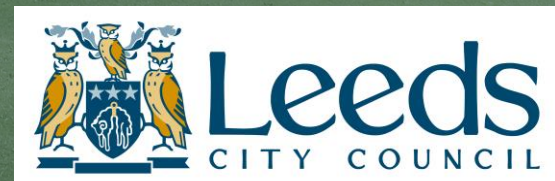


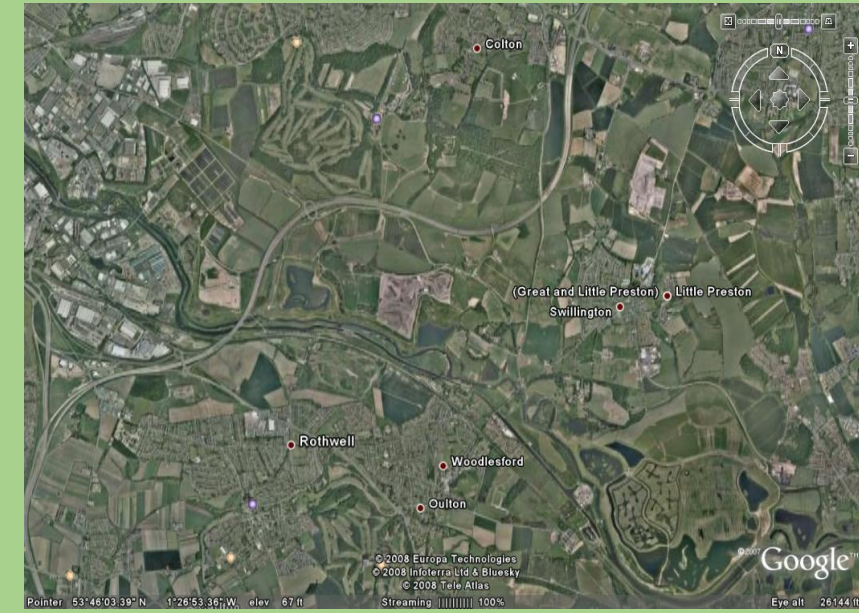
Implementing a Carbon – based tree planting strategy

Glenn Gorner MICFor



Tree planting targets : Challenges

- Mix of accessible urban trees and woodlands with increased rural planting. Includes the more challenging urban sites.
- Policy needs to catch up – “clear, stable and well-designed policies” (CCC, 2019)
- Identify the challenges and blocks to tree planting such e.g. Post Common Agricultural Policy and the transition to Environmental Land Management schemes.
- The scale of planting (1970’s 50,000 ha/yr, 1980’s 30,000 ha/yr).
- Balance of other factors such as biodiversity, farming, landscape character, water quality.



**Leeds City Council
Strategic Green Infrastructure Corridors**

Key

- District boundary (NUTS4) © Ordnance Survey
- Green Infrastructure Corridors © Natural England
- 1 - River Aire
- 2 - River Wharfe
- 3 - River Calder (inc part of Rochdale Canal)
- 13 - River Went
- 16 - Washburn Valley
- 17 - Worth Valley
- 19 - Colne Valley
- 21 - Spen Valley Greenway & Canal Road
- 23 - Wyke Beck
- 24 - Meanwood Beck
- 27 - Limestone Ridge
- 28 - Great Northern Trail
- 33 - Haverah
- 34 - Crimble
- 39 - Silsden Beck
- 40 - Harden Beck
- 41 - Shipley Glen
- 42 - Hawksworth Woods & Moor
- 43 - Pitty & Clayton Becks
- 44 - Tong/Calverley
- 45 - Middleton/Morley/Holbeck
- 48 - Luddenden Dean
- 49 - Halifax & Wheatley Valley
- 50 - Ryburn & Norland Moor
- 52 - Clifton Beck
- 56 - Five Towns Forest

NATURAL ENGLAND

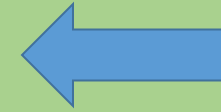
The map displays the South Leeds Green Corridor, highlighting several key site areas and their associated development potential:

- Middleton Park**: Site Area - 797.5ha
- Sherry Lane Plantation**: Site Area - 60.00ha; Area for Development - 3.74ha
- Rothwell Country Park**: Site Area - 12.3ha
- Flood and Water Hough Plantation**: Site Area - 77.0ha; Area for Development - 21.70ha
- Springlewood Park**: Site Area - 21.70ha; Area for Development - 10.18ha
- Rothwell Plantation**: Site Area - 16.53ha
- Thornley Lane - Thornhill Core Band**: Site Area - 8.10ha; Area for Development - 0.38ha
- Thornley Wood**: Site Area - 8.30ha; Area for Development - 0.38ha
- Dunston Road**: Site Area - 4.0ha
- East Ardsley Hall**: Site Area - 4.3ha; Area for Development - 4.3ha
- Cowshed Grove**: Site Area - 0.42ha

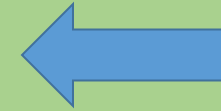
The map also includes a legend for Cycle Routes (Leeds Cycle Route Network on road, Leeds Cycle Route Network off-road, Traffic free path), Planned Works (Phase 1, Phase 2, Phase 3, Phase 4, Phase 5, Phase 6, Phase 7), and Key features (Parks and Open Spaces, Green Spaces, Leases Nature Areas, Proposed Improvements within Green Spaces). A scale bar indicates distances up to 100m.



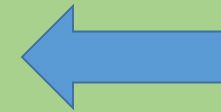
CONNECTING LANDSCAPES



18th Century
'Capability'
Brown



1970's Post -
industrial



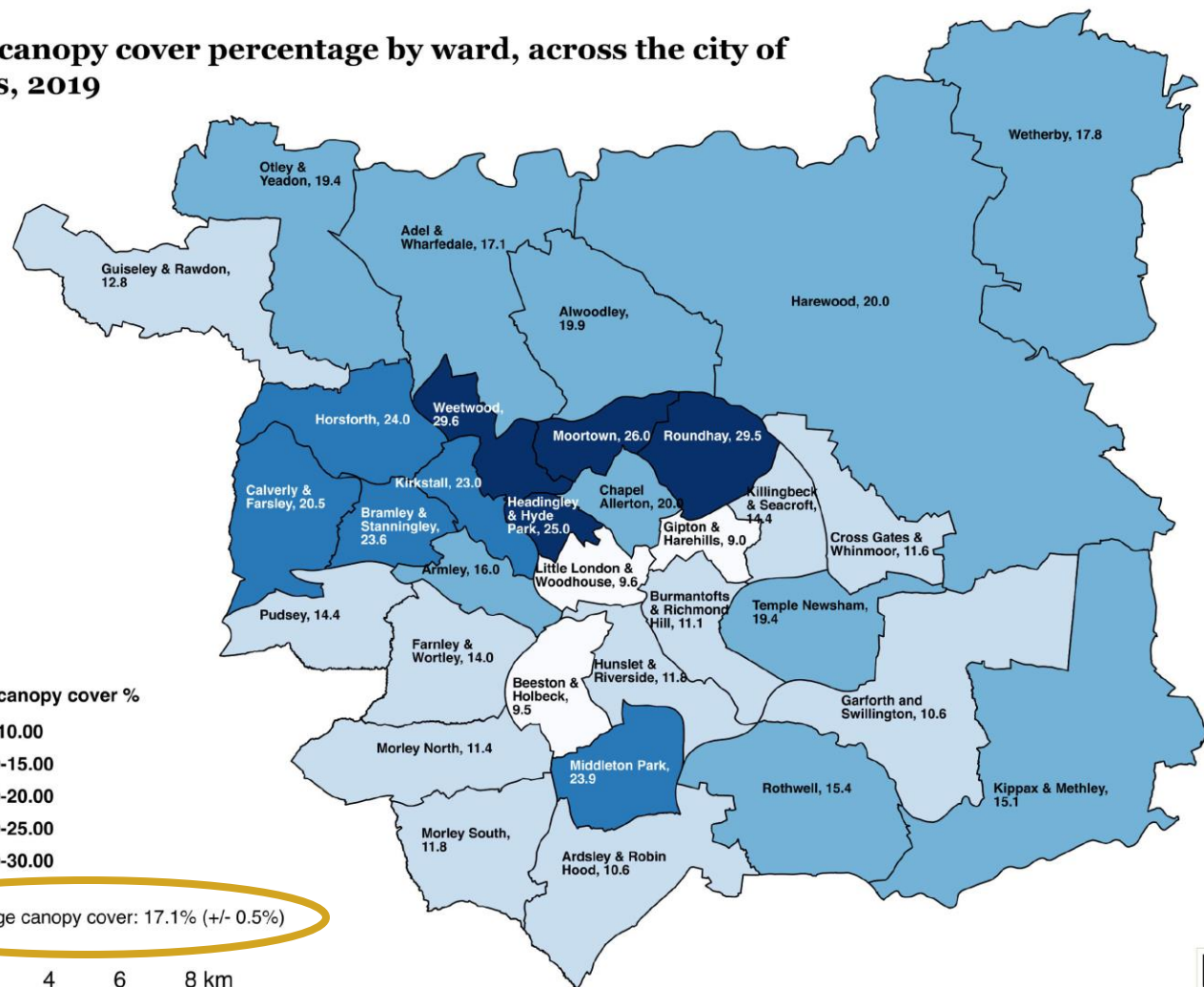
2000 Post
Industrial



TREES NEED SOIL

Other Leeds4trees projects

Tree canopy cover percentage by ward, across the city of Leeds, 2019



Copyright © Crown copyright and database rights 2017 apply. Reproduced under Ordnance Survey Licence number 100019567. Ward boundary shapefiles provided by Leeds City Council.

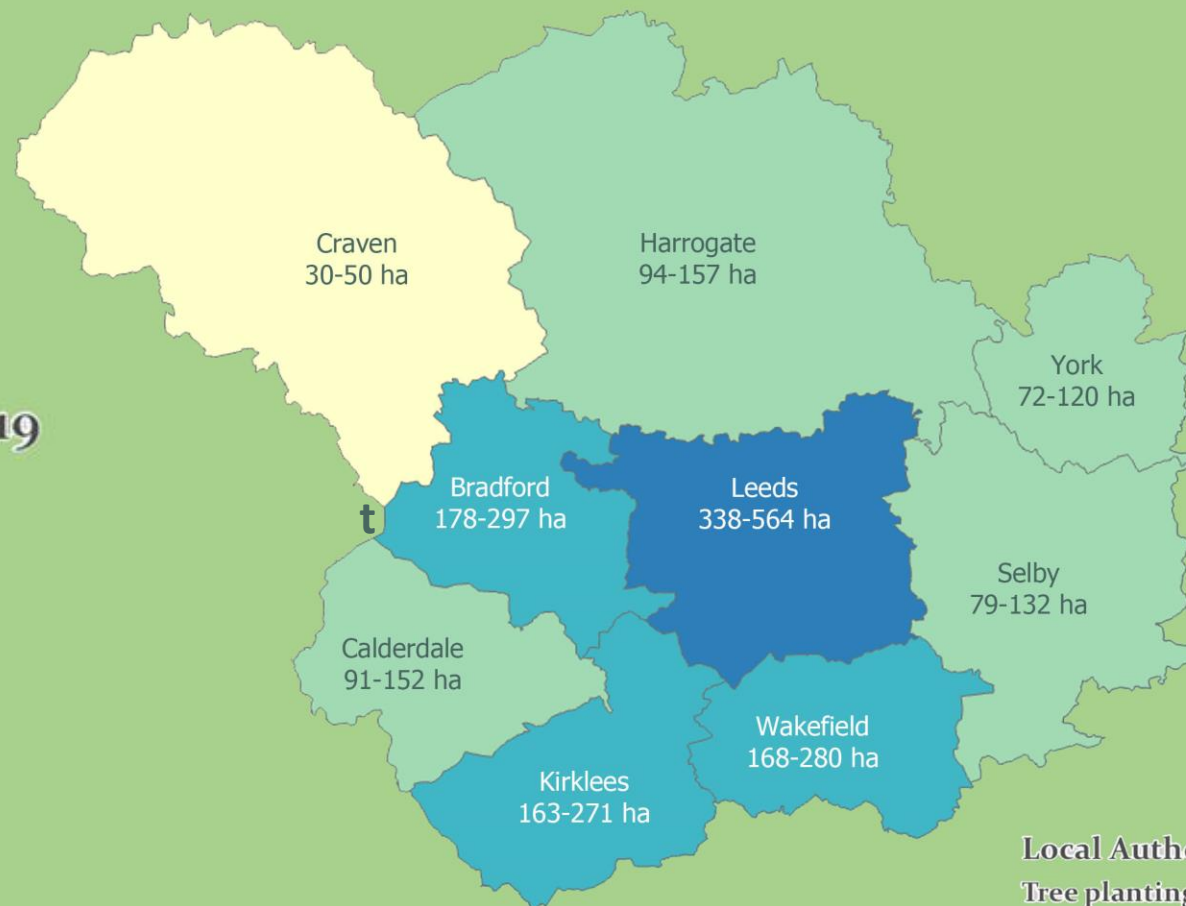
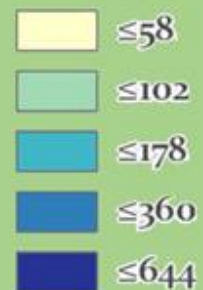
Figure 1. Map to show the estimated percentage tree canopy cover of Leeds wards. Canopy cover estimates calculated using surveys of 800 sample points per ward in i-Tree Canopy v6.1. Map produced using QGIS v2.18. Ward boundary shape-files provided by Leeds City Council.

WHITE ROSE FOREST DISTRICTS

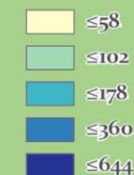
TREE PLANTING TARGETS

BASED ON EMISSIONS

Local Authority Districts 2019
Tree planting target (hectares)



Local Authority Districts 2019
Tree planting target (hectares)



These figures are a theoretical responsibility and planting outside of the local authority area but within the UK maybe required.

THE CHALLENGE FOR LEEDS

LEEDS SCALE – current canopy cover = 17.1%
(9,468 ha)

Canopy increase to 33% (18,296 ha)

Increase of 16% (8,828 ha)

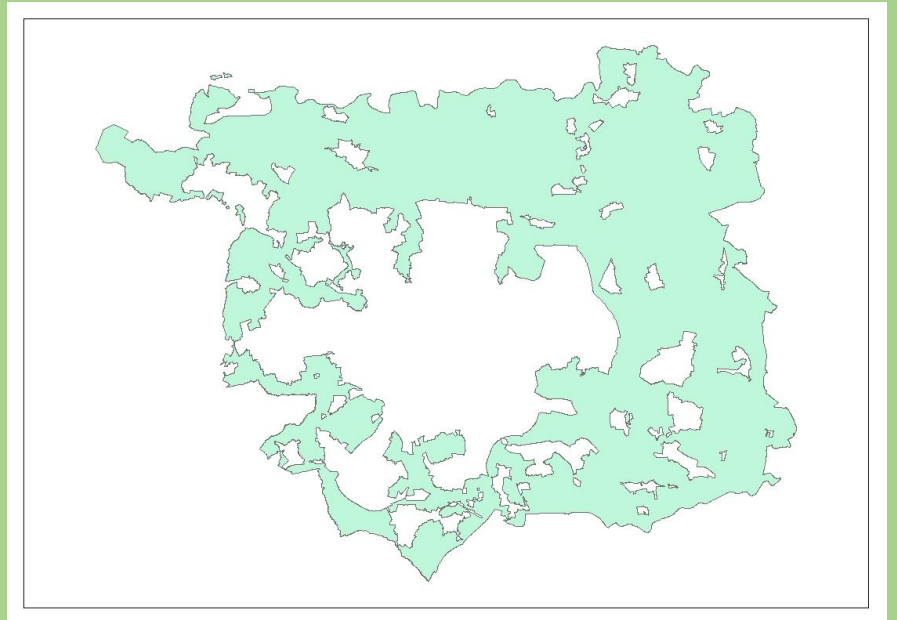
e.g. approaching 300 ha per year

PARKS & COUNTRYSIDE SCALE – area of land –
4,000 ha. This is 7% of City total (55,173 ha)

TCC of P&C land = 39% (1,557 ha of woodland)

Suggested canopy increase to 65% (2,807 ha)

Increase of 1,250 ha over 25 years



SUSTAINABLE SUPPLY OF TREES

LCC Parks * Countryside are gearing up to sow and grow their own forestry planting stock

Growing our own trees to provide 222,200 trees for planting each year

Over 5.5 million trees over 25 years.



CHOOSING THE RIGHT TREE FOR THE RIGHT LOCATION IS IMPORTANT

3 BASIC WOODLAND PLANTING MIXTURES HAVE BEEN IDENTIFIED:

- i. 3 MAIN LOWLAND BROADLEAVED WOODLAND TYPES FOUND IN THE LEEDS AREA (W10, W16, W8)**
- ii. THE MOST COMMON WET WOODLAND TYPE FOUND IN THE LEEDS AREA (W6)**
- iii. WOODLAND ON RE-CLAIMED LAND**

SPECIES CHOICE INFORMED BY THE NATIONAL VEGETATION CLASSIFICATION AND ECOLOGICAL SITE CLASSIFICATION

Woodland planting guidelines

Canopy species W10 community

- | | |
|---|---|
| ● Quercus robur
English oak | ● Tilia cordata
Lime |
| ● Betula pendula
Silver birch | ● Castanea sativa
Sweet chestnut |
| ● Acer pseudoplatanus
Sycamore | ● Prunus avium
Wild cherry |
| ● Alnus glutinosa
Alder | ● Populus tremula
Aspen |
| ● Taxus baccata
Yew | |

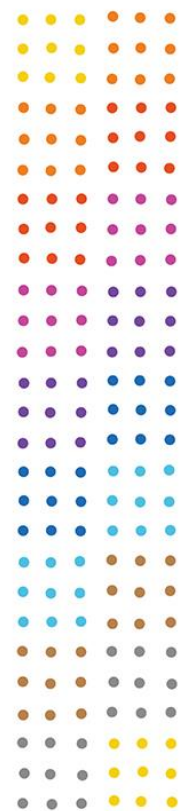
Woody shrubs

- | |
|--|
| ● Malus sylvestris
Crab apple |
| ● Ilex aquifolium
Holly |
| ● Corylus avellana
Hazel |
| ● Crataegus monogyna
Hawthorn |

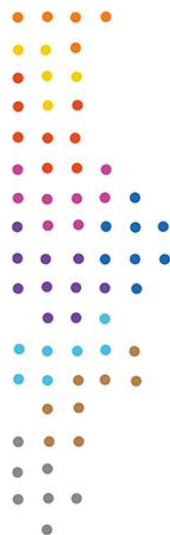
Block planting

each dot represents 1 tree

Regular planting e.g. 3 x 3

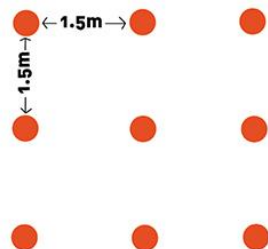


Irregular planting in groups of the same species

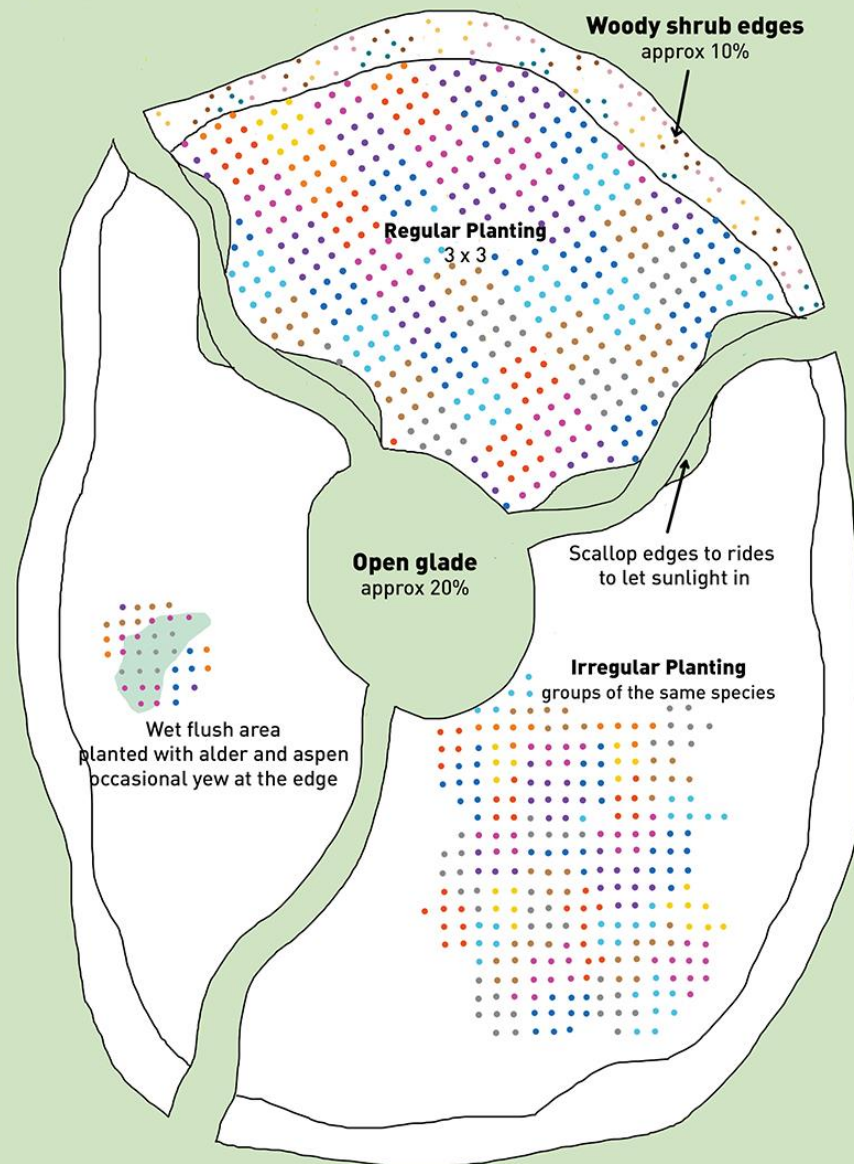


Spacing

whether regular or irregular planting
the spacing between each tree should
be approx 1.5m



Woodland planting scheme example





**LAND
PREPARATION
AND
THOROUGH
ESTABLISHMENT
MANAGEMENT
ARE ESSENTIAL**



**BUT HAVE A
LONG-TERM
VIEW**

BIODIVERSITY NET GAIN



'NATURALISED' FLOOD MANAGEMENT – MAKING SPACE FOR WATER



GREEN STREETS – INCORPORATING GBI INTO HIGHWAY DESIGN

