



Forestry England



Landscape change case study:

Thames Chase Community Forest

Thames Chase is a community forest located in east London and south Essex.

1 What is a brownfield site?

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2 What is a community forest?

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3 Locate and label on the map (left):

- Bonnetts Wood
- Bonnetts Wood extension
- Berwick Glades
- Berwick Glades extension



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4

Describe the story of Bonnetts Wood, including the extension by annotating the timeline.

Include the below:

- Opened to the public, managed by the Forestry Commission
- Farmland planted with trees to create a community forest
- Some abandoned quarries were used for landfill
- Land was used as low-quality farmland for grazing livestock
- Quarries were dug to extract sand and gravel for construction
- Landfill was covered by layers of soil
- Brownfield site planted with 27,500 trees with help from the local community
- Bought by Ingrebourne Valley Ltd



1950

1960

1970

1980

1990

2000

2010

2020

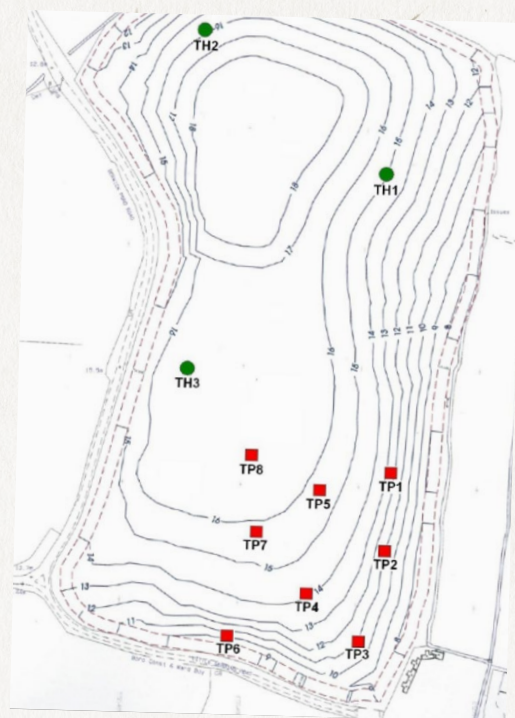




- 5** Before planting Bonnetts Wood, the Forestry Commission needed to understand the nature of the soil that had been used to fill the old quarries and landfill. Were there any toxic materials? What trees would be best suited to the soil's chemistry and texture?

The map (right) shows the contours and location of soil survey sites for the western part of Bonnetts Wood. Alongside is a selection of soil survey results.

TP1 GL - 0.15m 0.15 - 2.0m +	Imported Topsoil Clay Fill	TP6 GL - 0.26m 0.26 - 1.30m 1.30m	Imported Topsoil Clay Fill Obstruction – concrete slab
TP2 GL - 0.17m 0.17 - 2.3m +	Imported Topsoil Clay Fill	TP7 GL - 0.21m 0.21 - 0.68m 0.68 - 2.30m +	Imported Topsoil Clay Fill Sandy Clay Fill
TP3 GL - 0.23m 0.23 - 2.1m +	Imported Topsoil Clay Fill	TP8 GL - 0.19m 0.19 - 2.2m +	Imported Topsoil Clay fill
TP4 GL - 0.16m 0.16 - 1.25m 1.25m	Imported Topsoil Clay Fill Obstruction – concrete slab	TH1 GL - 0.17m 0.17 - 1.2m +	Imported Topsoil Imported Topsoil
TP5 GL - 0.25m 0.25 - 0.5m 0.5 - 0.9m 0.9 - 1.8m 1.8 - 2.1m 2.1m +	Imported Topsoil Clay Fill Ash Fill Clay Fill Chalk Fill Clay Fill	TH2 GL - 0.25m 0.25 - 1.2m +	Imported Topsoil Clay Fill
		TH3 GL - 0.19m 0.19 - 1.2m +	Imported Topsoil Clay Fill



- a** Describe the relief (the height and shape of the land) of the site.

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- b** What is the evidence that the land was improved so that it could be farmed?

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- c** For this activity you will need a sheet of graph paper.

- Draw a soil profile diagram to present the data for TP5. To do this, you will need to use a ruler to draw a vertical bar to represent a depth of 2.1m. A scale of 4cm=1m should work well. Now carefully use the scale to divide the bar into the different soil types.
- Draw a second soil profile alongside, using the same scale, for TP6.



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- d** Explain why the soils may get waterlogged close to the ground.

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- e** What is the evidence at TP6 that the site was previously used for industry?

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- f** Suggest how the soil profile data would have assisted the Forestry Commission in planting Bonnetts Wood.

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- 6** The aerial photo shows quarrying and land restoration at Berwick Glades extension.

- a** In what direction is the photo looking?

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- b** What is the evidence that the land is being restored?

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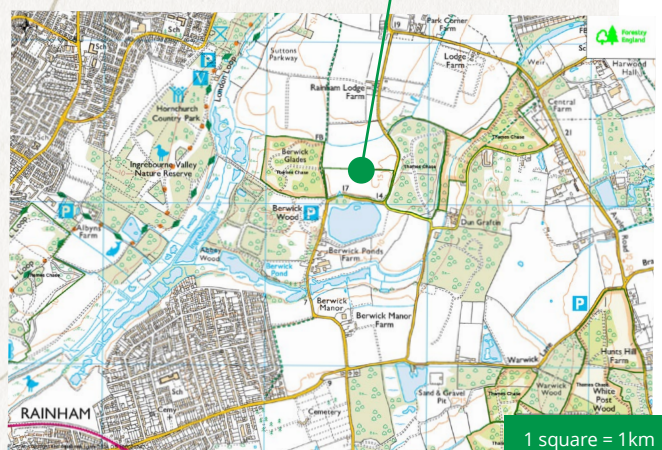
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- c** What is the name of the lake at X?

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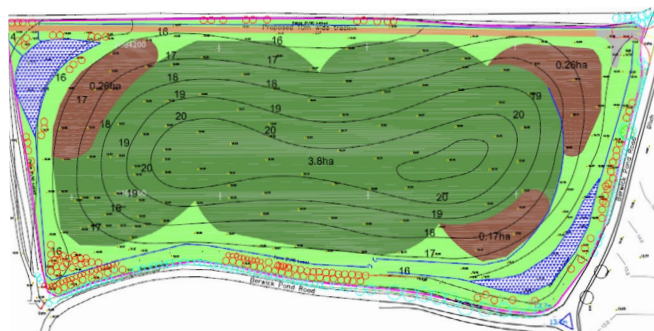
Berwick Glades Extension





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- 7** The map (right) shows the planting plan for Berwick Glades extension.



Key

- Grass ride
- Woodland mix
- Shrub mix
- Gate
- Rabbit fence
- Stone track for all-abilities
- Proposed and existing hedge/tree

- a** Use the OS map on the previous page to add a North arrow and an approximate scale bar.

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- d** Suggest how people might make use of the 'grass ride' around the perimeter of the land.

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- b** What is the main type of planting/land use?

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- e** Why do you think there is a rabbit fence at the edge of the wood?

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- c** There are two wetland areas shaded blue. Add this to the key.

- f** How does the planting create a variety of habitats to promote biodiversity?

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- 8** Summarise how the landscape across Thames Chase has changed through the creation of Thames Chase Community Forest and the benefits that that has brought.

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