideline. A non-technical pamphlet will be produced for those interested in the general principles of the tree strategy, which will be uploaded to www.castlefields.info.

TREE LEGISLATION & POLICY FRAMEWORK

- 3.1 This section considers current tree-related policy documents at a national, regional and local level that feed down into tree management activities within Castlefields to inform decision making. It also looks at relevant legislative controls that apply to trees.

National

- 3.2 At a national level the 'England Forestry Strategy – A New Focus for England's Woodlands' outlines the government's commitment to sustainable management of trees and woodlands, ensuring the steady increase of tree cover throughout England, including in and around urban areas, to benefit society and our local environment.
- 3.3 The England Forest Strategy was launched in 1998, and can be found at [http://www.forestry.gov.uk/pdf/fcefs.pdf/\\$FILE/fcefs.pdf](http://www.forestry.gov.uk/pdf/fcefs.pdf/$FILE/fcefs.pdf). It is now undergoing a performance assessment and review due to government policy changes and restructuring. A draft review was undertaken in 2006, and can be found at [http://www.forestry.gov.uk/pdf/efs-progress-report-2006.pdf/\\$FILE/efs-progress-report-2006.pdf](http://www.forestry.gov.uk/pdf/efs-progress-report-2006.pdf/$FILE/efs-progress-report-2006.pdf).

Regional

- 3.4 The Northwest Regional Forestry Framework (NWRFF) – 'Agenda for Growth' was published in 2005 (details can be found at <http://www.iwood.org.uk/>) and builds on the principles set out in the England Forest Strategy. It interprets these principles at the regional level by developing six Action Areas to account for spatial differences.
- 3.5 The NWRFF recognises the importance of trees and woodlands in helping the renewal of disadvantaged communities, improving self-image and beginning the progress of recovery.
- 3.6 Four of the six NWRFF Action Areas translate to the management of trees at the local level within Castlefields, as detailed in the following.

Action Area 2

- a) A coherent and ambitious programme of gateway and transport corridor greening across the region will provide a major improvement to 'first impressions'.

The landscape character of Castlefields created by the 'New Towns' initiative already contributes to this action; management must ensure that this asset is not degraded by uninformed decisions.

Action Area 3

- d) Targeting key woodlands for entry into management schemes and providing protection for ancient woodlands and important trees will meet landscape and biodiversity objectives in the Northwest. Tree and woodland management should also contribute to achievement of Habitat and Species Biodiversity Action Plan targets.

Through this Tree Strategy and action plan a cohesive management scheme will be put in place that encompasses the management of a wide multifunctional area that includes woodlands such as Delacy Wood and Haddocks Wood and Haddocks Wood SINC.

Action Area 4

- b) Targeted woodland creation and management would deliver enhanced access to woodlands near areas of high population density and significant quality of life benefits.

Access is available to one of the small wooded areas in Castlefields (Delacy Wood), but the facilities could be enhanced and access to other wooded areas (e.g. Haddocks Wood) could be introduced. Areas of new woodland planting should also be identified where this fits in with the development proposals.

Action Area 5

- a) A concerted programme to increase vegetation and tree planting in urban areas would use urban trees as a key solution in the development of a region-wide strategy to adapt and mitigate climate change. Our use of floodplains and upland areas needs to be addressed, planting trees and woodlands in a mosaic with other semi-natural habitats to help alleviate possible flooding and erosion.

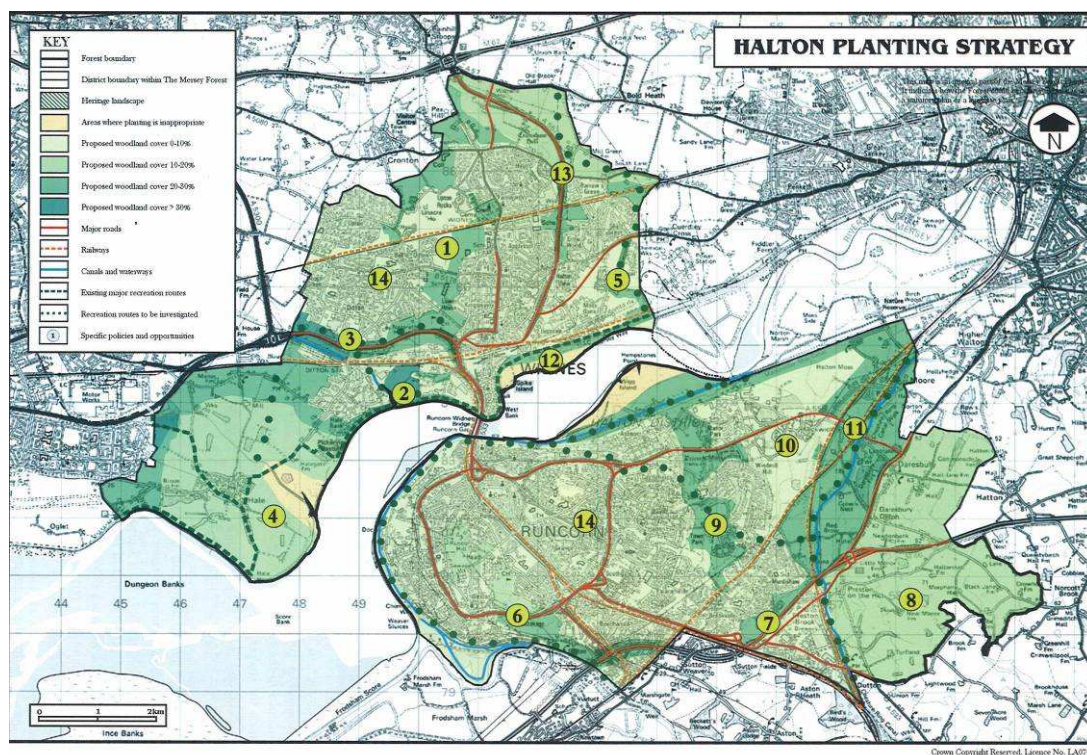
The implementation of this strategy will ensure sustainable management of the existing tree stock and allow new planting to be managed proactively to meet local targets.

- c) The creation of new, and management of existing woodlands must contribute to the creation of functional ecosystems and support species migration and adaptation. The consolidation and expansion of existing biodiversity ‘hotspots’ (such as ancient woodland) will increase the resilience of local habitats to the possible impacts of climate change.

The retention of blocks of trees and linear routes within the Castlefields redevelopment scheme is important, and must be linked with the measured management of the existing trees to benefit biodiversity, such as through promoting planting native species.

Mersey Forest

- 3.7 Halton is in the heart of the 115,000 ha Mersey Forest area, which is the largest community forest in England (for details see <http://www.merseyforest.org.uk/files/BusinessPlan1.pdf>). The Mersey Forest Program aims to improve the local environment in and around towns and cities by creating opportunities for recreation, nature conservation and economic regeneration. Its schemes work through building local community support and involvement.
- 3.8 The Mersey Forest Plan details the aims and goals of the Mersey Forest Partnership. Within Halton more than 90 hectares of woodland has been planted and 30 hectares of woodland brought into management since the inception of the Mersey Forest in the mid 1990s.
- 3.9 The map below shows a generalised picture of the proposed woodland cover for Halton under the principles of the Mersey Forest Plan.



Forest Strategy Plan taken from the Mersey Forest Plan 2001

- 3.10 The guiding principles for Halton in the Mersey Forest Plan are as follows.
- Provide a woodland buffer around the urban edge and create a wooded edge to the Mersey Estuary.
 - Extend planting into the urban area using all appropriate and available land, including derelict land.
 - Provide a new woodland structure for surrounding agricultural areas.
 - Protect and manage the existing resource of urban trees and woodlands in a sustainable manner.

- 3.11 The Mersey Forest and Groundwork initiatives may provide opportunities for the creation of new areas of tree planting and the management of existing areas where this would benefit the community (Appendix 10). An example of such an initiative in Halton is Murdishaw Green, which involved a woodland owned by LHT.

Local

- 3.12 Halton Borough Council's Unitary Development Plan (UDP) has several policies that relate to trees and woodlands, most of which are specifically planning related. The most relevant are:

- i) GE27 Protection of trees and woodlands

Reinforces the importance of retaining trees in urban areas in light of development.

- ii) GE28 The Mersey Forest

Shows commitment to the expansion and management of trees and woodlands in accordance with the Mersey Forest Plan.

- iii) BE1 General Requirements for Development

Highlights the importance of conservation of the natural environment including trees and woodlands.

- 3.13 Halton's 'Natural Assets Strategy' (available at www.halton.gov.uk) builds on the policies of the UDP and translates them into general workable policies. The main policies relating to trees are:

- i) Policy One – recognises the value of trees and commits the Council to responsible and sustainable custodianship;
- ii) Policy Two – relates to trees affected by development and seeks to protect those of greatest importance through the planning system;
- iii) Policy Three – commits the Council to the sustainable management of its trees encouraging other landowners to do the same;
- iv) Policy Four – applies Policy Three to woodlands;
- v) Policy Five – seeks to expand the area of trees and woodland and to encourage and support other landowners in doing so.

- 3.14 The 'Natural Assets Strategy' also sets out the Council's commitment to supporting the Housing Associations of Halton in managing its tree stock. Action 12 is specifically for this relationship with housing associations and states '*The Council will, subject to staff resources, encourage and assist any housing association which is preparing a working plan for the management of its trees in the Borough*'. This strategy goes further than this action in that it provides a coordinated agreement between two housing associations and the council to manage trees sustainably within Castlefields.

3.15 Halton Borough Council has also produced a series of five Trees and Woodlands leaflets that provide guidance on several tree issues (Appendix 9, also available at www.halton.gov.uk).

- i) Trees on Development Sites
- ii) Tree Planting and Maintenance
- iii) The Care of Mature Trees
- iv) Tree Work Contractors
- v) Managing Trees owned by the Council

Existing Housing Association Tree Policies

3.16 All three partners have some form of policy for managing their tree stock. Halton’s tree policy is contained in its Natural Assets Strategy, LHT has a brief policy statement that has been recently updated. (Appendix 7), the most recent CDS tree policy statement is dated 1997 and is included within a larger report, (Appendix 8).

3.17 In all of these policy statements there is a general presumption against the removal of trees unless there is good cause and supporting evidence.

3.18 All of the policy statements vary in their detail and age, and are not therefore consistent in the context of the regeneration programme.

3.19 To provide cohesive, consistent tree management across Castlefields, principles need to be set out for all those involved. The principles can be drawn together from the existing documents of each landowner and recent best practice guidelines.

Statutory Controls

3.20 The main statutory controls relevant to tree management are Conservation Areas and Tree Preservation Orders.

3.21 Conservation areas are defined to protect the character of particular areas, and in so doing afford protection for trees that are present from felling or pruning without agreement from the local authority.

3.22 A Tree Preservation Order can apply to a single tree or group of trees that are in close proximity to each other or in relation to a defined area of ownership. A tree preservation order can be placed on any tree to protect its amenity value, normally in response to threat from felling or development pressure. A tree preservation order requires anyone wishing to undertake work on the tree to apply for permission from the local authority, under the planning system, to undertake the works (download form from <http://www2.halton.gov.uk/content/environment/treesandwoodlands/treesandthelaw?a=5441>).

- 3.23 There is no requirement for the local authority to use tree preservation orders in every case, for example where trees are under good management.
- 3.24 Currently, there is only one Tree Preservation Order and no Conservation Areas in Castlefields. This can be attributed to the general immaturity of the landscape around the housing areas, and the fact that until recently there was little pressure from development.
- 3.25 As most of the landscape in Castlefields is actively managed by one of the housing associations or Halton Borough Council, the need for Tree Preservation Orders to protect the tree stock is minimal.
- 3.26 Through the implementation of this strategy, the current situation should suffice as all partners of the strategy will be working together toward good tree management. However, there may be a requirement to protect valuable trees that are currently in public space but, will fall within private gardens following regeneration.

SUMMARY - TREE LEGISLATION & POLICY FRAMEWORK

- 3.27 There is a hierarchy of strategies and documents that relate to trees and their management. However, the main principles echoed throughout are to ensure sustainable management of the existing tree stock and to expand tree cover, especially in and around urban areas, to provide direct benefit to local communities.
- 3.28 These principles can be delivered on a local level through a number of initiatives, such as the Mersey Forest and Groundwork programmes, with support from local agencies and authorities who have committed to providing help in their policies.
- 3.29 The implementation of the Tree strategy aims to satisfy several aims within the overarching strategies, and to provide a consistent approach to tree management in Castlefields in the context of the regeneration programme.
- 3.30 There are currently few statutory controls (Conservation Area or Tree Preservation Order) in Castlefields, mainly because tree management is under the control of larger organisations that operate their own management policies. This situation may change with the regeneration programme, as more trees will be within private gardens.

TREE STOCK OF CASTLEFIELDS & MANAGEMENT PRACTICES

- 4.1 The study area used for this strategy covers 116.9Ha, as shown on Figure 1.
- 4.2 The majority of the landscaped areas in Castlefields are entirely man made, and were created when the estate was constructed as part of Runcorn New Town. The New Town ethos considered it desirable to live in a 'green', heavily landscaped setting. Therefore large areas between the housing and other land uses were mass-planted with a mixture of shrubs and trees, with a high proportion of faster growing species (e.g. poplar and willow) to provide an immediate impact.
- 4.3 The desired effect was achieved, with the structured landscape areas quickly establishing and developing to become one of the area's key assets. However such large areas of landscape can cause problems and require a significant level of management.
- 4.4 Over the years, both proactive and reactive management has been undertaken mainly in the form of thinning and felling. This section of the Tree Strategy provides an assessment of the established tree stock before the remodelling works in Castlefields, to give a general picture of species composition, numbers, health, condition and specific management issues.
- 4.5 The Castlefields Masterplan is shown at Figure 5, and the implications of the regeneration programme are discussed in Part II at section 5.

Tree Data

- 4.6 To provide a sound basis for analysis of the tree stock within Castlefields, existing survey data was used where available, and samples were taken in areas where the data was deficient. The accuracy of the existing tree data was verified by sample surveys, which confirmed that the spatial distribution of the trees was generally consistent throughout a number of the landscape typologies (Figure 2).
- 4.7 As the data was compiled from different sources at different times (Appendix 1) the consistency and detail varies depending on management practices employed, and any assumptions made have been noted in the results. The survey data is not comprehensive for the whole of the Castlefields study area, but is sufficient, along with aerial photographs, to provide an overall picture of the tree stock before regeneration (Figure 2).
- 4.8 The study area has been dissected into 6 sections called Landscape Typologies to allow a more representative analysis of the tree data. The spatial distribution of the landscape typologies is shown on Figure 1 (below) and in Table 1. The largest landscape typology is Housing, followed by the Formal Parkland of Town Park and the Informal Parkland to the north and along the Bridgewater Canal. Miscellaneous areas, including Schools, Public Houses and Churches are included in the fourth landscape typology. Greenspaces consist of Play Areas, Public Open Spaces a small 'Pocket Park', and the last landscape typology, Wooded Areas includes the larger areas of Delacy Wood and Haddocks Wood.

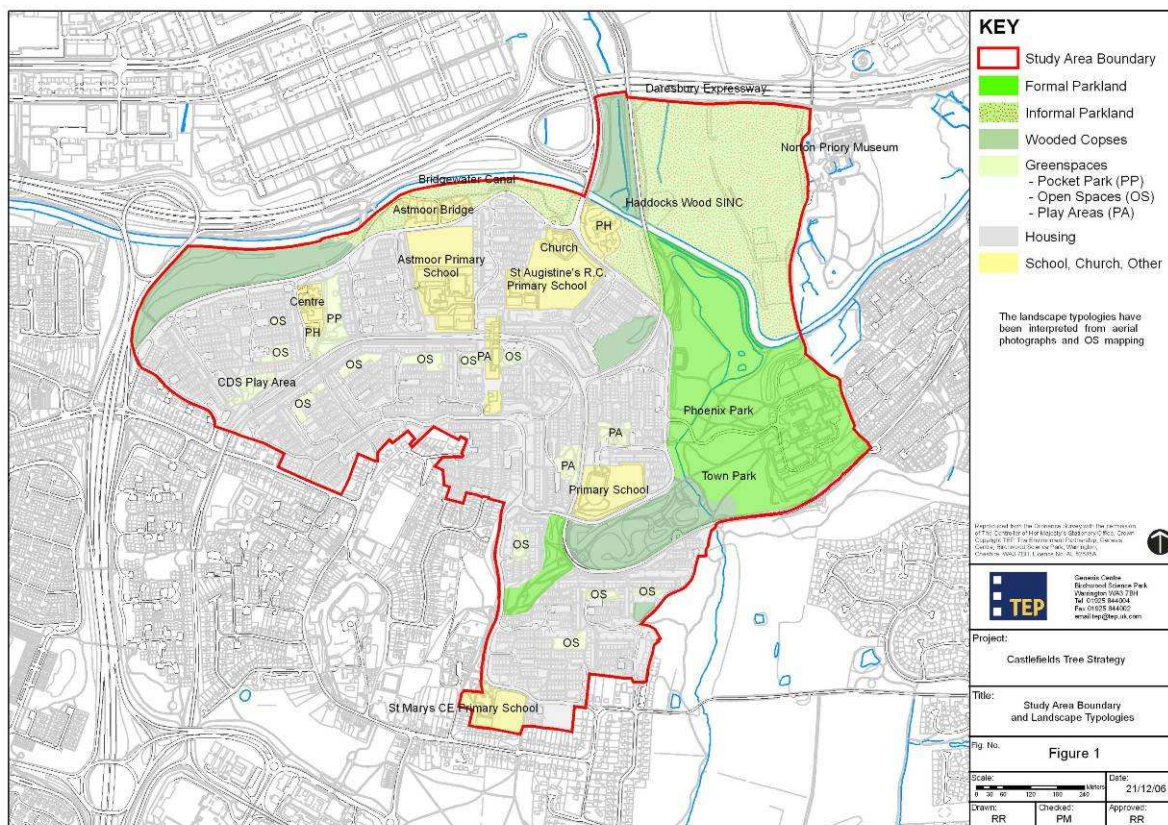


Figure 1 – Landscape Typologies

4.9 The data (Appendix 2 and 3 for details) shows the estimated number of trees in the Castlefields study area to be around 6500 (Table 1), although this does not include very small young trees that currently have low amenity value and are not part of the data. The wooded areas have been converted into a representative number of trees that they would be expected to contain at maturity. This means that the wooded areas that are comprised of closely spaced semi-mature trees will actually contain a much higher number than that stated. The exact population number would need to be confirmed by a comprehensive tree survey.

Landscape Typology	Area (ha)	Est. No. of Trees	NOTES
Housing	55	2098	50% from survey data
Schools, Churches, PH	11.2	240	Limited survey data
Formal Parkland	17.9	947	Some grouped survey data
Informal Parkland	16.9	969	Some grouped survey data
Greenspaces	3.9	264	Includes Open Spaces, 'Pocket Parks' and Play Areas
Wooded Areas	10.8	1944	Grouped survey data
TOTAL	115.4	6462	

Table 1 – Estimated Tree Population by Landscape Typology

(N.B. the total area is less than the study area due to the exclusion of the canal and some roads)

- 4.10 Once verified the tree data gave an idea of the species composition, age and condition of the tree stock. There is good tree data for the housing, parks and play areas, but more limited data for the schools and the areas along the canal. The data for the open spaces is patchy, with 3 out of the 11 areas surveyed and the wooded areas have no specific tree health or composition data. However, overall there is enough data to extrapolate trends for analysis.

Tree Species

- 4.11 There is a wide variety of tree species planted at Castlefields (Appendix 5 for details). Sycamore (29%) and birch (19%) constitute half of the trees surveyed, as shown spatially on Figure 3. This is supported by 1991 audit data from CDS (details at Appendix 6).
- 4.12 Chart 1 shows the proportion of the 10 most frequent tree species surveyed throughout Castlefields. Surprisingly, willow and poplar are only a small component making up 3% and 2%, respectively of the total, despite the fact that these fast growing species would have been a large component of the initial block planting. These figures, however, are not wholly representative as there are groups within the parkland areas that consist mainly of willow and poplar that have not yet been surveyed.

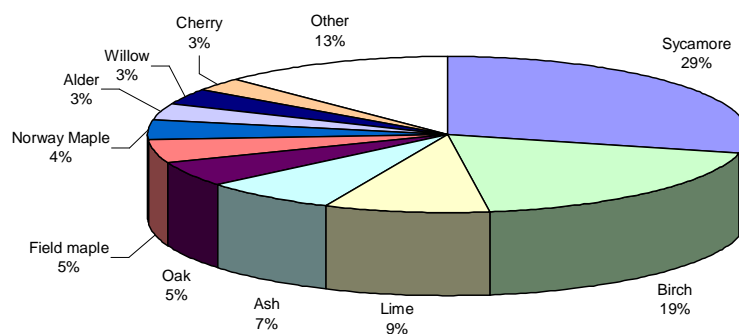


Chart 1 – Ten most frequent tree species surveyed

- 4.13 Historical management policies (Section 4.42 – 4.46) provide an explanation for this as they have targeted the removal of the fast growing willow and poplar species around the housing areas because of the management issues that are caused from their interaction with the urban environment.
- 4.14 The fast growing nature of willow and poplar result in them quickly occupying and exceeding their growing space above and below ground. This often results in roots and branches conflicting with the built environment. Figure 3 shows that the remaining willow and poplar is generally distributed near or in green spaces or parks.

Tree Health

- 4.15 The survey data shows that 67% of the trees in Castlefields are reported to be of good health, with 26% of fair condition. Chart 2 shows the breakdown of tree health by landscape typology (Appendix 4 shows analysis). No specific data is available for the schools or wooded areas, but the condition of the trees at the schools is assumed to be generally good due to ongoing grounds maintenance. The individual trees in the wooded areas were not assessed, although their condition during sampling was noted to be generally good.
- 4.16 The criteria used for assessing tree health from the available tree data was not comprehensively detailed for each dataset. It is assumed that the surveys were completed by a competent person with appropriate experience. The 1997 report from CDS uses three factors to determine tree quality; health, vigour and form. The criteria used by TEP for the sample surveys are along the same lines, but incorporates British Standard BS5837:2005 survey recommendations.

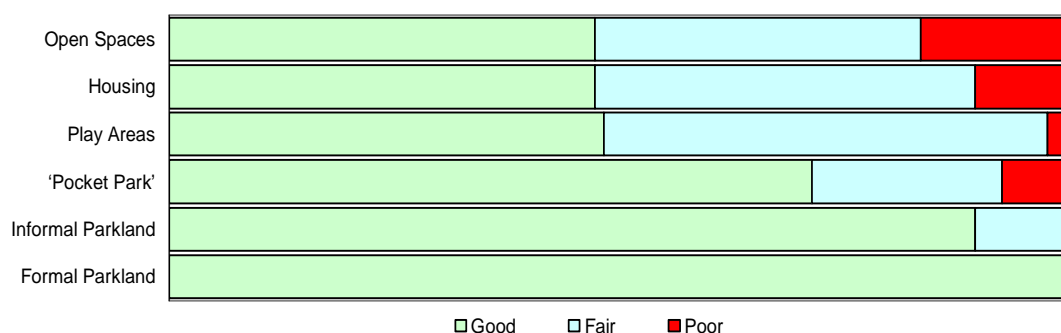


Chart 2 - Health of Surveyed Trees by Landscape Typology

- 4.17 The parkland areas have the highest percentage of surveyed trees in good health, which may be a reflection of the current management regimes. The areas that could be considered to have high usage and therefore pressure from use by the public are the smaller areas of open space, the play areas and the planting matrix around the housing areas. The health of the trees in these areas is more evenly split between trees in good health and trees in fair health, with noticeable degradation due to local conditions. There are more trees of poor health in these areas, but the overall condition of the tree stock in the open spaces is not truly representative, as only 3 of the 11 areas have survey data.

Tree Age

- 4.18 There is a slightly skewed distribution of the age classes of the surveyed trees, with just over half of the trees (51%) classed as middle age (trees between 1/3 and 2/3 of their lifespan), about a third (30%) mature (trees over 2/3 of their lifespan) and less than a fifth (18%) young (established trees in the first 1/3 of their lifespan). New tree planting consisted less than 1% of the tree stock. However, this may not be fully representative as newly planted and young trees are likely to be under-recorded in existing data due to their small size and low risk factor.

4.19 Two potential anomalies are likely to have affected the data.

- i) The recording of age class is subjective at certain growth stages, and will differ between surveyors and organisations. For ease of interpretation, four age classes have been used in the analyses – New Planting, Young, Middle age and Mature. The sample surveys taken indicate the distributions to be reasonably representative.
- ii) The proportion of mature trees would be greater if the tree ages were available for the groups in the parkland and all of the wooded areas.

4.20 Chart 3 shows a percentage breakdown, by landscape typology, of the age class distributions of the surveyed trees. The overall proportion of young trees in Castlefields has been elevated by the large number of young trees in the informal parkland. In the other landscape typologies, the number of young trees is generally very low (refer to 4.18).

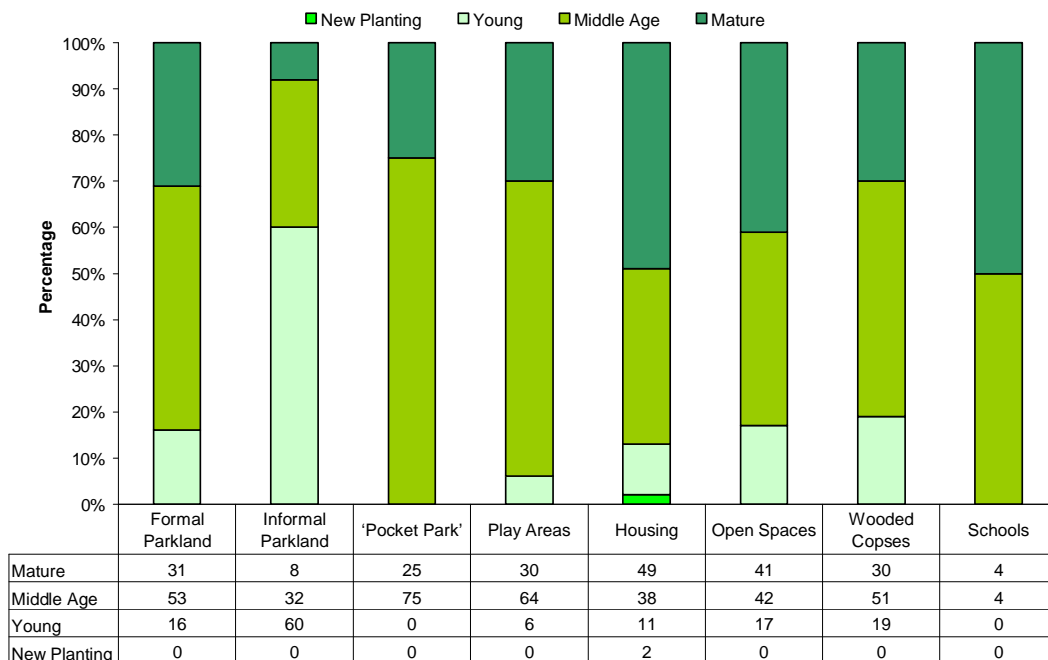


Chart 3 – Age class distribution of surveyed trees by landscape typology

4.21 The age class distribution of the surveyed trees is shown spatially on Figure 2, which highlights the areas where the mature trees predominate. Note that there is limited data for trees at the schools, Churches and PH.

Landscape Typology Analysis

4.22 Charts 4 to 11 show the tree species distribution and age class proportions for each landscape typology. The data does not include information on CDS land, except for the sample areas that were taken as part of the study. To give an idea of representation, the group species data is expressed as the occurrence of a species in each group surveyed.

Housing

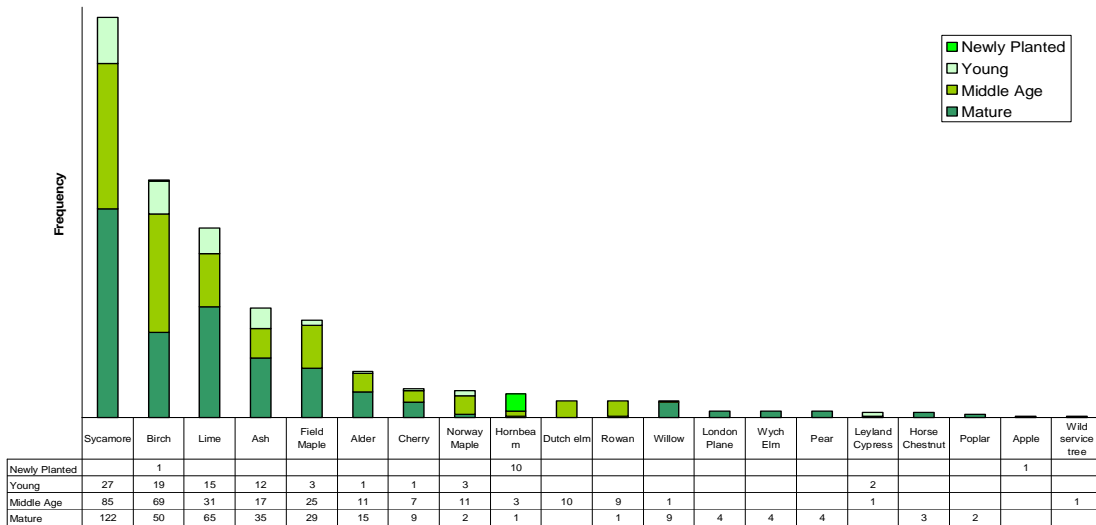


Chart 4 – Tree species distribution by age class within Housing typology

- 4.23 Thirty-two percent of the trees surveyed in the Housing typology are sycamore, 18% birch and 15% lime. The remaining species make up less than 10% each. The wide spread distribution of sycamore is shown on Figure 3.
- 4.24 Around half of the surveyed trees in the Housing typology are mature, with sycamore dominating. This indicates the resilience and importance of the species in the urban landscape.

Greenspaces

- 4.25 The next three graphs are analyses of the Greenspaces typology separated into Open Spaces, Play Areas and Pocket Park.

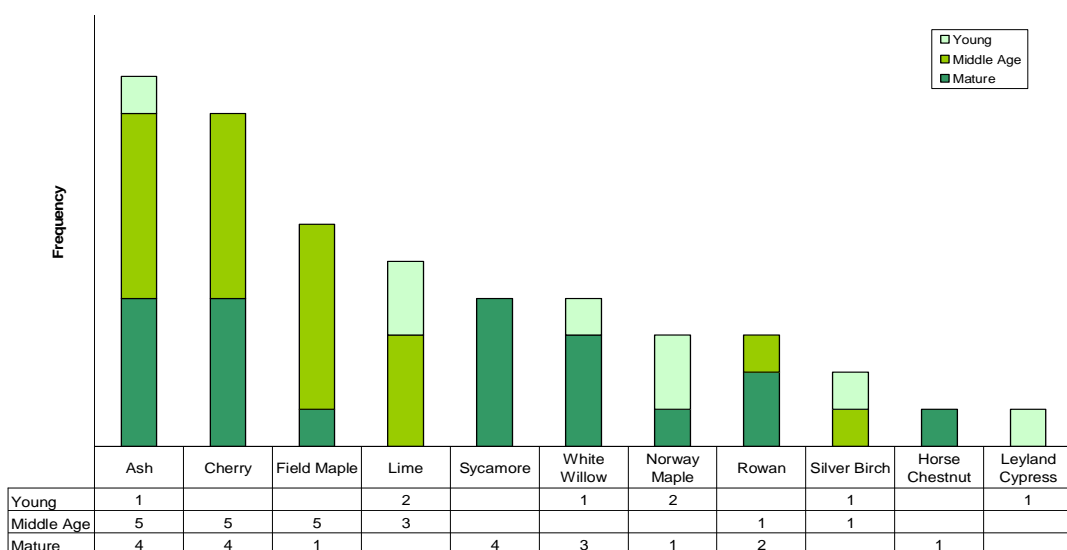


Chart 5 – Tree species distribution by age class within Open Spaces

- 4.26 The planting in the Open Spaces is ornamental, with a good proportion of native species. Ash comprises 20% of the surveyed trees, with cherry close behind at 19%, field maple at 12% and lime at 10%. Of the top four species in the open spaces, more than half are middle aged, and will provide some stability and maturity to the developing landscape.
- 4.27 The remaining mature willow and sycamore may cause problems. It is recommended that they be removed and replaced with more appropriate species now that there is an established treescape.

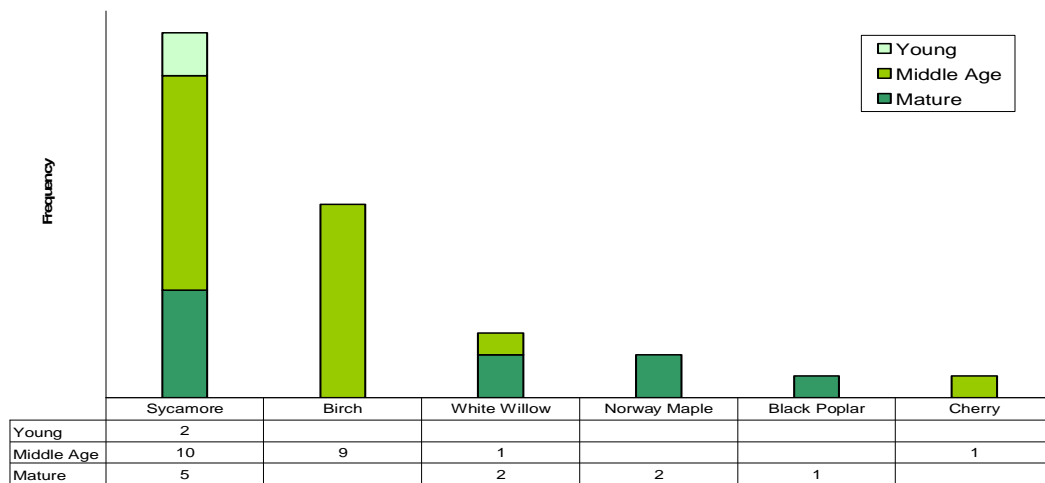


Chart 6 – Tree species distribution by age class within Play Areas

- 4.28 Over half of the trees in the Play Areas are sycamore, with birch making up over a quarter. The low diversity of tree species is as a result of the high pressure from users of the area meaning that only resilient species survive.
- 4.29 Sycamore is reasonably suited in this landscape typology due to its resilience to vandalism and less than ideal growing conditions, but it should not be the sole species present.

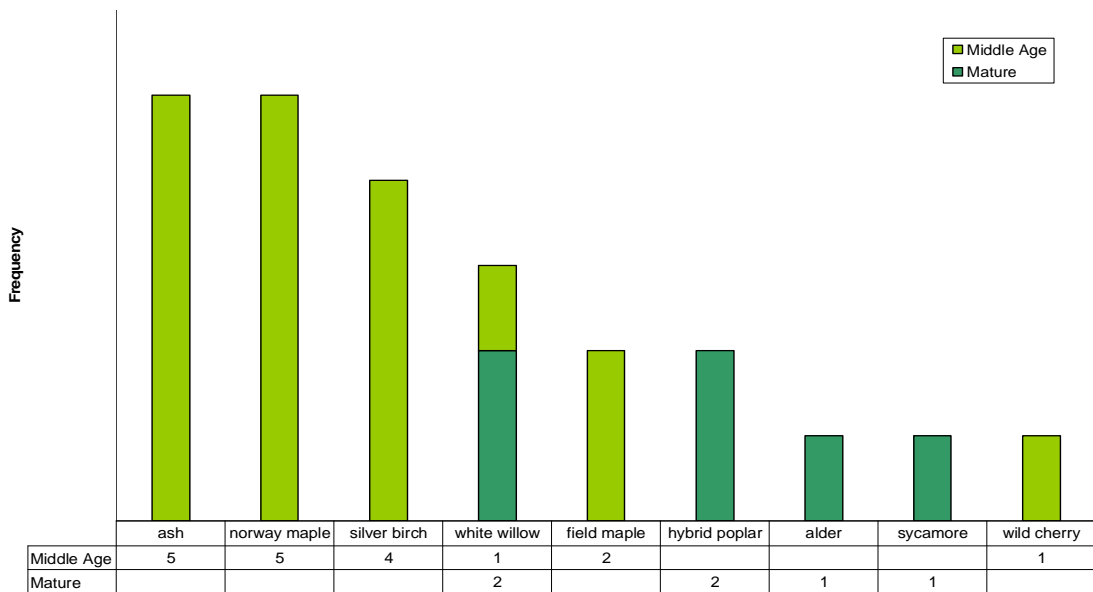


Chart 7 – Tree species distribution by age class within the ‘Pocket Park’

4.30 There is a reasonable mix of tree species in the ‘Pocket Park’, with ash and Norway maple dominating. Although the small number of larger mature willow and poplar add a feeling of maturity whilst the landscape develops, they should be replaced in the future with more suitable species.

Formal Parkland

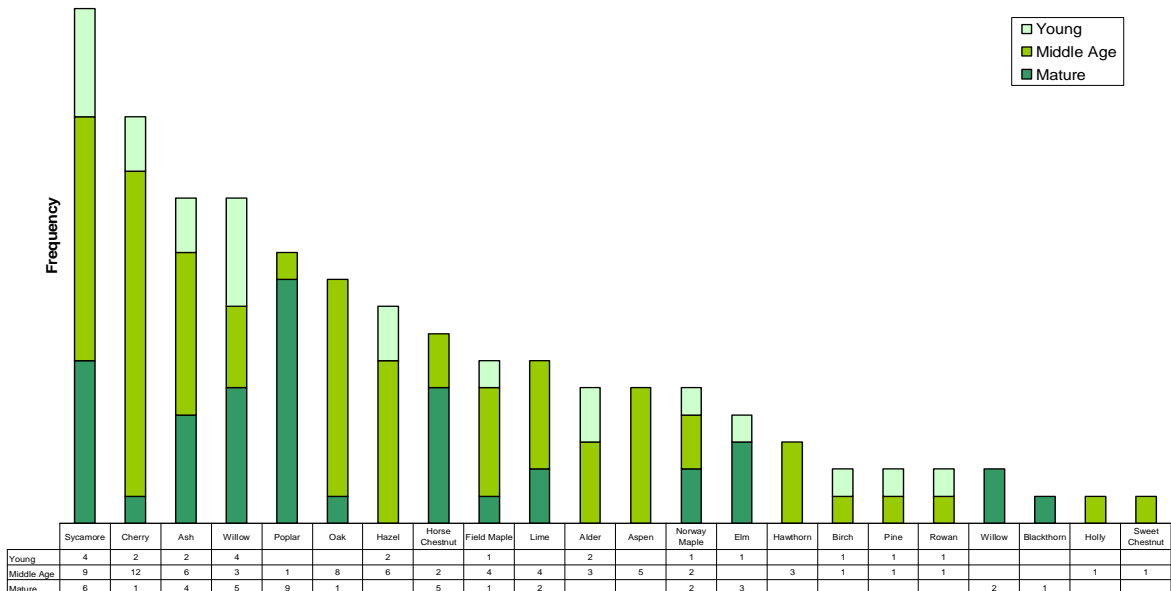


Chart 8 – Tree species distribution by age class within the Formal Parkland

4.31 Twenty-two tree species were identified in the Formal Parkland. Around 50% are native, which provides a good mix. Ash, oak and lime are in the top 10, although sycamore is the most frequent. Poplar and willow make up 16%, and provide maturity to the landscape through their size.

4.32 The species distribution shown in Chart 8 is not fully representative, as much of the data available was for groups of trees and does not specifically give proportions of individual species. From a general walkthrough, it would appear that the faster growing poplar and willow would make up a larger proportion similar to that of sycamore, otherwise the chart would remain the same.

Informal Parkland

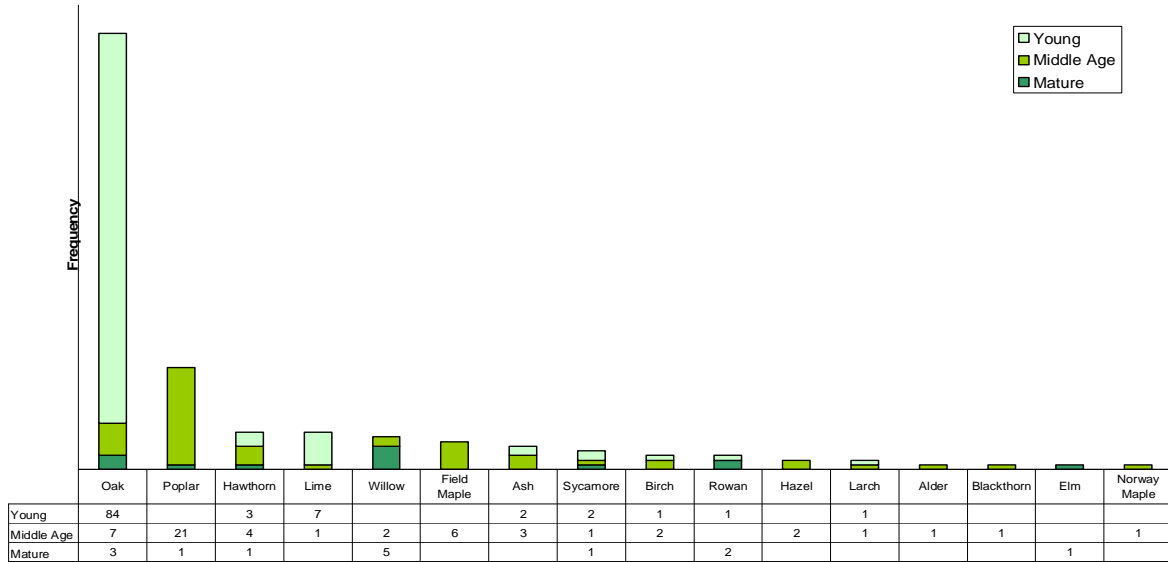


Chart 9 – Tree species distribution by age class within the Informal Parkland

4.33 Young oak constitutes more than 50% of the tree stock in the informal parkland. There is a good mix of species, including native trees which make up the established structure planting. This is likely to be similar in character to the areas along the canal side.

4.34 The graph is not proportionally representative as most of the survey information for this area was collected for groups of trees, and no numbers of species within the groups were recorded. A general increase of the proportion of all species is envisaged were data on the number or proportion of individuals collected.

Woodland

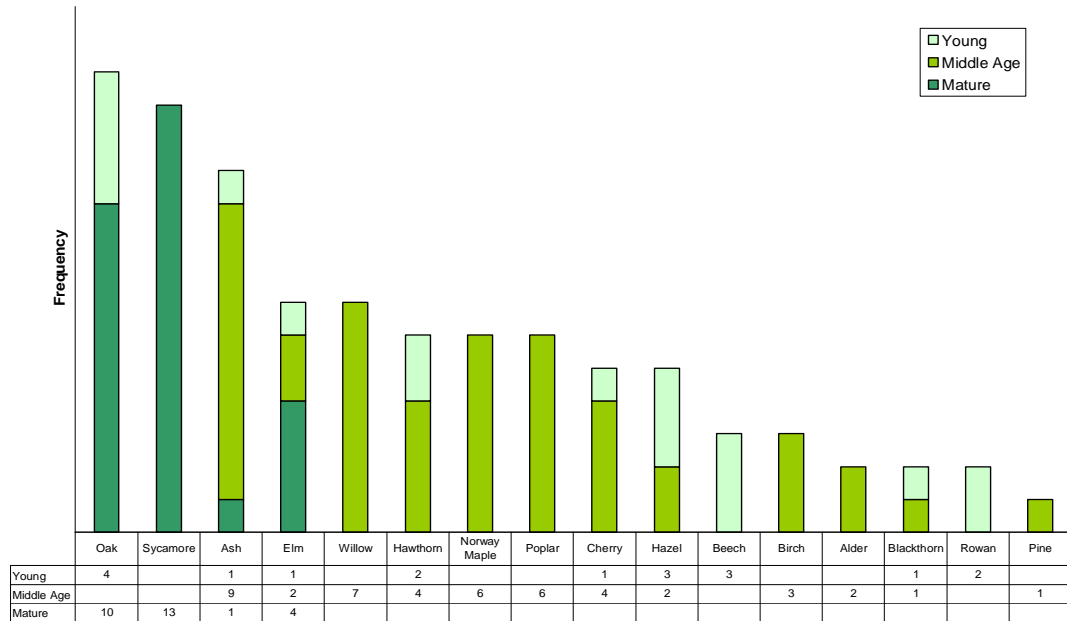


Chart 10 – Tree species distribution by age class within the Woodland Areas

- 4.35 The species distribution for the woodland was targeted in the survey sampling. The dominant woodland trees are mature oak and sycamore, with a good proportion of ash situated in the mature woodland areas to the north. The remaining species are found in wooded screen plantings that were mostly part of the original new town planting, generally to the south and west of the area.
- 4.36 The wooded areas along the canal to the northwest were not surveyed, but are expected to have a similar composition to the wooded screen planting areas in the south.

Schools

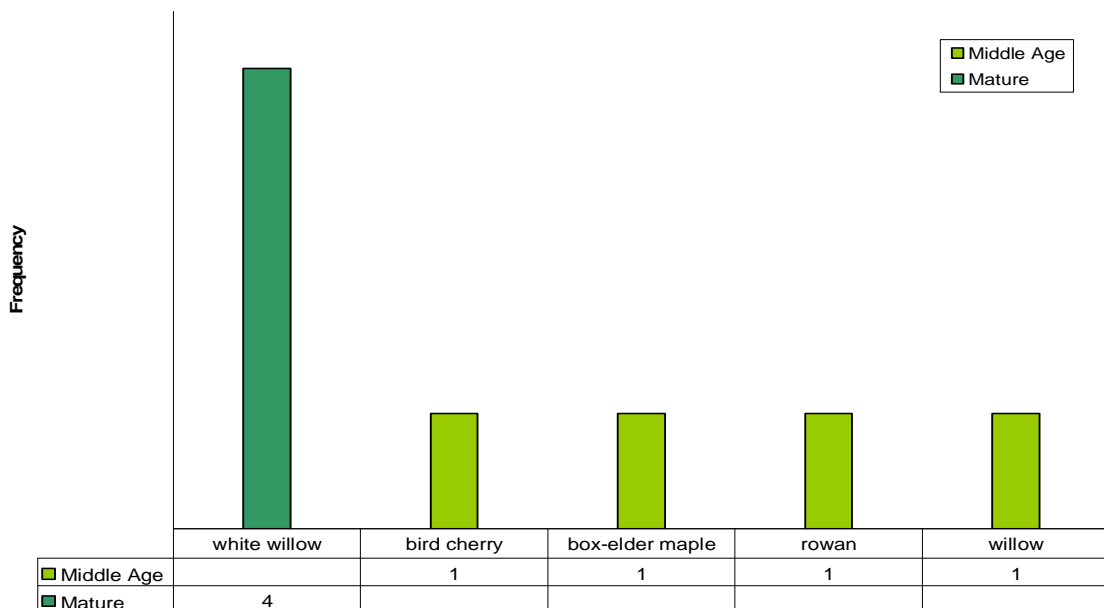


Chart 11 – Tree species distribution by age class around the Schools

- 4.37 The data is very limited for the schools, and essentially comprises a sample of data taken from around the boundary of one school. Fast growing species dominate, with a mix of smaller ornamental trees.
-

Tree Management in Castlefields

- 4.38 The three landowners are responsible for the maintenance and management of the existing landscape in accordance with their policies and requests and expectations of the residents to have a pleasant setting in which to live.
- 4.39 Trees form an important part of the green infrastructure within Castlefields, a result of the New Towns landscape planning which was targeted to create a strong landscape infrastructure. Although the high planting densities used to achieve the initial impact soon became problematic, and a high level of management has since been required.

Issues

- 4.40 An Ecological Baseline Audit of Castlefields (ref: TEP.620.023), carried out in July 2002, identified the main concerns of the community about the landscape and open space resources. The key points in relation to trees are as follows.
- i) *Overgrown trees and shrubs create an enclosed and intimidating atmosphere, particularly when in proximity to footpaths, causing sightlines to become considerably restricted.*
 - ii) *Car parking areas are often enclosed by planting, and are therefore subject to high levels of car crime.*
- 4.41 The main issues with the management of trees in Castlefields identified the housing associations and local authority are listed in Table 2 in order of importance.

Ref:	Management Challenge	Comments
MC1	Loss of trees to development	The British Standard recommendations for trees on development sites (BS5837) have not been followed in many of the re-development schemes, resulting in unwarranted loss of trees.
MC2	Pressure from residents to carry out inappropriate tree work or remove trees	Isolated trees have been poorly pruned (topped), resulting in visually undesirable trees that are more likely to have future structural failures. This type of work is inconsistent with the British Standard BS3998 for tree works. Where tree removals are requested, they must be justified using an agreed assessment procedure.
MC3	Obscuring branches	Branches block views, resulting in enclosed spaces and a feeling of insecurity among residents. There are also branches overhanging footpaths and street lights.
MC4	Inappropriate locations and species	Trees close to windows reduce daylight interception. Trees that will grow to a large size are planted close to buildings or in areas with restricted growth space. Some species are prone to structural weakness, and therefore should not be planted near targets.
MC5	Vandalism	Newly planted trees often have branches or the main stem broken, and some trees in high use areas have had bark removed.
MC6	Personal injury claims and damage claims	Surface roots cause trip hazards on footpaths and in gardens, roots block drains, falling branches, and leaves on footpaths cause slip hazard.
MC7	Fast growing conifers	Planted in gardens by residents for quick screening causing a nuisance.
MC8	Honeydew on cars	This is particularly a problem with species that are close to parking areas and near conservatories.
MC9	Satellite/TV reception	Residents unable to get a satellite TV signal.
MC10	Leaves in autumn	Leaves block drains and gutters and cause slip hazards on footpaths.

Table 2 – Tree Management Issues

Past Management

- 4.42 The general recommendations from the ecological baseline audit were to undertake regular targeted thinning and coppicing to reduce the tree and shrub density and enhance the landscape structure.
- 4.43 Information from CDS indicates that on average 120 trees were removed annually between 1991 and 1997 on their estate (including areas outside of the Castlefields study area). The main species targeted were those that were inappropriate for their location and caused problems such as poplar and willow. (Given the consistent nature of the tree stock in the housing areas it is envisaged that LHT undertook similar tree removals).

- 4.44 The main tree work operations undertaken around the housing areas are.
- i) removal of dead, dangerous or diseased trees
 - ii) crown lifting and crown thinning to increase light availability
 - iii) thinning of tree groups to open areas up.
- 4.45 Tree management by the housing associations in Castlefields has been proactive, and has been informed by surveys in addition to dealing with complaints. However, recent management practices of have been affected by the impending re-development and uncertainty over which trees will be retained in the long term. This means that the general policy that is currently being implemented by both LHT and CDS is reactive, with tree management being triggered solely to complaints.
- 4.46 The Ecological Baseline Audit (ref: TEP.620.023) highlighted the occurrence of excessive and poor tree pruning, which was reported by some of the residents. During the data sampling exercise to supplement the available tree survey information, a number of trees were encountered that had been severely pruned to control their size or to provide light under the canopy. These works were not carried out to current best practice guidelines, such as British Standard BS3998. It is unclear as to whether such pruning was undertaken in angst by the residents themselves or to avoid felling the tree. These practices do not set good examples.

Tree Surveys

- 4.47 Halton Borough Council has a tree survey system in place that uses Ezytreev, a computer based GIS linked database that records and generates a survey programme and tree work specification from the inputted data. Most of the trees in the parkland and open spaces have been inputted onto the system (Figure 2) and are part of a rolling survey programme.
- 4.48 LHT uses GIS with at least 50% of the trees inputted (Figure 2). The routine tree surveys have been based on a 5-year rolling programme that is determined by the location of the tree.
- 4.49 CDS have mapped all of their trees on paper, and have associated survey sheets. Routine monthly inspections of the managed landscape are carried out that also highlight tree problems.
- 4.50 The basis of an integrated system for managing the trees in Castlefields is already present. By sharing the information and resources already available a comprehensive dataset could be compiled to assist ongoing management.

SUMMARY – OVERVIEW OF CASTLEFIELDS TREE COVERAGE & MANAGEMENT

- 4.51 The analysis of the pre-regeneration tree coverage has been compiled from fragmented data from each partner organisation, each of which has their own management policy. Figure 2 shows the spatial distribution of the data. The sample surveys taken as part of the study indicate that the compiled data is representative of the tree stock in Castlefields before re-development.
- 4.52 Castlefields has a substantial tree stock that makes a significant contribution to local amenity and defines the character of the area. The multifunctional benefit that trees bring to the urban environment is well documented. The publication 'Trees Matter!' from the National Urban Forestry Unit provides a good level of detail. Generally, trees are good for urban areas providing shade, absorbing carbon dioxide, filtering airborne pollutants and providing shelter for wildlife, amongst others, their additional importance in countering the effects of climate change is increasingly being recognised.
- 4.53 Before the regeneration programme began in 2003, it is estimated that there were approximately 6500 established trees in the Castlefields study area. However, it is acknowledged that such a large amount of trees can cause problems requiring high management input, this is a significant challenge for the Council, housing associations and local residents.
- 4.54 In general the trees of Castlefields are in good condition. The best trees are in the parkland, where there is less pressure on the growing environment.
- 4.55 Many of the surveyed trees are middle age, and there is only a small proportion of young trees. This may be due to under-recording in the available survey data. A higher proportion of young trees is desirable to provide for future trees as middle age and mature trees are lost naturally or due to human pressures.
- 4.56 There is a variety of tree species in Castlefields, with the most diverse areas being the Formal Parkland and Woodland. Sycamore is the dominant tree species, possibly due to its resilience in the urban environment and ability to successfully establish through self-seeding. Sycamore will always form a significant part of the urban tree fabric, and should be valued as such.
- 4.57 The past approaches to tree management of all three landowners involved in Castlefields have been similar with the thinning of densely planted areas forming the main operation to maintain the open feeling of the estate. In addition, willow and poplar have been targeted for removal due to the management problems that they cause. The remaining willow and poplar now form only a small proportion of the tree stock around the housing areas.
- 4.58 The majority of the trees in the housing area have been maintained to an acceptable standard, but there are a few isolated examples of works carried out that are contrary to good practice and have a negative impact on the amenity of the area. These practices should be resisted in the future to demonstrate best practice tree pruning and management.

- 4.59 The policy of thinning the areas of structure planting and opening up views along footpaths and around car parks should be continued, because this reduces the feeling of enclosed and intimidating spaces for residents and visitors, as reported in previous study documents.
- 4.60 The challenges of tree management in Castlefields need be addressed through action plans to fulfil the strategy principles. It is important to engage with local residents to ensure that what is being delivered is wanted. There will be a need to devise cooperative working methods for the action plans to ensure they are implemented consistently by all stakeholders across Castlefields.
- 4.61 It is important to have a comprehensive record of the tree stock in Castlefields. This should be regularly updated to enable management decisions on a local and area-wide basis. The data can then be used to spot positive and negative trends and provide a base point from which the effectiveness of management decisions can be measured.
- 4.62 The use of a Geographic Information System (GIS) or specific tree management software programme, will facilitate future data capture and management and allow the easy transfer of data between all parties. The data compiled for this strategy can be fed directly into a GIS for immediate use.

IMPLICATION OF CASTLEFIELDS MASTERPLAN ON EXISTING TREES

- 5.1 The Masterplan produced in 2004 (Figure 5) sets out over 50 individual projects that need to be delivered to achieve the holistic regeneration aims set for Castlefields. The projects vary from the construction of short footpaths to the demolition and replacement of poor quality housing stock. The projects that have had, and will in some cases continue to have, an impact on the tree stock are summarised in Tables 3 and 4.

Demolition and Replacement of Existing Deck Access Flats

- 5.2 Of the three types of properties within Castlefields (bungalows, houses and deck access flats) the flats were identified as the biggest problem for the area. Their sheer scale and grey concrete appearance (Photo 2) made them unattractive to people. Consequently with no long-term demand, the blocks could only serve transient populations, which compounded the socio-economic problems on the estate.



Photo 2 – Deck Access Flats Dominate the Skyline

- 5.3 The decision was made by the Regeneration Partnership to demolish the deck access flats where feasible and replace them with a more desirable and sustainable mix of traditional houses and modern apartments. This activity is constrained to short windows of government funding regimes, and is being carried out in three phases (Figure 6). Each phase is further subdivided according to which block is being tackled. Phase 1, highlighted in Blue on Figure 6 was started in 1999 and is due to be completed 2006/07. This will be followed by phase 2 (shown in Green) during 2006-2008 and Phase 3 (shown in brown) during 2008-2011.
- 5.4 To vacate the blocks to be demolished, car parks and some open spaces were used as sites for new homes for existing tenants. Due to the restricted space available, this has resulted in some unavoidable tree loss. In a few cases, some mature trees of high amenity value have had to be scheduled for removal.

New Infrastructure – Demolition of Busway and Removal of Subways

- 5.5 A key feature of the Runcorn New Town is its segregated busway system, a section of which passes through Castlefields. Although a unique feature, the Regeneration Partnership took the decision to remove an elevated section of the busway (Photo 3) and replace it with an at-level, shared use road, that provides direct access to the local centre for private cars, pedestrians and cyclists.
- 5.6 Due to its elevated position, the demolished section of busway was flanked on either side with steep tree-covered embankments that had to be cleared (Photo 4). Elsewhere, the removal of unwanted subways and certain other highway improvements necessitated further tree loss.

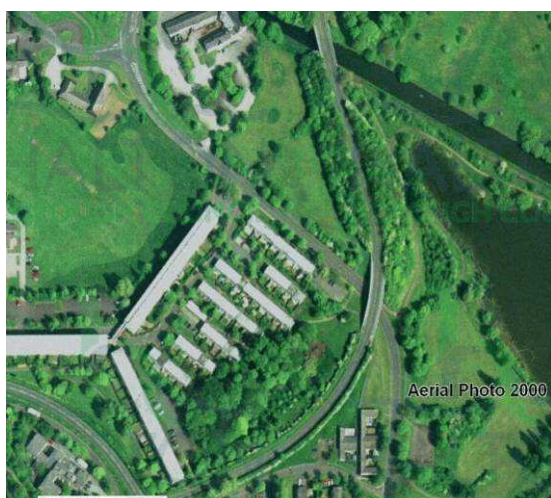


Photo 3 – Busway present in 2000

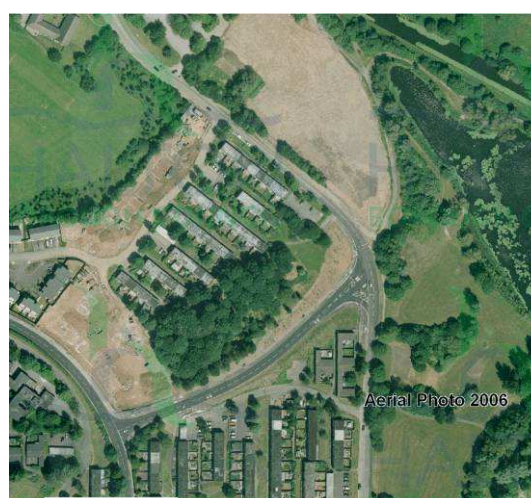


Photo 4 – Busway demolished in 2006

The Creation of Phoenix Park – Youth Activity Park

- 5.7 Another key project in the programme has been the creation of Phoenix Park (Photo 6), which was completed in July 2006. The park is an 8 ha state of the art Youth Activity Park comprising new park pavilion, young persons' play areas, skate park, climbing boulder and multi-use games area (Figure 1).

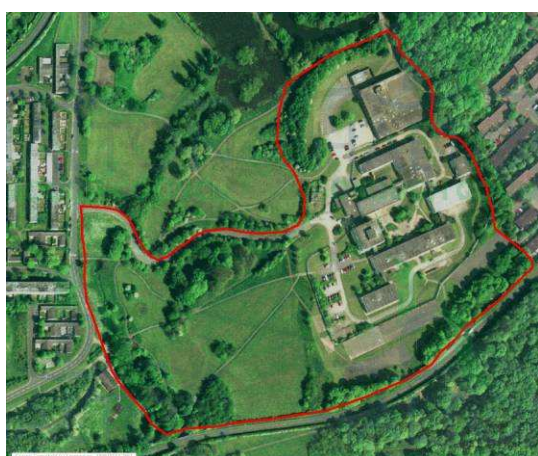


Photo 5 – Norton Priory School 2000

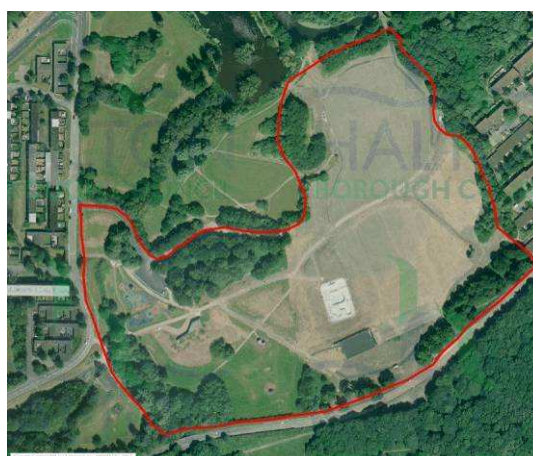


Photo 6 – New Phoenix Park

- 5.8 The park was created on the site of Norton Priory Secondary School (Photo 5) which had closed and was in a derelict state for many years. In order to build the

park the old school buildings had to be demolished and the whole site remediated before it could be reclaimed.

- 5.9 Although this process included the felling of a considerable number of trees, replacement planting on the site will provide more than adequate compensation, and the net effect on the environment will be positive.

Private Sector Housing Sites

- 5.10 In addition to the renewal of the existing housing stock, several greenfield sites will also be released for private sector housing. These are sites 26 (Lakeside) in Phase 2 and site 33 (Canalside) in Phase 3, as marked on Figure 6. These sites are currently being assembled for disposal and are untouched at present.
- 5.11 Photos 7 and 8 below show that there are many existing trees that could potentially be affected by these proposals. Although outline permission has been secured for the housing developments, the layout submitted as part of the planning application is for indicative purposes only. At the detailed planning stage, the Council will endeavour to ensure that as many of the better quality trees as possible can be retained as each of the sites is developed.

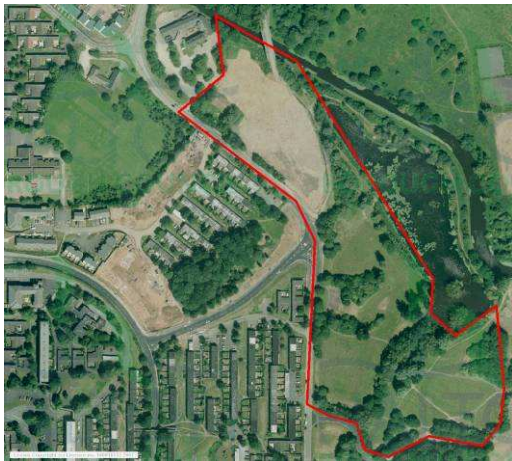


Photo 7 – Lakeside Development Area



Photo 8 – Canalside Development Area

- 5.12 In preparation for the development of site 33, the Council intends to translocate some of the semi-mature trees from this site to an adjacent site, where they will help form a nature conservation area (see Figure 7). This area will also act as a Sustainable Urban Drainage System for the new housing development, thereby creating a valuable semi-wetland habitat.



Figure 6 - Canalside Development Plan & Conservation Area

Estimated Tree Coverage of Key Development Sites Before Redevelopment

- 5.13 Only a few of the planning applications for development sites have so far been accompanied by full tree surveys. The information presented in Tables 3 and 4 have been interpreted from available survey data, local knowledge and aerial photographs. The table is split into the key development sites referenced on Figure 6.
- 5.14 For consistency and to allow comparison with Table 1, Table 3 converts the wooded areas that have been affected by the regeneration sites into a representative number of trees that they would be expected to contain at maturity (180 per hectare). This is an underestimation of the actual number, because in most cases the trees were semi-mature and at a much closer spacing.

Table 3 – Estimated Tree Coverage & Impact from Regeneration to Date

Development	Detail	Plan ref – Fig 5	Approx Date	Landscape typologies	Size of site (Ha)	Estimated number of original trees	Est. loss of trees
Housing Renewal P1	Conway Court	1	1999	Housing	0.2	7	7
	Conway Court	2	1999	Housing	0.2	20	13
	Nigel Walk 1	3	2000	Housing	0.08	10	10
	Nigel Walk 2	4	2000	Housing	0.08	10	10
	Waterbridge Mews	5	2005	Green-space	0.9	60	60
	Delacy & Fitzwilliam	6	2006	Housing	0.5	18	18
	Rolands & Princess	7	1999	Housing	0.8	35	15
	Rolands & Caernarvon	8	2003	Housing	1.2	18	8
	The Butts	9	2007	Housing	0.6	6	6
	Achillies Court	10	1999	Housing	0.3	16	16
	Chester Road	11	1999	Housing	1.7	30	25
	Ferryview, Rothesay	12	2001	Housing	1.2	49	40
New Infrastructure	Busway Demo, New Road Con	13	2004	Woodland	1.6	100	100
	Astmoor Subway	27	2005	Woodland	0.1	35	30
Phoenix Park	Norton Bus Stop improvements	14	2004	Woodland	0.1	100	50
	Sightline to lake and canal	14	2003	Woodland	0.1	72	18
						200	40
Total estimated no. of trees on development sites						748	466

Table 4 – Future Projects in the Programme – Estimated Tree Coverage of Sites

Development	Detail	Plan ref – Fig 5	Approx Date	Landscape typologies	Size of site (Ha)	Estimated number of original trees	Est. loss of trees
Social Housing Renewal P2	Caesars and Roman Close	16	2007	Housing	0.7	54	40
	Kingshead Close	17	2009	Housing	0.5	23	20
	Shepherds Row	18	2009	Housing	0.5	13	10
	Keepers Walk	19	2009	Housing	0.5	60	50
	Hedge Hey Car Park	20	2007	Housing	0.4	40	30
	Hedge Hey Flats	21	2008	Housing	0.3	20	20
	Spinney	22	2007	Housing	0.2	6	0
	Meadow	23	2007	Housing	0.2	60	50
	Youth Centre Site	24	2008	Housing	0.9	150	150
	Richards Close	25	2009	Housing	0.2	12	0
Private Sector Housing Sites P2	Lakeside	26	2009	Park	5.8	424	220
Housing Renewal P3	Village Square	27	2009	Housing	0.7	75	50
	Plantation	28	2010	Housing	0.2	21	21
	Plantation Car Park	28	2009	Housing	0.3	36	30
	Woodlands, Merlin	29	2011	Housing	0.6	25	22
	Woodlands Arthurs	30	2011	Housing	0.7	44	40
	Rupert Row	31	2011	Housing	0.2	16	15
	Bretherton	32	2011	Housing	0.2	13	12
	Opportunity Sites	34	2011	Housing	0.2	120	0
Private Sector Housing P3	Canalside	33	2011	Park	5.5	220	120
Total estimated no. of trees on development sites						2267	900

- 5.15 Of the estimated 6,462 trees in the study area (Table 1), the regeneration project has had or will have the potential to affect around 33%. The actual representative loss of trees so far (Table 3) has been estimated at 466 (7%). However, the ongoing regeneration programme has the potential to affect a further 900 trees (Table 4).

Proposals for Replacement Tree Planting

- 5.16 The regeneration projects have provided for some replacement tree planting, although the species used are generally more ornamental, with a shorter life and a smaller size than the original trees. The new planting has not been quantified, but it is likely to be insufficient to provide a sustainable environment.
- 5.17 Guided by this strategy, the objective should aim to allow for the planting of at least two, and where feasible three, new trees for each tree lost. There is therefore a need to identify suitable locations for the planting of around 3,000 trees (based on their spacing at maturity), to replace the forecasted 1366 potential tree losses at the completion of the regeneration programme. Figure 4 indicates several sites totalling 4.9ha across Castlefields that will be investigated for this purpose.
- 5.18 Future surveys can be used to identify newly planted trees that require management.

SUMMARY – IMPLICATIONS of CASTLEFIELDS MASTERPLAN on EXISTING TREES

- 5.19 The individual regeneration projects making up the Castlefields Regeneration Programme have had or will continue to have an impact on the local environment in general, and trees in particular. A number of complex factors are driving the regeneration programme, some of which inevitably conflict with other interests, but the ultimate goal is to deliver the strategic aims of the project. Tree coverage has been adversely affected by several of the larger projects, and in particular by the demolition of the social housing and replacement with the new housing.
- 5.20 The loss of trees to date and in the future as a result of development is not easy to quantify due to the scarcity of the data. The best estimate is that the equivalent of about 466 mature trees have been lost due to the regeneration programme so far, representing around 7%. However, potentially 900 more trees could still be lost through the regeneration projects still to be implemented.
- 5.21 Whilst there have been some regrettable losses, it should be noted that some of the trees removed were not of good quality and may have had to be felled anyway as part of routine management. Some opportunities for new planting have been created, such as at Phoenix Park, and these can be extended to other areas.
- 5.22 The main challenges in the future will be those sites that have been confirmed for development in the regeneration programme, such as the Private Sector Housing sites, but have yet to be designed in detail. Appropriate surveys to BS5837 should inform the development process. The aim should be to develop around and retain the more valuable specimens in situ.
- 5.23 In the interests of sustainability, a balance should be achieved between retaining the best of the existing trees and planting suitable replacements for those that are felled.
- 5.24 The development of Site 33 (Figure 6) will unfortunately affect a significant number of middle aged oak trees. A translocation programme to move some of these trees will be undertaken by the council before development commences. The trees will be moved to a new nature conservation area which incorporates a Sustainable Urban Drainage System (Figure 7).
- 5.25 Where trees have to be removed to realise the wider objectives of the regeneration programme, they should be replaced using appropriate species at a minimum planting ratio of 2 to 1, and where feasible 3 to 1, to account for establishment failures, and result in a net increase in the number of trees in Castlefields at the completion of the regeneration programme. Further details of Halton's policy on tree removals and replacement planting can be found in the Natural Assets Strategy.
- 5.26 The species composition is likely to change as smaller ornamental trees are preferred to be planted around new developments. Additional sites thus need to be identified where there is sufficient space for the establishment of large-growing native trees to compensate for any large trees that are removed. Figure 4 shows potential areas that will be considered for this purpose. A high standard of aftercare will be essential to give the newly planted trees a good chance of survival.



PART II – *Tree Management*
'A Vision for the Future'

CASTLEFIELDS TREE STRATEGY PRINCIPLES

6.1 Four Strategic Principles set out the framework for sustainable tree management in Castlefields. Each principle has several Action Plans for stakeholders to deliver.

SP1) To promote the value and benefits of trees to the local community.

The trees of Castlefields are under threat from development pressure. They are a valuable asset and contribute greatly to the green infrastructure of the area. They provide wildlife habitat, visual amenity, screening and recreation value, but require appropriate management to ensure sustainability and to avoid creating oppressive environments with enclosed and intimidating spaces. Involving and informing local residents will give them a sense of ownership and provide them with opportunities to gain wider benefit from their local environment.

Action Plans

- i) Use the existing lines of communication with the housing associations tenants (e.g. newsletter) to.
 - (a.) report on the persistent vandalism of trees,
 - (b.) promote the environmental value of trees and
 - (c.) promote events involving trees.
- ii) Investigate the feasibility of creating a Castlefields Tree Warden Scheme (see <http://www.treecouncil.org.uk/tws/what.htm>).
- iii) Create lines of communication to promote trees within the stakeholder organisations, especially with regard to future development schemes.
- iv) Establish a dialogue with the Mersey Forest and Groundwork groups with the aim of encouraging participation in community planting schemes.

SP2) To ensure that trees are managed in accordance with good arboricultural practice.

The active management of the tree stock informed by a survey programme will result in a well maintained and balanced tree stock of good condition. It will also allow the better control and forecasting of budgets. Good tree management will confer high amenity value to the local area.

Action Plans

- i) Specify that all tree surgery be carried out in accordance with recognised best practice standards for tree works (BS3998) to maintain the amenity value and structural integrity of the trees.
- ii) Use appropriately qualified and insured professional tree surgeons that have a proven track record of quality tree work, possibly through the creation of a co-operative select list.
- iii) Undertake a programme of proactive tree maintenance operations informed by historic trends and site surveys for cost-effective management.
- iv) Provide a measured assessment of all tree complaints that takes a wider view of the long-term tree management aims.
 - (a) Undertake site visits to assess the issues reported,
 - (b) Resist the removal of trees without just cause,
 - (c) Assess species suitability for each location.
- v) Maintain records of all tree survey, tree works and complaints in a consistent format between all parties.

SP3) To ensure that the tree and woodland coverage is sustained for future generations.

The challenge for the future is to sustainably manage the existing tree stock by maintaining an appropriate number of trees for each locality with a diverse age range. This diversity will provide both local interest and ecological benefit. The pressures of the regeneration programme will increase this challenge, but this should also be viewed as an opportunity to set the future structure of tree management at an exemplary level within the Castlefields area.

Action Plans

- i) Identify and remove, or undertake remedial pruning on, all hazardous, poorly pruned and mismanaged trees.
- ii) Compile a detailed digital dataset of trees in Castlefields within a 5-year period to guide tree management decisions.
- iii) Maintain existing trees in good health and condition, only undertaking tree works that conform to best practice techniques to ensure that visual amenity is maintained.
- iv) Sustainably manage the wooded areas to maintain and improve multi-functional uses for local residents.
- v) Set benchmarks for a sustained tree population in Castlefields for the various landscape typologies to be maintained through appropriate management.
- vi) Compile a tree planting strategy and identify areas for planting and guidelines for the establishment and maintenance of new trees, including measures to reduce acts of vandalism on new tree planting.
- vii) Maintain and enhance biodiversity where appropriate in line with local, regional and national Biodiversity Action Plans (BAP's).
- viii) Regularly review the tree strategy and tree population of Castlefields against the benchmarks set by all partners.

SP4) Ensure that new development schemes make provision for retaining the best of the existing trees, and provide for new tree planting to compensate for any that have to be felled.

The primary objective of delivering the regeneration programme has impacted on existing trees. Through informed decision making, established trees must be given due regard so that the most important of them are retained within new development sites as far as is practicable. To facilitate this approach, detailed tree surveys and arboricultural implication studies, in accordance with best practice BS5837, should be carried out at the earliest stage of the design process.

Action Plans

- i) Provide detailed tree surveys and arboricultural implication assessments to BS5837:2005 at the earliest stage of the design process for all development proposals.
- ii) Mitigate the impact of the re-development on the tree stock by identifying new sites and implementing appropriate planting schemes.
- iii) Ensure that high-quality landscaping schemes are devised for each development site as a planning condition.
- iv) Choose species suitable for each site guided by the tree planting strategy, such that new planting is incorporate into the existing tree landscape.

TREE PLANTING GUIDELINES

7.1 Halton Borough Council's Trees & Woodlands Leaflet No.2 details good planting practice and maintenance. Guidance is also given in Halton's 'Natural Assets Strategy' at section 3.5. As these documents provide sufficient detail, the information will not be duplicated in this document.

7.2 Nursery stock should be sourced from local nurseries that can provide native trees of local provenance.

Replacement Planting

7.3 In cases where tree felling is unavoidable, suitable replacement planting should take place at a minimum rate of two for one. Table 5 lists appropriate native tree species for the Castlefields area as identified by the Biodiversity Appraisal (ref: TEP1058.04.001).

Opportunities

7.4 The regeneration of Castlefields will provide opportunities for new planting in areas that have been reclaimed following demolition and regeneration. Areas such as the former Norton Priory High School site have some new planting but have capacity for more (Photo 5).

7.5 Around the new development areas, some tree planting may be secured through planning conditions. An appraisal of the suitability of the area, should be undertaken following completion of each stage of the demolition and development works to determine the opportunities for tree planting.

7.6 New potential planting areas should be assessed for suitability using a standard protocol. The protocol should be used by all stakeholders to rank the planting opportunities and benefits of the identified sites. This will provide consistency and contribute toward a cohesive landscape.

Schools

7.7 Of the four schools within the study area (Figure 1), three have few trees. Opportunities exist to involve the schools in tree planting and aftercare to improve their environment. Partnership with the Mersey Forest is a potential avenue to pursue for funding and education programmes (Appendix 10).

Table 5 – Recommended native tree species from the Biodiversity Appraisal

Ilex aquifolium
holly



Betula pendula
silver birch

Quercus robur
English oak



Alnus glutinosa
alder

Crataegus monogyna
hawthorn



Corylus avellana
hazel

Betula pubescens
downy birch



Fraxinus excelsior
ash

Salix caprea
goat willow



Salix cinerea
grey willow

Salix viminalis
osier



Prunus spinosa
blackthorn



Quercus petraea
sessile oak

Sambucus nigra
elder



Prunus avium
wild cherry

Ulmus glabra
wych elm



Tilia cordata
small leaf lime

Salix alba
white willow



Populus nigra
black poplar

- 7.8 The nature of urban areas often requires the planting of more ornamental species to compliment or emphasise a particular attribute of the surrounding built environment. In these circumstances, appropriate ornamental species should be chosen.
- 7.9 Table 6 is taken from the Biodiversity Appraisal (ref: TEP1058.04.001), and recommends 'wildlife friendly' ornamental tree species. Some additional ornamental tree species for urban areas, also taken from the Castlefields Design Palette (2005) and recommended for diversity, are listed in Table 7.

Table 6 - 'Wildlife friendly' ornamental tree species from the Biodiversity Appraisal

			<i>Amelanchier lamarkii</i> juneberry
<i>Carpinus betulus</i> hornbeam			<i>Castanea sativa</i> sweet chestnut
<i>Larix decidua</i> European larch			
	<i>Pinus sylvestris</i> Scots pine		
<i>Malus pupurea</i> purple crab apple		<i>Malus domestica</i> domestic apple	
	<i>Sorbus aria</i> Lutescens whitebeam		

Table 7 - Other recommended ornamental tree species

Corylus colurna
Turkish hazel



Crataegus x lavalleyi
hybrid cockspur thorn

Populus tremula
aspen

Alnus cordata
Italian alder



Prunus padus
bird cherry



Prunus subhirtella
'Autumnalis'
autumn cherry



Tilia tomentosa
silver lime

Acer campestre
field maple



Crataegus prunifolia
broadleaved cockspur thorn

Acer pseudoplatanus
sycamore



Sorbus aucuparia
mountain ash

7.10 The tree species lists in Tables 5, 6, and 7 will form the basis of the Castlefields Tree Planting Palette. The following section looks at each of the defined landscape typologies from this study and lists the appropriate species for each area taking into account the requirements and variation of their characteristics.

CASTELFIELDS TREE PLANTING PALETTE

- 8.1 Using the available tree data for Castlefields, the following guidelines have been brought together with the previous section to form a Tree Planting Palette to be used those responsible for planting and managing trees in Castlefields.
- 8.2 The average number of trees found in the housing area, as calculated from this study, is 40 per hectare. Due to the changed nature of the housing areas, detailed in section 1, this density may not be achievable without encouraging planting in private gardens. Working with the community will therefore be important.

HOUSING AREAS		Notes
Small Trees		
<i>Amelanchier lamarkii</i>	juneberry	Showy flowers in spring
<i>Crataegus monogyna</i>	hawthorn	Hardy small tree
<i>Crataegus x lavalleyi</i>	hybrid cockspur thorn	Plant away from paths because of fruit
<i>Crataegus prunifolia</i>	broadleaved cockspur thorn	Plant away from paths because of fruit
<i>Malus domestica</i>	domestic apple	Plant away from paths because of fruit
<i>Malus pupurea</i>	purple crab apple	Plant away from paths because of fruit
<i>Sorbus aucuparia</i>	mountain ash	Numerous varieties available
<i>Sorbus hupehensis</i>	hupeh rowan	Showy berries
Medium Trees		
<i>Betula pendula</i>	silver birch	
<i>Betula pubescens</i>	downy birch	
<i>Carpinus betulus</i>	hornbeam	Fastigiated form available but can be wide spreading
<i>Corylus colurna</i>	Turkish hazel	Good architectural form
<i>Prunus padus</i>	bird cherry	
<i>Prunus subhirtella</i> 'Autumnalis'	autumn cherry	Late flowering
Large Trees		
<i>Acer pseudoplatanus</i>	sycamore	Some ornamental varieties available, resilient urban tree
<i>Pinus sylvestris</i>	Scots pine	

- 8.3 Planting within existing and new woodland areas will require a higher density of trees. The target density for established woodlands at maturity is around 180 trees per hectare. New woodland areas should be planted at 2200 trees per hectare.

WOODLAND AREAS		Notes
Small Trees		
<i>Corylus avellana</i>	hazel	
<i>Crataegus monogyna</i>	hawthorn	
<i>Ilex aquifolium</i>	holly	
<i>Prunus spinosa</i>	blackthorn	
Medium Trees		
<i>Acer campestre</i>	field maple	
<i>Populus tremula</i>	aspen	
<i>Prunus avium</i>	wild cherry	
<i>Prunus padus</i>	bird cherry	
<i>Sorbus aucuparia</i>	mountain ash	
Large Trees		
<i>Fraxinus excelsior</i>	ash	
<i>Quercus petraea</i>	sessile oak	
<i>Quercus robur</i>	oak	
<i>Tilia cordata</i>	small leaf lime	

- 8.4 The informal nature of the parkland areas should reflect the process of natural regeneration with a mosaic of habitats. The survey found that there was an average of 57 trees per hectare, but this could be increased with the re-development to concentrate habitats in particular areas.

INFORMAL PARKLAND AREAS		Notes
Small Trees		
<i>Corylus avellana</i>	hazel	
<i>Ilex aquifolium</i>	holly	
<i>Malus domestica</i>	domestic apple	
<i>Prunus spinosa</i>	blackthorn	
<i>Salix caprea</i>	goat willow	
<i>Salix cinerea</i>	grey willow	
Medium Trees		
<i>Acer campestre</i>	field maple	
<i>Alnus glutinosa</i>	alder	
<i>Betula pendula</i>	silver birch	
<i>Betula pubescens</i>	downy birch	
<i>Prunus avium</i>	wild cherry	
<i>Prunus padus</i>	bird cherry	
<i>Sorbus aucuparia</i>	mountain ash	

INFORMAL PARKLAND AREAS		Notes
Large Trees		
<i>Fraxinus excelsior</i>	ash	
<i>Populus nigra</i>	black poplar	Becoming scarce
<i>Quercus petraea</i>	sessile oak	
<i>Quercus robur</i>	oak	
<i>Salix alba</i>	white willow	

- 8.5 The formal parkland has a more structured landscape, with the number of trees per hectare similar to the informal parkland at 53. Tree planting should be used to frame the sweeping open grassland areas.

FORMAL PARKLAND AREAS		Notes
Small Trees		
<i>Amelanchier lamarkii</i>	juneberry	Showy flowers in spring
<i>Ilex aquifolium</i>	holly	
<i>Malus domestica</i>	domestic apple	
<i>Malus purpurea</i>	purple crab apple	
Medium Trees		
<i>Alnus cordata</i>	Italian alder	
<i>Carpinus betulus</i>	hornbeam	
<i>Corylus colurna</i>	Turkish hazel	Good architectural form
<i>Prunus avium</i>	wild cherry	Variety 'Plena' is very floral
<i>Salix viminalis</i>	osier	
Large Trees		
<i>Castanea sativa</i>	sweet chestnut	
<i>Fraxinus excelsior</i>	ash	Ornamental varieties with coloured stems
<i>Pinus sylvestris</i>	Scots pine	
<i>Populus nigra</i>	black poplar	
<i>Quercus petraea</i>	sessile oak	
<i>Quercus robur</i>	oak	
<i>Salix alba</i>	white willow	
<i>Tilia cordata</i>	small leaf lime	
<i>Tilia tomentosa</i>	silver lime	Resistant to aphids

- 8.6 As the 'pocket park' is a compact area, there is a high tree density of 101 trees per hectare. This can be maintained with the appropriate choice of species in the appropriate location to minimise conflict with the land uses of the surrounding areas.

'POCKET PARK' AREA		Notes
Small Trees		
<i>Amelanchier lamarkii</i>	juneberry	Showy flowers in spring
<i>Crataegus x lavalleyi</i>	hybrid cockspur thorn	Plant away from paths because of fruit
<i>Crataegus prunifolia</i>	broadleaved cockspur Thorn	Plant away from paths because of fruit
<i>Ilex aquifolium</i>	holly	
<i>Malus domestica</i>	domestic apple	Plant away from paths because of fruit
<i>Sorbus aria</i>	whitebeam	Plant away from paths because of fruit
<i>Sorbus hupehensis</i>	hupeh rowan	Showy fruit
Medium Trees		
<i>Acer campestre</i>	field maple	
<i>Betula pendula</i>	silver birch	
<i>Betula pubescens</i>	downy birch	
<i>Carpinus betulus</i>	hornbeam	Fastigiated form available but can be wide spreading
<i>Corylus colurna</i>	Turkish hazel	Good architectural form
<i>Prunus padus</i>	bird cherry	
<i>Prunus subhirtella</i> 'Autumnalis'	autumn cherry	
Large Trees		
<i>Fraxinus excelsior</i>	ash	
<i>Pinus sylvestris</i>	Scots pine	
<i>Tilia cordata</i>	lime	

- 8.7 The open spaces and play areas have been combined, as they provide similar functions and are subject to similar pressures from the local community. The survey information is sparse for these landscape typologies so the figures for tree densities may not be fully representative.
- 8.8 The open spaces had a tree density of 75 trees per hectare and the play areas 26 trees per hectare. This difference reflects the uses of the spaces and the psychological aspects that users associate with enclosed spaces. The lower figure is therefore more appropriate.

OPEN SPACE & PLAY AREAS		Notes
Small Trees		
<i>Crataegus monogyna</i>	hawthorn	Hardy small tree
<i>Crataegus x lavalleyi</i>	hybrid cockspur thorn	Plant away from paths because of fruit
<i>Crataegus prunifolia</i>	broadleaved cockspur thorn	Plant away from paths because of fruit
<i>Ilex aquifolium</i>	holly	
<i>Malus domestica</i>	domestic apple	Plant away from paths because of fruit
<i>Malus pupurea</i>	purple crab apple	
<i>Sorbus aria</i>	whitebeam	
Medium Trees		
<i>Betula pendula</i>	silver birch	
<i>Betula pubescens</i>	downy birch	
<i>Carpinus betulus</i>	hornbeam	Fastigiate form available but can be wide spreading
<i>Prunus padus</i>	bird cherry	
<i>Prunus subhirtella</i> 'Autumnalis'	autumn cherry	
Large Trees		
<i>Acer pseudoplatanus</i>	sycamore	
<i>Fraxinus excelsior</i>	ash	
<i>Pinus sylvestris</i>	Scots pine	
<i>Tilia cordata</i>	lime	

- 9.1 Castlefields has an extensive landscaped setting that contributes greatly to the local environment. This study has estimated the tree population in Castlefields to be around 6500 established trees.
- 9.2 In 2003, the Castlefields Regeneration Programme was initiated, to address the problems that have contributed to the area's decline. The overarching priorities of the programme are to improve the housing, economic, social and environmental well-being of the area.
- 9.3 Unfortunately, these improvements have resulted in the unavoidable loss of a significant number of trees. Some of the losses were trees of poor condition or unsuitable location. This study estimates this loss to currently be around 7% of the pre-regeneration tree stock, although there is potential to have a greater effect.
- 9.4 Although the regeneration projects are providing some replacement planting, it will not be sufficient to mitigate for the unfortunate losses. In order to ensure the creation of a sustainable tree population each tree removed should have at least two, and where feasible three, trees planted as replacement. This will result in a net gain in the number of trees in Castlefields associated with the Regeneration Programme.
- 9.5 A key aspect of the replacement planting will be the identification of suitable areas and resources for tree planting to integrate with the new developments.
- 9.6 The need for a tree strategy to work alongside and beyond the regeneration programme is identified. This tree strategy highlights the main issues and provides a framework for future management.
- 9.7 The four guiding management principles of this Tree Strategy are as follows.
1. *To promote the value and benefits of trees to the local community.*
 2. *To ensure that trees are managed in accordance with good arboricultural practice.*
 3. *To ensure that the tree and woodland coverage is sustained for future generations.*
 4. *To ensure that new development schemes make provision for retaining the best of the existing trees, and provide for new planting to compensate for any trees that have to be felled.*
- 9.8 With the support of all of the stakeholders and input from the regeneration project, the delivered strategy will improve the landscape in conjunction with the regeneration project in Castlefields, and will ensure its sustainability into the future.

APPENDICES

- Appendix 1 Data sources table
- Appendix 2 Data extrapolation of tree cover table
- Appendix 3 Detail of landscape typologies analysis
- Appendix 4 Health of surveyed trees by landscape typology
- Appendix 5 Species list of trees surveyed at Castlefields
- Appendix 6 CDS summary of tree species in Castlefields - report extract
- Appendix 7 LHT Tree Policy Statement 2006
- Appendix 8 CDS Tree Policy Statement 1997 – report extract
- Appendix 9 HBC 'Trees & Woodlands' Leaflets No1 – No5
- Appendix 10 Potential Funding Opportunities for Tree Planting

Tree Survey Data Sources

Data Source	Original Format	Date of Data	No. of Trees or Groups	NOTES
(Tree Survey RB) for SINC & develop(HBC)	MapInfo	2005	98 Trees	Qualitative data attached for analysis
(Tree Survey RB) for SINC & develop(HBC)	MapInfo	2005	8 Groups	Data attached not very specific
LHT Trees Layer 1 to 6	MapInfo	2001/2002	681 Trees	Qualitative data attached for analysis
Youth Activity Park & development (HBC)	CAD	2004	45 Trees	Qualitative data now attached for analysis
Youth Activity Park & development (HBC)	CAD	2004	20 Groups	Data attached not very specific, 63 groups in data tables unable to allocate all to shapes
TEP Sample Survey Data	GIS	2006	150 Trees, 8 Groups, & 4 Woods	Qualitative tree data, less specific for groups and woods
CDS data analysis information	Paper	1991	1331 Trees	Data not specific but gives overview, covers some areas outside of study boundary
TOTAL			974 Trees 36 Groups	With usable data for analysis

The usefulness of the tree group survey data is likely to be limited because the data does not have sufficient qualitative detail for analysis. However, the information can be used to compile species lists and general condition of the tree groups.

Extrapolation of Tree Coverage in the Housing Areas

Reference	Area (ha)	No. of Trees	Est. No. of Trees per Ha
LHT Sample 1	4.8	190	40
LHT Sample 2	3.9	170	44
CDS from data analysis	18.8	714	38
Housing Area with No Tree Survey Data	18.1	724 (extrapolated)	(40 used as the average)
Remaining Housing Area with Tree Survey Data	10	300	
TOTAL No. of Trees around Housing Areas (excluding groups)	55	2098 (estimated)	

To estimate the number of trees along streets and in gardens surrounding housing, two samples of the LHT data have been used as a template. The results were extrapolated across the areas with similar characteristics for which no tree survey data is available (Figure 2).

Extrapolation of Tree Coverage in the Schools, Churches, PH

Schools, Churches, PH	Area (ha)	Est. No. of Trees	Extrapolated No. of Trees per ha
Day Care Centre	0.43	20	47
PH (adj. to Astmoor Lane)	0.13	5	38
Astmoor Bridge	0.9	25	28
Astmoor School	2.88	40	14
Castlefields Local Centre	0.44	10	22
Church	0.18	5	28
St Augustines School	2.36	15	7
St Augustines Church	0.3	10	33
PH (adj. to canal)	0.85	30	35
The Park County Primary	1.53	60	40
St Marys CE Primary	1.17	20	17
TOTAL for Schools, Churches, PH etc...	9	240	

Extrapolation of Tree Coverage in the Greenspaces

Greenspaces	Area (ha)	Est. No. of Trees	Extrapolated No. of Trees per ha
Pocket Park	0.83	84	101
Play Area	1.13	30	26
Open Space	2.0	150	75
TOTAL for Greenspaces	3.96	264	

Extrapolation of Tree Coverage in the Parkland and Woodland

Landscape Typology	Area (ha)	Est. No. of Trees	Extrapolated No. of Trees per Ha
Wooded Areas	10.8	1944	180
Formal Parkland	17.9	947	53
Informal Parkland	17	969	57

Health of Surveyed Trees by Landscape Typology

Landscape Typology	Health of Surveyed Trees (%)		
	Good	Fair	Poor
Open Spaces	47	36	17
Housing	47	42	11
Play Areas	48	49	3
'Pocket Park'	71	21	8
Informal Parkland	89	10	1
Formal Parkland	99	1	0
Schools, Churches, PH	Insufficient Data		
Wooded Areas	Insufficient Data		

List of Tree Species Surveyed by Frequency

Species	Frequency	Percentage
Sycamore	629	28.93%
Birch	412	18.95%
Lime	190	8.74%
Ash	157	7.22%
Oak	118	5.43%
Field maple	100	4.60%
Norway Maple	88	4.05%
Alder	76	3.50%
Willow	73	3.36%
Cherry	59	2.71%
Poplar	52	2.39%
elm	50	2.30%
Rowan	40	1.84%
Pine	23	1.06%
Hornbeam	22	1.01%
Hawthorn	19	0.87%
Hazel	15	0.69%
Horse Chestnut	11	0.51%
Aspen	5	0.23%
Blackthorn	4	0.18%
Leyland Cypress	4	0.18%
London Plane	4	0.18%
Pear	4	0.18%
Wych Elm	4	0.18%
Apple	3	0.14%
Beech	3	0.14%
Larch	2	0.09%
Laburnum	2	0.09%
Black Poplar	1	0.05%
box-elder maple	1	0.05%
Holly	1	0.05%
Sweet Chestnut	1	0.05%
Wild service tree	1	0.05%
Grand Total	2174	100.00%

The table includes species occurrences in groups, which have been recorded as one occurrence for each group and are therefore not fully representative.

APPENDIX 5

PERCENTAGES OF TREE SPECIES ON THE ESTATES

CASTLEFIELDS

<u>0-5%</u>	<u>6-10%</u>	<u>11-20%</u>	<u>over 20%</u>
Apple	Maple	Willow	Birch
Alder			Sycamore
Cherry			
Elm			
Hawthorn			
Hornbeam			
Lime			
Oak			
Pine			
Poplar			
Rowan			

No	Species	Height																								
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
2	Apple/Grub Apple					1	1																			
50	Alder				4	11	12	12	5	7	2															
64	Ash						7	12	21	16	8															
329	Birch	4	15	43	57	41	53	61	38	13	2	1			1											
25	Cherry			4	6	4	4	5	2																	
2	Cotoneaster			2																						
33	Elm						1			2	3		5	3	3	4			1	1		9		1		
2	Hawthorn				1	1																				
14	Hornbeam					8	5	1																		
2	Laburnum						2																			
70	Lime				1	9	8	10	14	14	13	1														
117	Maple		1	3	10	28	38	24	10	1	1	1														
1	Oak							1																		
26	Pine	21	5																							
24	Poplar							2		1	2				1	3				1		8		5		1
26	Rowan/Sorbus	2		3	2	15	1	3																		
2	Staghorn				1	1																				
397	Sycamore		2	11	31	56	85	87	62	55	3	5														
3	Whitbeam					1	2																			
142	Willow			3	1	2	5	8	8	40	5	21	13	8	8	7	2	1	2	8						
1331		23	9	27	75	151	167	229	222	155	137	12	33	16	12	16	7	3	3	2	25	0	6	0	0	1

Please note, 132 Trees to Delney Wood not included in above analysis.

LHT - TREE POLICY 2006

Background

The New Town landscape was designed to create a woodland setting throughout the estate for the purpose of:

- Providing an aesthetic backdrop and link way between residential, commercial, industrial and open space areas
- To aid in replacing the wildlife habitat lost through property development.
- Provide opportunities for adventure play.

This approach requires careful management if the new towns objectives are to be upheld. This means carrying out programmed works with plans for long term sustainability

Demand

Members of the Environmental Services team are under constant pressure from residents to carry out tree felling/pruning by request usually due to 'light condition' or satellite TV 'poor reception'. Conflict arises when some requests for one reason or another are denied.

All residents' requests are entered onto a database. An initial letter is generated informing the resident that a member of the team will be out within 14 days to inspect the tree, following the inspection a further letter is sent out stating what or if work is to be carried out.

The majority of requests arise over the summer months but unless work is urgent, all pruning forms part of a contract which is carried out in autumn/winter

Policy

We recommend that the criteria stated in the following table are used to enable LHT to manage the landscape effectively. See table on following page.

Expectations

Area Regeneration projects and car park improvement schemes require tree work to be carried out to form part of an overall objective.

The same criteria will apply and in some schemes new stock may be introduced to replace areas where tree loss has occurred

Summary

There are many benefits to be gained from the new town landscape. Managed effectively and residents will enjoy a green attractive place to live, with areas suitable for children to play and wildlife to flourish

LHT will benefit by attracting new residents to the area as well as retaining existing communities. Furthermore, by programming works they will cost effectively create a healthy sustainable habitat.

Residents are to follow normal grievance procedure if they disagree with the outcome of inspection.

Recommendations

It would be unethical, destructive and financially unsound for LHT to expect all residents' requests for tree work and felling to be carried adhoc. All work must be carried out at the correct time of year, using the correct methods and skilled labour, (Tree Surgeons), professional name Arborists.

By following this policy all residents will receive appropriate tree maintenance in their area.

Policy

Type of Work	Conditions Apply	Under Programme	Upon Request	Effect
Crown Lifting	The lowest branches of a tree may be removed if in any way they obstruct a pedestrian or vehicular part, or touch fencing or property	✓	✓	A safe path for Pedestrians and vehicles and clears access.
Crown Thinning	If the tree canopy is full and blocking light into a property. (NB. This excludes part of a partially shaded garden).	✓		Improves light conditions
Fell	If a tree has been diseased and decay has set in, subsequently dying or has died. If the tree is hazardous, i.e. Leaning 45 degrees towards a property following storm damage or severe ground movement. Causing Structural damage.	✓ ✓ ✓	 ✓ ✓	Can reduce the risk of disease spreading and aesthetically improves the landscape Creates a safe environment Halts further damage occurring, (existing damage made good).

Selective fell	If there is a large grouping of trees forming a dense canopy and their individual health is suffering due to competition for water, light and nutrients	✓		Trees remaining will be allowed to develop to full potential.
Coppicing	Thinning out groups of trees to establish a well balanced shrub boarder or canopy	✓		Creates a woodland habitat, 'naturalistic planting belt'.

Co-operative Development Services
Tree Policy - Castlefields & The Brow, Runcorn.

• Other Points to Consider

It will be noted from the previous section on pests and disease that stressed trees are more liable to attack by species such as *Pitythivaria regalis* (scale insect). Several *Tilia* species and *Acer pseudoplatanus* on site are heavily infested by this pest.

Preventative treatment is difficult, especially given the close proximity of residential properties, but the following practical measures may be considered for particularly important specimens:-

- ◆ A tar-oil winter wash may be considered as a means of killing overwintering pests, for trees which can be temporarily isolated from public usage whilst spraying is taking place.
- ◆ Improving current conditions by relieving soil compaction. The use of specialist machines which inject high pressure air into the soil to a depth of up to one metre may be considered. It is claimed that the soil fissures which are produced can act as channels for healthy root growth.
- ◆ Ensuring that future compaction, changes in surface water run off (e.g. through new paving or bitmac covered areas) and root severance are minimised. Thus trenching for services should be avoided beneath existing canopies of high quality trees on site. If such trenching is deemed essential then this should only be carried out by hand to prevent unnecessary root severance which may not only stress the tree affected but also affect its long term stability.

POLICY STATEMENT

This report has identified the following objectives:

1. Trees of high landscape importance should be retained wherever possible, not only for their own inherent value but for the contribution which individual and group specimens make to landscape character in any particular area.
2. Trees of outstanding merit may be considered for special protection, (i.e. Tree Preservations Orders)
3. Trees of low landscape importance should be removed.
4. Trees which may present a hazard to public safety or property should be removed or remedial works should be undertaken as soon as possible, having due regard to the effect such removals might have upon landscape character.
5. Longer term structural implications should be considered when selecting species for replanting.
6. The preservation and enhancement of landscape character and quality should be considered when selecting species for replanting within specific areas.

ACTION PLAN

This report has set out the way in which the above objectives can be achieved by:-

- Identifying trees which are of low landscape importance and/or present a hazard to public safety or property, for removal.
- Identifying trees of high and outstanding landscape importance to ensure retention and protection.
- Providing a framework policy for replanting, based upon local landscape character, to ensure opportunities for long term improvement to the landscape of the estate can be achieved.

Halton Borough Council Tree Leaflets

- i) Trees on Development Sites
- ii) Tree Planting and Maintenance
- iii) The Care of Mature Trees
- iv) Tree Work Contractors
- v) Managing Trees owned by the Council

Trees on Development Sites

Trees & Woodlands Leaflet No. 1





Established trees are generally of great value to the environment and usually held in high regard by the majority of nearby residents. Because of their size, shape and colour, trees are often prominent features in the local landscape and reflect the changing seasons in a familiar and pleasing way. They bring nature into the urban environment and add to the quality of life. It is therefore not surprising that controversy can arise when trees appear to be threatened by a development proposal.

The careful retention of healthy trees can give a sense of maturity to a new development and can be a significant asset when selling new properties. However, there is no point in trying to keep trees which are overmature or defective and which could soon become dangerous in their new surroundings.

Where there are trees on a potential development site, pre-application consultation with the Council is advisable at an early stage of the planning process. Where the trees are a critical issue, developers are advised to engage a specialist consultant to prepare a detailed report about the arboricultural implications of the development. Such a commitment may be necessary to show that all the factors relating to trees have been properly considered and that the granting of planning permission will not result in a net loss to the environment.

The Council's policies regarding trees on development sites are contained in the UNITARY DEVELOPMENT PLAN and the NATURAL ASSETS STRATEGY. In summary, these policies aim to protect the most important trees from development, to replace any which are unavoidably lost, and overall to increase the number and quality of trees in the Borough.

LEGAL CONSIDERATIONS

In determining planning applications, the Council will seek to retain trees wherever this is appropriate in the interests of public amenity. Trees can be afforded legal protection in a number of ways:

- When included in a Tree Preservation Order,
- When situated within a designated conservation area,
- When subject to a planning condition,
- When subject to felling licence requirements.

Without due thought and consideration, trees on development sites can be threatened in a number of ways, including:

- Felling to create more space for construction works,
- Careless use of machinery, causing damage to roots, trunk or branches,
- Ground compaction or contamination,
- Alterations to the existing soil level or water table,
- Excavation of service trenches.

It is strongly recommended that landowners or developers consult with the Council before undertaking any tree work. Otherwise, any unauthorised work may lead to prosecution.

BRITISH STANDARD 5837

British Standard 5837 "TREES IN RELATION TO CONSTRUCTION" should be regarded as an essential reference for all those concerned with the development of sites containing trees. It gives valuable guidance, following a logical sequence from the initial survey through the design period to the protection of retained trees from site works by the provision of temporary fencing. All developers of land in Halton where trees are present are expected to adopt these principles when submitting applications for planning permission.



TREE SURVEY AND DESIGN OF DEVELOPMENT



An essential first stage of planning a development should be to carry out a thorough survey of existing natural features. Such a survey should plot all trees accurately and record details of species, size, approximate age and physical condition. The trees should then be categorised in accordance with the BS5837 guidelines, such as:

1. *Trees whose retention is essential or most desirable (e.g. vigorous healthy trees of good form which would be in harmony with the sympathetic development of the site).*
2. *Trees whose retention is desirable (e.g. trees in a reasonable condition but not quite so important as the top category, perhaps because of abundant numbers or slightly impaired condition).*
3. *Trees which could be retained (e.g. trees in a reasonable condition but of no particular merit and not worthy of inclusion in the first two categories).*
4. *Trees which should be removed (e.g. trees which are dead, diseased or dangerous).*

The information gathered from the tree survey should be taken into account when designing possible layouts for the site. The trees which are worthy of retention should be clearly marked on the plan, with the full branch spread shown to scale. Wherever possible, any roads, access drives, footpaths or service trenches should be routed so as not to trespass beneath the branches of trees to be retained. This area is where the majority (but not all) of the roots will be located close to the surface, and so should not be disturbed if the trees are to survive.

Buildings should be positioned a reasonable distance away from any trees, bearing in mind nuisance factors to future occupants such as light obstruction and leaf fall, as well as safety factors such as the possibility of falling branches in adverse weather conditions.

The distance allocated between trees and buildings is of critical importance and should depend on the size, species and condition of the each tree. Only by ensuring that the tree has adequate space, including allowance for future growth, can a satisfactory juxtaposition be achieved. The architect should always seek guidance from an experienced arboriculturalist in this respect.

ARBORICULTURAL METHOD STATEMENT

Damage is usually unnecessary and can be avoided if the importance of trees is recognised and appreciated from the start by all concerned. An arboricultural method statement is a useful means of describing all the measures to be taken to ensure the protection and continued healthy existence of all trees shown to be retained on the approved plan.

In particular, before any site works begin, all trees to be retained should be protected by robust temporary fencing. The minimum distance between the tree and fence should be determined by a qualified arboriculturalist, with reference to British Standard 5837.

The protective fencing must remain in place for the duration of the development and no activity whatsoever should take place within the enclosed area, unless the advice of an arboriculturalist is first sought.

There may be other special ways of working which need to be taken on some sites and these should also form part of the arboricultural method statement. For example, the installation of underground services could be proposed if carried out in accordance with NJUG 10 (National Joint Utilities Group, Publication 10), or the provision of some hard surfacing could be proposed if carried out in accordance with APN 1 (Arboricultural Practice Note 1, "Driveways close to trees").

It may be appropriate to carry out surgery on some trees which are retained on development sites. This should only be carried out by a specialist contractor, with the consent of the Council and in accordance with British Standard 3998 (see Leaflets 3 & 4 of this series).



DEPTH OF FOUNDATIONS

When building in the vicinity of trees, special precautions may be necessary to ensure that the roots do not cause damage in the future. This is particularly important where the soil has a clay content. By extracting water, trees can in some cases influence the moisture content (and therefore the volume) of shrinkable soils, leading to subsidence.

Foundations need to be provided to a depth that is below the level of any likely soil movement. The depth of foundation for all new buildings should comply with current building regulations, usually as determined by reference to NHBC Standards, Chapter 4.2 "BUILDING NEAR TREES". Further advice is available from the Council's Building Control Officers.



LANDSCAPING

After site work has been completed, an approved landscaping plan should be implemented during the first available planting season. This should include the planting of suitable trees:

- To enhance the new development,
- To compensate for any trees which have been felled,
- To complement those trees which have been retained, and
- To ensure continuity of tree cover in the future.

Large-growing trees should be sited wherever there is room for unrestricted growth, such as wide verges or public open spaces. Species of more modest ultimate size should be used on narrow verges or in small front gardens.



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- **No. 3 – THE CARE OF MATURE TREES**
- **No. 4 – TREE WORK CONTRACTORS**
- **No. 5 - MANAGING TREES OWNED BY THE COUNCIL**

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One of the policies contained in the Natural Assets Strategy is:

"The Council recognises the important contribution made by trees and woodlands to the environment and is committed to the responsible and sustainable custodianship of this resource on any land which it owns or influences."

For further information, contact:

John White (Trees & Woodlands Officer)
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Picow Farm Road
Runcorn WA7 4UB

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Tree Planting & Maintenance

Trees & Woodlands Leaflet No. 2



THE IMPORTANCE OF PLANTING TREES

Trees are a cherished but vulnerable part of our landscape heritage. Although long-lived, trees do not last forever and some are inevitably lost each year for one reason or another. A sustained programme of planting is therefore needed just to maintain the number of trees at the present level.

Trees enhance the quality of life and it is our duty to ensure that future generations are also able to enjoy the many benefits that trees bring to the environment. If properly planned, planting trees can achieve a combination of objectives and make a valuable contribution to the landscape of the future.

WHERE TO PLANT TREES

With the permission of the landowner, trees can be planted anywhere that they have space to grow without detriment to other uses of the land, for example on playing fields, open spaces, highway verges, industrial estates and derelict land. Planting within private gardens can also be of value to local amenity when visible to the public.

However, there is nothing to be gained from planting a tree which will have to be cut down or mutilated in the future because it has been poorly sited. Trees should only be planted where there is room for them to grow to maturity without becoming a nuisance. Locations which should be avoided include road junctions where visibility must be maintained and places which are too close to buildings, retaining walls, overhead wires or underground services.

Some sites such as wildflower meadows, wetland and heathland may be valuable to nature conservation in their current state and could be spoilt rather than improved by tree planting. A register of sites known to be of importance for nature conservation is maintained and the Council's Nature Conservation Officer can offer appropriate advice.

WHEN TO PLANT TREES

Generally, trees can be planted at any time between the beginning of November and the end of March, excluding periods when the ground is frozen or waterlogged. If there is a wide choice of planting dates, it is preferable to plant deciduous trees during November or early December when there is still some warmth in the soil. There is some reason to believe that trees planted at this time, rather than later in the season, may be less susceptible to a possible drought period in the following Spring.

The planting season can be extended by using container-grown trees but special design, ground preparation and maintenance requirements must then be considered. In particular, it is essential to ensure that a regular supply of water is available to the roots.



CHOOSING THE RIGHT SPECIES

When planting trees, the species selected should:

- *have the potential to fulfil the main objectives for planting, e.g. for timber, habitat creation or visual amenity,*
- *be suited to the conditions of the site, e.g. soil type or degree of exposure, and*
- *be of an ultimate size that is not too large for the site.*

The use of native species is of most value to wildlife but non-native trees can be used with good effect on sites which are not sensitive for nature conservation reasons. With a wide variety of species and cultivars to choose from, all with different characteristics of size, shape, colour and site requirements, it is important to ensure that any tree planted will be suited to its location in the future. General advice is available from a number of local sources or the Council's Tree Officer.

CHOOSING THE RIGHT SIZE

Trees can be purchased from nurseries in a variety of sizes as bare-rooted, container-grown or root-balled specimens. Bare-rooted stock is cheaper, easier to handle and often gives the best results. A disadvantage with some containerised plants can be the tendency for roots to remain within the original growing medium after planting, especially on heavy or inhospitable soils. Irrespective of size or type, all plants must be vigorous and healthy at the time of planting with a well developed root system giving a favourable root to shoot ratio.

There are four main size classifications, with variations within each category:

Seedlings, transplants or cell-grown

These are small trees, usually up to three years old and up to 90 cm. in height. They are relatively cheap to purchase, easy to establish and (with good maintenance) make rapid early growth.

Feathered whips (bare-root or container-grown)

These are slightly older and larger, usually between 90 and 150 cm. tall. They can combine ease of establishment with some early impact.

Standards (bare-root or container-grown)

These are usually between 2 and 4 metres tall, having been pruned to give a branch-free stem of at least 150 cm. They are classified according to the circumference of the stem at 1 metre above ground (6-8 cm. = light standard, 8-10 cm. = standard, 10-12 cm. = selected standard, 12-14 cm. = heavy standard, 14-16 cm. = extra heavy standard).

Semi-mature

Advanced nursery stock can be obtained for sites where specimen trees are required to give an immediate visual impact. Planting this type of tree is expensive and specialist techniques need to be used.

TRANSPORT AND HANDLING OF BARE-ROOTED PLANTS

Between lifting in the nursery and planting on site, the roots must never be allowed to dry out. Exposure for even an hour or so can be harmful, especially when windy. The roots must therefore be placed in bags or covered with tarpaulin when in transit. On receipt of the plants, they should be planted straight away or stored (with the roots still covered) for up to two days in an outbuilding which is not heated but free from frost. If planting is not to be carried out immediately, the trees must be "heeled in" (that is, stored in trenches with all the roots covered with soil). Plants can be kept safely in this way throughout the dormant season.

METHODS OF PLANTING

Ground preparation

Before planting, some preparation of the ground may be needed. This is essential when the planting is scheduled to follow earth-moving operations. In such cases, it is important to provide a sufficient depth of suitable rooting medium and to ensure adequate drainage, particularly by relieving any compaction. Where trees are to be planted on an undisturbed site with reasonable soil conditions, the removal of competing vegetation (by cutting, screening or herbicide application) will aid early establishment.

Notch planting

This method is only suitable for bare-rooted transplants and smaller whips with a compact root system.

- *Cut two deep notches into the ground at right angles, creating an "L" shape and leaving the spade in the second slit.*
- *Lift up a flap of earth with a twisting action, while carefully inserting and pushing down all of the roots behind the spade.*
- *Gently pull the plant up slightly until the root collar is at ground level in the corner of the notch.*
- *Withdraw the spade and close the notch by treading firmly, ensuring that the plant remains in a vertical position.*



Pit planting

This method is suitable for all sizes and types of trees.

- *Dig a hole which is substantially bigger than the volume of roots to be accommodated.*
- *Break up and loosen the bottom and sides of the hole, to improve drainage and to encourage future root development. This is especially important on heavy soils.*
- *If support is necessary, drive a stake (or stakes) into the base of the pit as appropriate.*
- *Position the tree so that the ground level at the base of the stem will correspond to that at which it was growing in the nursery.*
- *Back fill the pit in stages, whilst firming up the soil around the roots by treading, until the original ground level is restored.*
- *If support is necessary, fasten the stem to the stake(s) using cushioned ties in a way which will ensure that no chafing occurs.*

Staking

Small trees (up to about 120 cm. tall) do not usually need staking. With larger trees, the root system needs to be held in place until it can become established. In many cases, this can be achieved by using a short stake extending out of the ground no higher than one third of the height of the tree. If the tree has a large root ball, more than one stake may be needed or a specialist underground anchorage system can be used. Stakes can usually be removed at the beginning of the second or third growing season.



PROTECTION

In many situations, newly planted trees need to be protected against browsing animals and one or more of the following methods are commonly used:

Tree shelters

A tree shelter is a translucent tube which is placed over the young tree and held in position by a stake. It has the added advantage of acting like a mini-greenhouse, thereby enhancing the growth of the tree inside. Shelters which are 0.6m. high will protect against rabbits, 0.75m. high against hares, and 1.2m. high against sheep.

Spiral rabbit guards

These are loosely coiled plastic tubes which are easily fitted around the base of the stem. A cane may be needed if the tree is not sturdy enough to support the guard without bending.

Fencing

Animals such as horses, cattle and sheep must be excluded from newly planted areas by appropriate fencing. In urban areas, some forms of fencing can be used to deter vandalism or to limit the degree of soil compaction around the roots.

MAINTENANCE

The successful establishment of young trees today will help to shape the landscape of tomorrow, but establishment is not the same as planting. Even those trees planted to the best possible specification rarely grow well if they are neglected afterwards. Maintenance should be regarded as an essential, not just desirable, part of establishment.

TREE ESTABLISHMENT = PLANTING PLUS MAINTENANCE

Firming up

Between the time of planting and the following April, the trees should be checked after any periods of frost, snow, wind or heavy rain. If there has been any disturbance to the ground conditions, this should be remedied and any cracks in the soil closed by treading firmly.

Weed control

Perhaps more than any other single factor, the survival and early growth rate is affected by the type and extent of the surrounding vegetation. This will compete with the trees for the available moisture and nutrients in the soil. Some weed control is therefore usually necessary to promote healthy tree growth. To allow the proper development of tree roots, an area of at least 0.5 metre radius around the base of the stem should be kept as weed-free as possible for at least three years. Mowing or cutting close to the tree is not recommended, as this only stimulates more vigorous weed growth. There is also a real danger that the cutting machine will damage the tree itself.

Frequent manual weeding is an option in a few situations, such as individual trees in gardens. However, on a larger scale, the careful use of an approved herbicide is usually the most effective, reliable and economical method. The application of herbicide should be carried out only by trained personnel and in accordance with the manufacturer's instructions.

Mulching

In some cases, the provision of a mulch can be an alternative to using chemical methods of weed control. This can be in the form of a layer of organic material such as wood chips, or a manufactured mulch mat. This should cover the ground for a minimum radius of 0.5 metre around the tree.

Replacing failed trees

Any trees which have failed to establish should be replaced in the following planting season. Before doing this, the likely causes of failure should be investigated to see if the original specification needs to be modified to give the replacements a better chance of success.

Removing stakes and ties

It is essential that these are not left indefinitely, as they can cause serious damage to the tree as it grows.



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The Care of Mature Trees

Trees & Woodlands Leaflet No. 3



THE IMPORTANCE OF TREES & WOODLANDS

Trees and woodlands are of vital importance in maintaining and improving the quality of life for those who live or work within the Borough. Trees are the most obvious of our natural assets, by virtue of their size and prominence, but they do not last for ever and are vulnerable to changes in their surroundings. The many benefits that trees bring to the environment have been well documented and it is our duty to ensure that, as well as ourselves, future generations are also able to enjoy these benefits.

Trees have great visual amenity value which can significantly enhance the appearance of the locality. They provide contrasts of size, colour and texture to the urban landscape and effectively reflect the changing seasons, bringing nature into towns. Prominent trees become accepted as landmarks and are often held in high regard by local residents.



Of increasing value to modern living is the contribution that trees make to improving the quality of the air that we breathe. As well as removing carbon dioxide from the atmosphere and releasing oxygen, trees also improve air quality by filtering out harmful pollutants (such as ozone, ammonia, sulphur dioxide, nitrous oxides and dust particles). A number of scientific studies have demonstrated these properties, which are of benefit to us all but are of particular importance to the growing numbers of people with respiratory ailments.

Trees in towns can screen unsightly structures and activities. They can give privacy and help to reduce noise from traffic and industry. They can have a limiting effect on the extremes of weather by providing shelter from wind and shade from the sun. They are effective in intercepting rainfall, thus reducing problems of rapid water run-off from hard surfaces.

Woodlands, and parklands which contain trees, provide essential space for quiet, informal recreation activities such as walking, jogging and cycling. The opportunity to escape into these areas from the hustle and bustle of modern life is very important and should not be taken for granted. Woodlands are also important for landscape and wildlife reasons, and for the production of timber, a renewable resource.

This leaflet is designed to give some initial guidance to the owners of trees and woodlands. However, it is not a substitute for seeking professional advice and it is strongly recommended that this is obtained if there is any cause for concern.

PROBLEMS CAUSED BY TREES

Some of the common problems associated with trees can be summarised as follows:

Health and safety

Trees are living, changing entities that can sometimes develop into potentially dangerous structures. Trunk, branches or roots can be weakened in a number of ways, including fungal disease, decay, insect infestation, storm damage and vandalism. Although it is not possible to guarantee the absolute safety of any tree, the relative risk associated with it can be assessed by an experienced arboriculturalist. A tree which is in such a poor condition that it is likely to collapse should obviously be removed, but there would be no justification in trying to eliminate all risk by felling healthy trees in good condition.

Nuisance

Trees can be regarded as a nuisance, particularly by those who occupy houses in close proximity to them. Trees can obstruct light and views, interfere with television reception and generally become troublesome because of honeydew drip and falling leaves. However, the positive benefits of each tree should always be considered before deciding what action, if any, would be appropriate.

Direct damage

Cracks can appear when an expanding trunk or root comes into contact with a hard surface (such as tarmac or concrete) or a lightly-loaded structure (such as a low wall). This type of damage is relatively common but can often be repaired without having to fell the tree.

Indirect damage

Some types of soil shrink when water is lost during dry weather and this can cause subsidence in buildings which have inadequate foundations. The presence of tree roots can have a significant influence on the moisture content of such soils, with serious consequences. This type of damage is, fortunately, not common in the Halton area due to the higher rainfall and lower incidence of vulnerable soils than found in areas further south and east.

TREES & THE LAW

Important note

Although believed to be a reasonable summary of some of the legislation affecting trees, the information given below is brief and therefore limited in extent. This leaflet is offered for preliminary guidance only and the Council disclaims any responsibility arising from its use. For more detailed advice on legal matters, a suitably qualified person such as a solicitor should be consulted.

Tree Preservation Orders

Under the Town and Country Planning Act 1990, the Council has the power to protect trees in the interests of amenity by making tree preservation orders (TPOs). A new TPO is made by serving a notice on all affected persons and any objections are considered before it is confirmed (i.e. made permanent). The effect of a TPO is to prohibit the felling or pruning of the trees concerned without the permission of the Council. If a protected tree is cut down without consent, anyone found guilty of this offence is liable to a maximum fine of £20,000 if convicted in the magistrates' court. Application forms to carry out work on protected trees are available from the Council and the Tree Officer can offer further advice.

Trees in Conservation Areas

Trees in conservation areas which are not protected by TPOs are subject to other controls. Generally, anyone who proposes to fell or prune a tree (over 7.5 cm. in diameter) which is situated within a conservation area must give the Council six weeks notice of their intention (under section 211 of the Town & Country Planning Act 1990). The Council then has that period of time to consider whether it would be in the public interest to make a new TPO. Anyone who damages or carries out work on a tree in a conservation area without giving a section 211 notice is liable to prosecution and the penalties are the same as those for contravening a TPO. Notification forms to carry out work on trees within a conservation area are available from the Council and the Tree Officer can offer further advice.

Felling Licences

Under the Forestry Act 1967 (as amended), a landowner must have a licence to fell growing trees if the volume of timber exceeds 5 cubic metres (or 2 cubic metres if sold) in any calendar quarter. Some types of felling are exempt from the requirement to obtain a licence and further advice is available from the local office of the Forestry Commission (Linnere, Delamere, Northwich, CW8 2JD, tel. 01606 889912). Felling licence applications can be made by completing the appropriate form and sending it to the Forestry Commission for determination.



Dangerous Trees

In circumstances where a tree can be classified as imminently dangerous, or where a tree is causing an obstruction to the highway, the Council has powers to serve notice on the landowner to remove the danger or obstruction under the Local Government (Miscellaneous Provisions) Act 1974 or the Highways Act 1980.

Common Law

In addition to the statute law made by the various Acts of Parliament, common law is based on judgements made by the courts. It has developed over hundreds of years and is still evolving as new decisions are made or earlier ones are clarified. Some of the principles that have been established are:

- A tree normally belongs to the owner of the land on which it is growing, regardless of how it got there. It is the position of the centre of the trunk (not the branches) that determines ownership.
- The owner of a tree has a duty of care, to take reasonable steps to minimise the risk of injury to people or damage to property (where the threat is foreseeable).
- The owner of a tree may be held liable for any damage caused as a result of failing to exercise the duty of care. For example, failure to remove a badly decayed branch overhanging a public path could be regarded as negligence in the event of the branch falling and a claim being made by an injured party.
- A neighbouring landowner has the right to cut back to the boundary any branches which overhang from a tree on an adjacent property. However, there is no right to enter the property to carry out the work, no right to cut beyond the legal boundary and no right to reduce the height of the tree concerned. In the case of a tree which is protected by statute law, the Council's consent may also be necessary before the right can be exercised.

ARBORICULTURE

Arboriculture can be described as “the establishment and management of trees for amenity purposes, such that trees and people can co-exist in a sustainable environment”.

Tree inspection

It is advisable that all owners of trees make arrangements for them to be inspected on a regular basis in order to demonstrate that their duty of care is being met. If the owner is not sufficiently knowledgeable about what to look for, an arboricultural consultant can be asked to provide a report with recommendations.

Tree surgery

From time to time during the life of a tree, it may be appropriate to carry out certain pruning works. An up to date working knowledge of pruning techniques and the characteristics of different tree species is needed to decide what is required and when. Operations which may be beneficial in some situations include:

- *Formative pruning of young and semi-mature trees.*
- *Selective removal of dead or defective branches.*
- *Crown lifting (removing low branches to a specified height).*
- *Crown thinning (removing a specified proportion of secondary branches).*

All work should comply with British Standard 3998 (Recommendations for Tree Work) and should seek to retain the general shape and character of the tree.

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“The Council recognises the important contribution made by trees and woodlands to the environment and is committed to the responsible and sustainable custodianship of this resource on any land which it owns or influences.”

For further information, contact:

*John White (Trees & Woodlands Officer)
Regeneration and Neighbourhood Services Directorate
Landscape Services Department
Picow Farm Depot
Picow Farm Road
Runcorn WA7 4UB*

Telephone: 01928 583918

E-mail: john.white@halton.gov.uk

Choosing a contractor

For advice about choosing a contractor, see Leaflet 4 of this series.

WOODLAND MANAGEMENT

Forestry Operations

Most woodlands require attention at times to meet the objectives of management. Thinning (the removal of a proportion of the trees) may be needed to allow the better trees more room for growth and this may also have benefits for landscape, recreation and nature conservation. The production of timber is an aim which can be compatible with environmental considerations.

Ancient Woodlands

Sites which have been continuously wooded since at least the year 1600 are a precious natural asset deserving particular attention. They contain flora and fauna that have evolved over centuries in a continuous woodland environment. Once the continuity is broken, it can never be regained. All known ancient woodlands in Halton are protected from development by the Unitary Development Plan.

Grants

The Woodland Grant Scheme can provide grant aid towards the costs of carrying out woodland operations in compliance with an approved plan. The regional office of the Forestry Commission (tel. 01606 889912), or staff at The Mersey Forest (tel. 01925 816217) can offer advice about the current grants available to landowners.



Tree Work Contractors

Trees & Woodlands Leaflet No. 4



WHY CHOOSING A CONTRACTOR IS IMPORTANT

Choosing a reliable contractor is very important. Trees which have taken many years to grow can soon be irrevocably damaged through ill-advised and badly executed operations. Anyone can call themselves a tree surgeon and place an advert in Yellow Pages or the local newspaper. That alone is no guarantee that the contractor is capable of carrying out works safely to an acceptable standard.

Tree felling and tree surgery are skilled operations which require a high level of technical knowledge, supported by training and experience. Other essential requirements are the provision of safety equipment and sufficient insurance cover for both employers and public liability.

HOW TO CHOOSE A CONTRACTOR

The following characteristics describe a company that would be considered suitable for carrying out tree works. A reputable contractor should be able to respond positively to any questions about these issues.

- Will have insurance cover (recommended minimum £5 million) for Employers Liability and Public Liability and be prepared to provide evidence of this if requested.
- Will carry out works to British Standard 3998 and be knowledgeable about the latest research and methods of good arboricultural practice.
- Will have full safety equipment and be aware of Health and Safety legislation.
- Will have certificates to prove that operatives are competent in using chain saws.
- Will be a member of a professional organisation.
- Will be able to provide references about the standard of previous work carried out.

WHAT TO EXPECT IN A WRITTEN QUOTATION

A reputable contractor should be willing to provide a written quotation without any obligation. The quotation should ideally include the following.

- A clear and full description of the work to be undertaken.
- The total cost of the operation, and whether VAT is included.
- What will happen to the resulting wood debris.
- Who will be responsible for obtaining permission (if the trees are legally protected in some way).
- What measures will be taken to ensure that no damage will be caused to persons or property.

RECOGNITION OF COMPETENCE BY PROFESSIONAL ORGANISATIONS

The Arboricultural Association publishes a DIRECTORY OF REGISTERED CONSULTANTS AND APPROVED CONTRACTORS. The contractors included in this directory have met high standards of technical competence, safety procedures and insurance protection. They are regularly assessed to ensure that these standards are maintained. The directory is available from The Arboricultural Association, Ampfield House, Romsey, Hants, SO51 9PA (Tel. 01794 368717, web site www.trees.org.uk).



Individual arborists may be certified by the International Society of Arboriculture. Displaying the logo indicates that the individual has been assessed for their technical knowledge and ability and found to be competent.



TREES AND THE LAW

Tree owners are reminded that, in certain circumstances, permission from the local authority or the Forestry Commission will be necessary before any tree work can be legally carried out. It is strongly advised that the relevant authority is consulted before work commences, or prosecution may result. Further information is given in Leaflet No. 3 of this series.



LIST OF LOCAL CONTRACTORS

- **The Council does not approve or recommend any tree work contractors.** This list of local contractors is made available to the public for general information purposes only.
- The listed contractors have in the past carried out tree works to an acceptable standard, but the Council cannot guarantee the current quality of service given by them and cannot confirm that their insurance cover is up to date.
- Tree owners should still apply the principles of this leaflet before employing anyone from this list.
- The list below was compiled in November 2004, but some details may have changed since that date. A copy of the latest version of the list can be viewed on the Council's web site, www.halton.gov.uk/trees

Name	Address	Telephone
A. J. LANDSCAPES (A. J. O'Donnell)	4 Canberra Square, Orford, Warrington, WA2 0DY	01925 240203
AMENITY TREE CARE (S. Brain)	Willow Hill Cottage, School Lane, Burwardsley, Chester, CH3 9NX	0808 108 0909
BARTLETT TREE EXPERTS	The Saddle Room, Capesthorne Hall, Siddington, Macclesfield, SK11 9JY	01625 890150
BORDER TREE CARE (D. Hindley)	29 Cemetery Road, Weston, Crewe, CW2 5LH	01270 252625
CANOPY TREE CARE (B. Kearsley)	Olympus House, High Street, Tattenhall, Chester, CH3 9PX	01829 771724
CHESHIRE TREE SURGEONS (D. Lloyd Jones)	9 Lowland Way, Knutsford, WA16 9AG	01565 621234 or 01928 787613
EURO TREE SERVICE (S. Walton)	Caxton Lodge Farm, Lodge Lane, Cronton, Widnes, WA8 9QA	0151 424 0333 or 01928 740289
HOLLY OAK TREE SERVICES (R. Haslam)	Holly Hedge Farm, Holly Hedge Lane, Higher Walton, Warrington, WA4 5QP	01925 266368 or 07719 746998
NORTH WEST TREE SERVICES (G. Hopson)	10 Addingham Avenue, Widnes, WA8 8YB	0151 423 4517
OLD VICARAGE TREE SURGERY (M. Munday)	8 Moss Drive, Manley, Frodsham, WA6 9JJ	01928 740877
JOHN OLIVER	The Bungalow, Peck Mill Farm, Chelford, Macclesfield, SK11 9BD	01625 861663
ROGER PARKER	Heath Cottage, New Road, Rostheme, Knutsford, WA16 6RU	01565 832867 or 07813 762588
SHADES OF GREEN (J. Griffiths & G. Bowden)	5 Horseshoe Crescent, Houghton Green, Warrington, WA2 0LB	01925 740995
KEITH THELWALL TREE CARE	Oak Leigh, Childs Lane, Brownlow, Congleton, CW12 5TG	01270 811561
WIRRAL LANDSCAPE GARDENERS	"The Willows", 110 Chester Road, Childer Thornton, South Wirral, L66 1QL	0151 339 3490



The series of "Trees & Woodlands" Leaflets:

- **No. 1 – TREES ON DEVELOPMENT SITES**
- **No. 2 – TREE PLANTING & MAINTENANCE**
- **No. 3 – THE CARE OF MATURE TREES**
- **No. 4 – TREE WORK CONTRACTORS**
- **No. 5 - MANAGING TREES OWNED BY THE COUNCIL**

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Regeneration and Neighbourhood Services Directorate
Landscape Services Department
Picow Farm Depot
Picow Farm Road
Runcorn WA7 4UB
Telephone: 01928 583918*

E-mail: john.white@halton.gov.uk



Managing Trees Owned by the Council

Trees & Woodlands Leaflet No. 5



TREES OWNED BY THE COUNCIL

“The Council will manage its own stock of trees in a sustainable manner which takes into account both safety and amenity issues, and encourage other landowners to do likewise.”

Policy 5 of the Halton Borough Council Natural Assets Strategy



Trees and woodlands are of vital importance in maintaining and improving the quality of life for those who live or work within the Borough. However, trees can also be a nuisance in some situations and become the subject of complaints from nearby residents.

Leaflet 3 of this series describes both the benefits and the problems that are associated with trees. The Council has a responsibility to care for the trees which are growing on its land and will aspire to demonstrate the principles of good forestry and arboriculture.

This leaflet is designed to give some initial guidance to residents who are concerned about trees which are owned by the Council. It outlines how to raise these concerns, how the Council will consider whether any action would be appropriate and how the Council will prioritise and carry out its programme of tree work.



TYPES OF TREE WORK

Felling

Trees are completely removed when the Council considers that they are in a poor condition, suppressing the growth of better trees nearby, or are unsuitable for their location in some way. In the interests of sustainability, replacement planting somewhere in the vicinity will be considered when significant trees have to be felled for a justifiable reason.

Tree surgery

Trees are not pruned for the sake of it, but when appropriate to benefit the tree or to alleviate a problem. An up to date working knowledge of pruning techniques and the characteristics of different tree species is needed to decide what and when action is needed. Operations which are sometimes undertaken by the Council include:

- *Formative pruning of young and semi-mature trees.*
- *Selective removal of dead or defective branches.*
- *Crown lifting (removing low branches to a specified height).*
- *Crown thinning (removing a specified proportion of secondary branches).*



Reducing the height of a tree is only carried out in a few circumstances as, in most cases, it only gives rise to prolific regrowth and can be detrimental to the long-term health of the tree.

Management of woodlands and groups of trees

Thinning (or the removal of a proportion of the trees) may be carried out to allow the remaining trees more room for growth and this may also have benefits for landscape, recreation and nature conservation.

HOW TO CONTACT THE COUNCIL ABOUT TREE PROBLEMS

If you have any complaints or concerns about trees which you think are owned by the Council, you can request that this is looked into by:

- *visiting a Halton Direct Link office,*
- *ringing the Neighbourhood Services Help Desk direct on 0151 471 7595, or*
- *writing to the Head of Landscape Services, Picow Farm Depot, Picow Farm Road, Runcorn, WA7 4UB.*



HOW THE COUNCIL WILL PRIORITISE TREE WORK

When a tree has been inspected and action recommended, the proposed work will be entered into a scheduled programme of arboricultural works. Each task will be given a target date for completion and this will reflect the urgency of the situation, the degree of nuisance being caused, and the best time of year for the work to be done. Trees which are considered to be in a hazardous condition will always be given priority and made safe as soon as practical. Genuine emergencies will receive an immediate response.



HOW THE COUNCIL WILL CONSIDER REQUESTS FOR TREE WORK

A representative of Landscape Services will normally inspect the tree(s) concerned within a few working days and will decide what action, if any, would be reasonable. The representative will seek to accommodate the wishes of individual residents, but will also bear in mind:

- *the positive benefits of the tree(s) to the environment and to the wider general public,*
- *the Council's policies for managing trees, as detailed in the Natural Assets Strategy,*
- *the timing and priority that should be assigned to any suggested work, and*
- *the budget and resources available to Landscape Services.*

In some instances, particularly when a tree has an amenity value which outweighs the nuisance problems, the Council may not be able to accede to the wishes of the complainant. Indeed, there is a presumption against felling trees which are owned by the Council without good justification. It is possible for residents to meet an officer on site to explain the decision, if a mutually convenient time can be arranged. If the resident is still not satisfied, the Council's complaints procedure can be used and the case reviewed by a senior manager.

It should be recognised that tree work can be of a seasonal nature. Some operations are best carried out at certain times of the year, whilst all major works (except for emergencies) are best avoided during the Spring and early Summer, when birds are nesting. It is not therefore always possible to give a commitment that the work will be completed within a specified time period. Depending on when the enquiry is made, any agreed work may be completed within a few weeks or may have to be delayed for several months.



HOW THE COUNCIL WILL CARRY OUT TREE WORK

Felling or pruning large trees can only be carried out safely by skilled, trained operatives. Landscape Services has a specialist team of employees who are well equipped and capable of achieving high standards of arboricultural practice. Occasionally, fully insured professional contractors may be used.

All work carried out by the Council will comply with British Standard 3998 (Recommendations for Tree Work). When tree surgery is undertaken, every effort will be made to retain the general shape and character of each tree.



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E-mail: john.white@halton.gov.uk



POTENTIAL FUNDING OPPORTUNITIES for TREE PLANTING

The Royal Forestry Society publishes a booklet entitled 'Grants for Trees' that comprehensively lists potential funding opportunities for tree planting and establishment, (see <http://www.rfs.org.uk/grantsfortrees.asp> for details). The most relevant are as follows.

- i) Forestry Commission Grants - Aimed mainly at woodlands, there is now more emphasis on improving access to woods in and around urban areas.
- ii) UK National Lottery – Given for projects that deliver public good (see <http://www.nlcb.org.uk>).
- iii) Community Forest Grants – Castlefields is within The Mersey Forest (see <http://www.merseyforest.org.uk>).
- iv) Tree Council – can provide funding for organised events that involve tree planting; such as National Tree Week, especially where schools are involved (see <http://www.treesforcities.org/html/newscampaign/pr/>).
- v) Woodland Trust – Trees for All scheme aims to increase the number of trees planted around the country (see <http://www.treeforall.org.uk>).
- vi) Shell Better Britain Campaign – Targets projects that improve the environment at a local level (see <http://www.sbbc.co.uk>).
- vii) Groundwork engages in projects that aim to improve the local environment in poor areas (see <http://www.groundwork.org.uk>).
- viii) The Landfill Tax Credit Scheme – provides funding for tree planting through a variety of schemes (see www.entrust.org.uk).
- ix) International Tree Foundation – provides grants for planting trees in the UK (see <http://www.internationaltreefoundation.org>).

FIGURES

- Figure 1 – Study Area Boundary and Landscape Typologies
- Figure 2 – Age Class Distribution of Surveyed Trees in the Study Area with Landownership
- Figure 3 – Species Distribution of Surveyed Trees (Sycamore, Willow, Poplar)
- Figure 4 – Areas of Potential for New Tree & Woodland Planting
- Figure 5 – Housing Renewal Programme
- Figure 6 – Castlefields Masterplan
- Figure 7 – Canalside Development Plan and Conservation Area

KEY

- Study Area Boundary
- Formal Parkland
- Informal Parkland
- Wooded Areas
- Greenspaces
 - Pocket Park (PP)
 - Open Spaces (OS)
 - Play Areas (PA)
- Housing
- School, Church, Other

The landscape typologies have been interpreted from aerial photographs and OS mapping

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Genesis Centre
 Birchwood Science Park
 Warrington WA3 7BH
 Tel 01925 844004
 Fax 01925 844002
 email tep@tep.uk.com

Project:
 Castlefields Tree Strategy

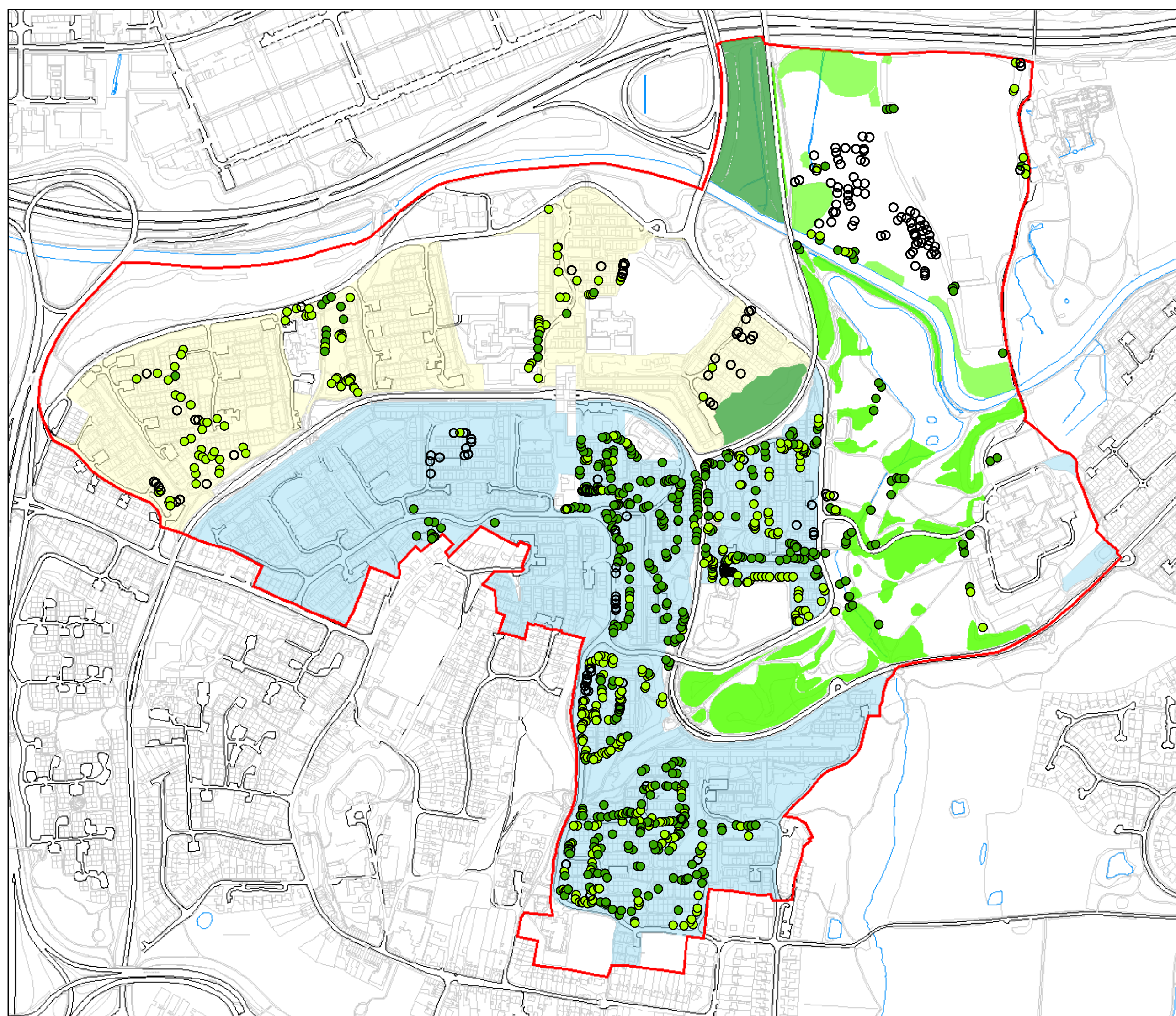
Title:
 Study Area Boundary
 and Landscape Typologies

Fig. No. **Figure 1**

Scale: Date: 21/12/06

Drawn: RR	Checked: PM	Approved: RR
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KEY

- Study Area Boundary
- Young Tree
- Middle Age Tree
- Mature Tree
- Group of Trees
- Wooded Copse
- LHT Ownership
- CDS Ownership

NOTE:
The trees shown on this map are from available survey data and do not represent the total tree coverage of Castlefields.

Specific age class data was not available for groups of trees or wooded copses, they are shown here for completion

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email tep@tep.uk.com

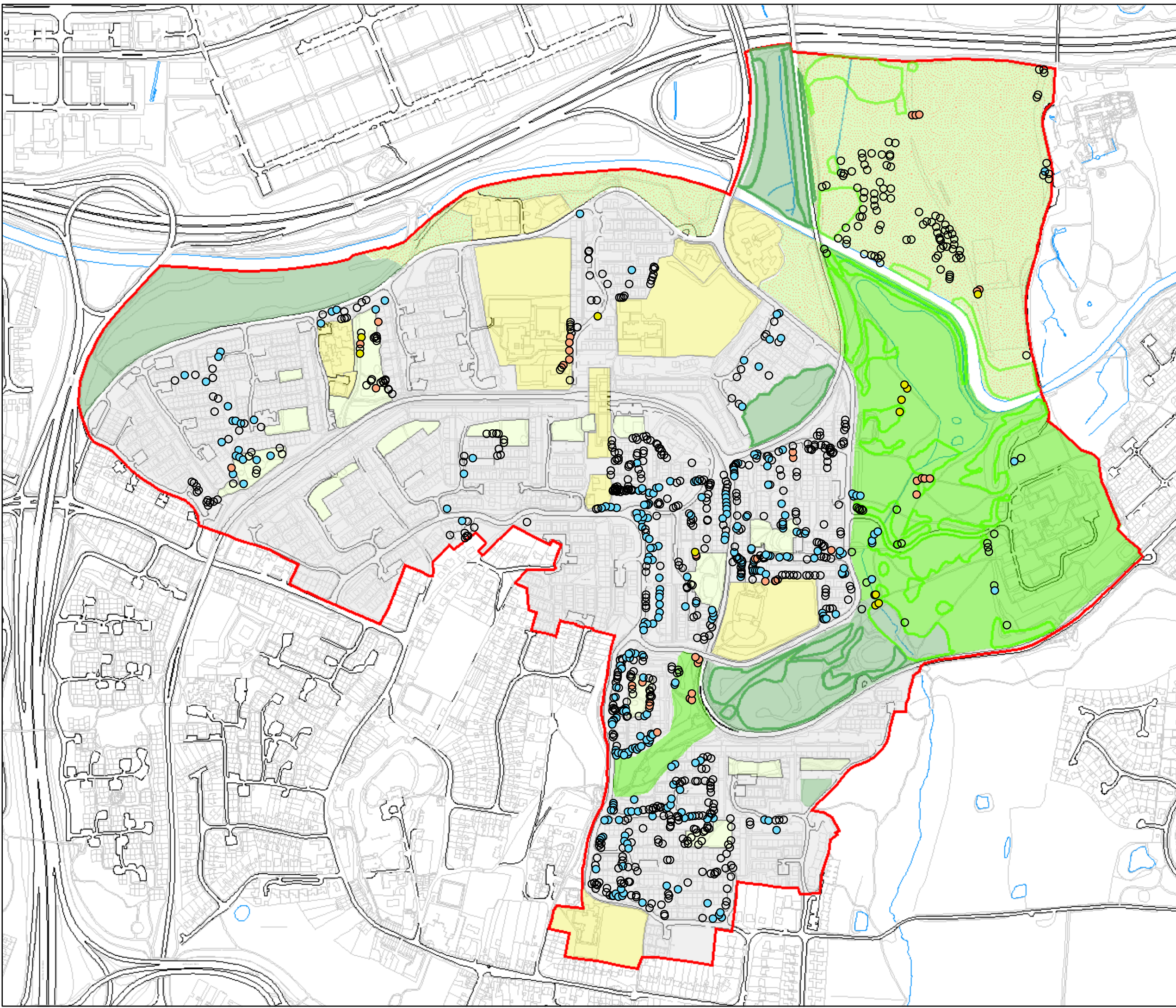
Project:
Castlefields Tree Strategy

Title:
Age Class Distribution of Surveyed Trees
in the Study Area with Landownership

Fig. No. **Figure 2**

Scale: Meters Date: **25/07/06**

Drawn: RR	Checked: PM	Approved: RR
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KEY

- Study Area Boundary
- Formal Parkland
- Informal Parkland
- Wooded Copses
- Greenspaces
- Housing
- School, Church, Other
- Group of Trees
- Wooded Copse
- Sycamore
- Willow
- Poplar
- Other Species

NOTE: The trees shown on this map are from available survey data and do not represent the total tree coverage of Castlefields.

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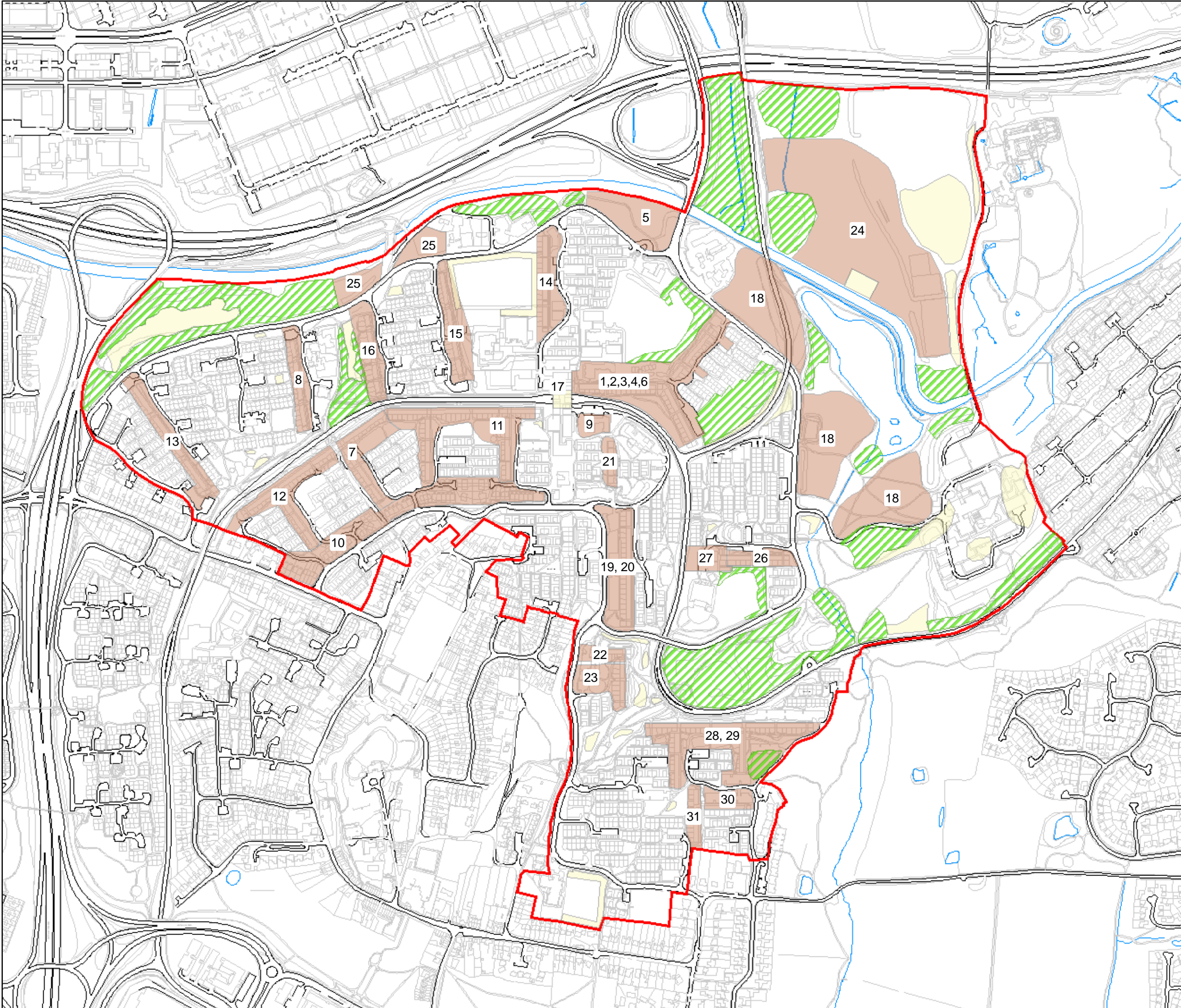
Project:
 Castlefields Tree Strategy

Title:
 Species Distribution of Surveyed Trees in the Study Area by Landscape Typology

Fig. No. **Figure 3**

Scale: Meters Date: 25/07/06

Drawn: RR	Checked: PM	Approved: RR
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KEY

- Study Area Boundary
- Development Areas (27Ha)
- Planting Opportunities (4.9ha)
- Opportunities to Manage Existing Planting (13Ha)

The numbered development areas relate to the masterplan key

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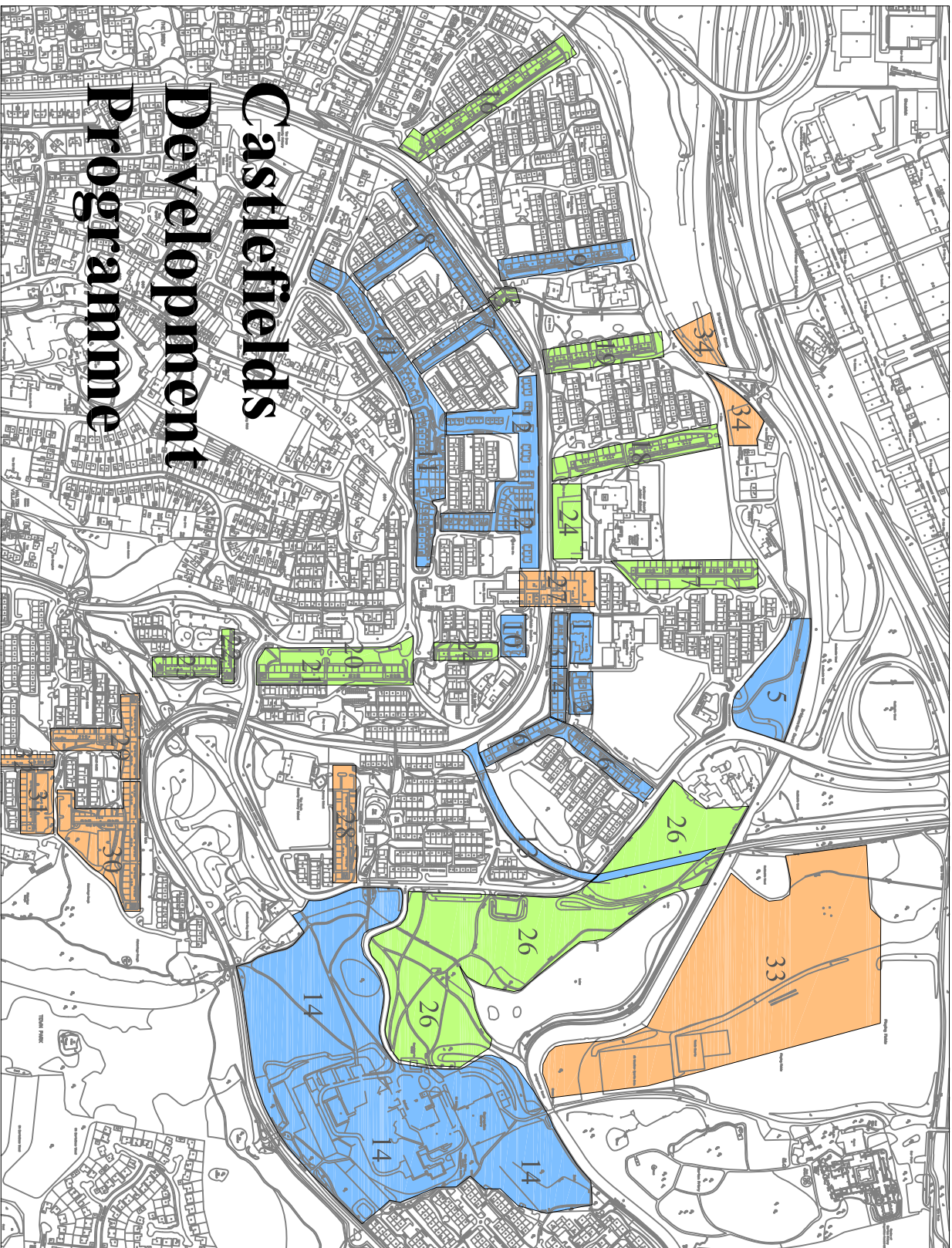
Project:
 Castlefields Tree Strategy

Title: Study Area Tree Planting and Tree Management Opportunities with Indicative Development Areas

Fig. No. **Figure 4**

Scale: Meters
 Date: 15/12/06

Drawn: RR Checked: CMN Approved: -



Castlefields Development Programme

PHASE 1 99-06	
1	Conway Court 1
2	Conway Court 2
3	Nigel Walk 1
4	Nigel Walk 2
5	Waterbridge Mews
6	Delacy & Fitzwilliam
7	Rolands & Princess
8	Rolands & Caernarvon
9	The Butts
10	Achilles Court
11	Chester Close
12	Ferryview & Rothsay
13	Busway Demolition
14	Phoenix Park / Norton Bus
PHASE 2 06-08	
15	Astmoor Subway Demo
16	Caesars & Romans
17	Kingshead Close
18	Shepherds Row
19	Keepers Row
20	Hedge Hey 1 Car Parks
21	Hedge Hey 2
22	Spiney
23	Meadow
24	Youth Centre Site
25	Richards Close
26	Lakeside
PHASE 3 06-11	
27	Village Square
28	Plantation Close
29	Woodlands & Merlin
30	Woodlands & Arthurs
31	Ruperts
32	Brereton
33	Canalside
34	Opportunity Sites










Castlefields Development Programme

Scale: _____ Date: _____
 Drawn by: _____ DATE _____
 Checked by: _____
 Plan No: _____ Rev: _____



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- Notes:
-  Proposed Housing Development
 -  Existing woodland planting
 -  Proposed woodland planting
 -  Proposed meadow areas
 -  Proposed wetland areas
 -  Proposed ditch
 -  Footpath or footpath / cycleway

REVISIONS	



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 R.G. Tregea B.A., M.A., M.R.T.P.I., M.I.Mgt
 Strategic Director
 Landscape Services
 Picow Farm Depot
 Picow Farm Road
 Runcorn
 Cheshire WA7 4UB

NORTON PRIORY LINK / SINC

BASE PLAN

Scale: 1:1000 @ A1	Date: FEB 06
Drawn by: PJE	Checked by:
Plan No: L159/A/01	Rev:



For more information please contact Halton Borough Council

Halton Borough Council
Major Projects Department
Castlefield Regeneration Programme
Municipal Building
Kingsway
Widnes
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