

## Wider application

Commercial clones of poplar, planted as large sets are clearly suited to cultivation on filled land and inert, relatively infertile soils. The quality and quantity of timber and the economic potential of the crop have yet to be determined, but the poplars bring very rapid amenity and landscape benefits.

## Further information

### National Urban Forestry Unit

This leaflet is one of a series produced by the National Urban Forestry Unit. NUFU provides a national focus for the exchange of information and good practice in urban forestry.

If you would like further information on other case studies or their application, or if you have examples of good practice to share with others, please contact:

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### Further reading

**Evans J (1984)**

*Silviculture of Broadleaf Woodland, Bulletin 62, HMSO, London*

**Jobling J (1990)**

*Poplars for Wood Production and Amenity, Bulletin 92, HMSO, London*

**Tabbush PM (1995)**

*Approved Poplar Clones, Forestry Commission Research Information Note 265, Forestry Commission, Edinburgh*

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# Urban Forestry in Practice

## Growing poplars for timber on derelict land



CASE STUDY 4

# Growing poplars for timber on derelict land

## Introduction

Poplar is traditionally grown in deep, fertile alluvial soils, and produces one of the fastest growing timber crops. Ease of establishment (from unrooted "sets") and dramatic growth rates make the various commercial cultivars potentially useful for rapid-impact urban greening and, if successful, they also offer scope for economic return.

## Specific example

### Project name and location

**CHARLEMONT ROAD**, Ray Hall, **WEST BROMWICH**, West Midlands, UK  
Grid reference SP 023 938

### Project partners

- National Urban Forestry Unit (project managers)
- George Udall (landowner)
- Sandwell Metropolitan Borough Council (project initiators)

### Project objectives

To compare various clones of Belgian poplar and native black poplar for ability to establish and grow on urban derelict land

### Site description

The site covers 1.5 ha of uncontaminated subsoil and demolition rubble, which is raised 3-4m above the floodplain of the River Tame in the Sandwell Valley. It is adjacent to the elevated interchange of the M5/M6 motorways and the site is privately owned.

### Project design

3m unrooted sets (cuttings) of five commercial Belgian poplar clones and 1m rooted cuttings of black poplar were planted at 8m centres, in the following proportions (on the recommendation of the Forestry Commission):

<i>Populus x interamericana</i> 'Beaupré'	75%
<i>Populus x interamericana</i> 'Boelare'	5%
<i>Populus x euramericana</i> 'Dorskamp'	5%
<i>Populus trichocarpa</i> 'Fritzi Pauley'	5%
<i>Populus trichocarpa</i> 'Trichobel'	5%
<i>Populus nigra</i> subsp. <i>betulifolia</i> (native black poplar)	5%

Native woodland species of trees and shrubs were interplanted as 600-900mm transplants on a 2 metre grid

### Implementation

The ground was ripped to a depth of 600mm, using a plough with winged tines set at 1 metre centres. Poplar sets were planted in February 1994, into pre-augered 1 metre deep holes which were backfilled with 10-20 litres of tree planting compost. Each set was well firmed, protected against herbicide drift and vole damage using a 900mm Tubex shelter, and weed competition was suppressed with a 1m<sup>2</sup> black polythene mulch mat at the base of each tree.

A bundle of 3 metre long poplar sets



### Establishment

No water or fertiliser was applied, but establishment was excellent, with three of the six varieties showing 100% survival. The whole batch of 'Dorskamp' totally failed to come into leaf at all, suggesting faulty stock. 'Fritzi Pauley' and 'Beaupré' had an 85% and 60% survival rate respectively (see graph below).

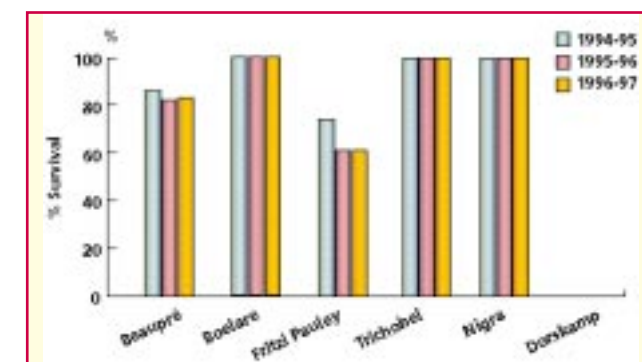
In addition to the mulch mats, emergent weeds were controlled with herbicide (glyphosate) over the three year maintenance period to ensure complete weed control.

### Management

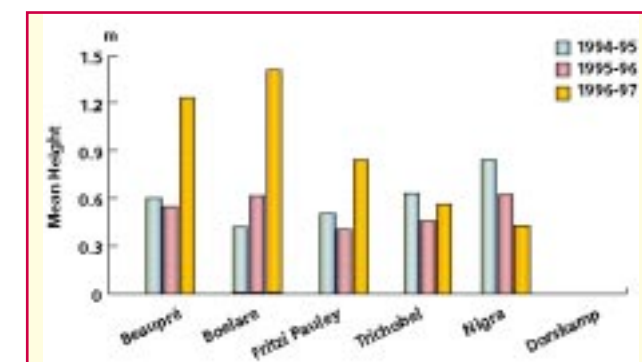
The poplar is being managed for knot-free veneer quality timber, to be harvested at approximately 20 years of age. This requires early removal of side branches at least once every two years, gradually raising the crown to achieve a 6-8m length of clear stem within the first 10 years. The interplanting of native woodland trees and shrubs is to be managed to form the permanent woodland cover on the site. It also helps to suppress poplar side-shoot growth.

### Results

In the first two years, the rooted cuttings (black poplar) outperformed the commercial clones, but once the sets had produced roots and were properly established, they grew much more rapidly. The *Populus x interamericana* clones 'Beaupré' and 'Boelare' showed the greatest increase in both height and girth over the initial 3 year period.



SURVIVAL



INCREASE IN HEIGHT



A poplar set in the first summer after planting



Spectacular growth: a poplar in its second growing season. Long term woodland planting is also establishing well