

# Slaithwaite (Hill Top) Reservoir Spillway Replacement (P/12553)

## Tree Replanting Scheme

### Background

To facilitate the replacement of the spillway at Slaithwaite Reservoir a number of trees needed to be removed (details below).

To mitigate this loss, replacement planting needs to be undertaken following the defect period of the scheme. Only trees removed with a diameter of 75mm or greater (measured at 1.5m from ground level) were included in calculating replacement numbers.

The following ratios should be followed as these have been agreed with the LPA and Project Manager.

- 5:1 ratio for any trees removed from the TPO area
- 3:1 ratio for any trees removed from the rest of the site

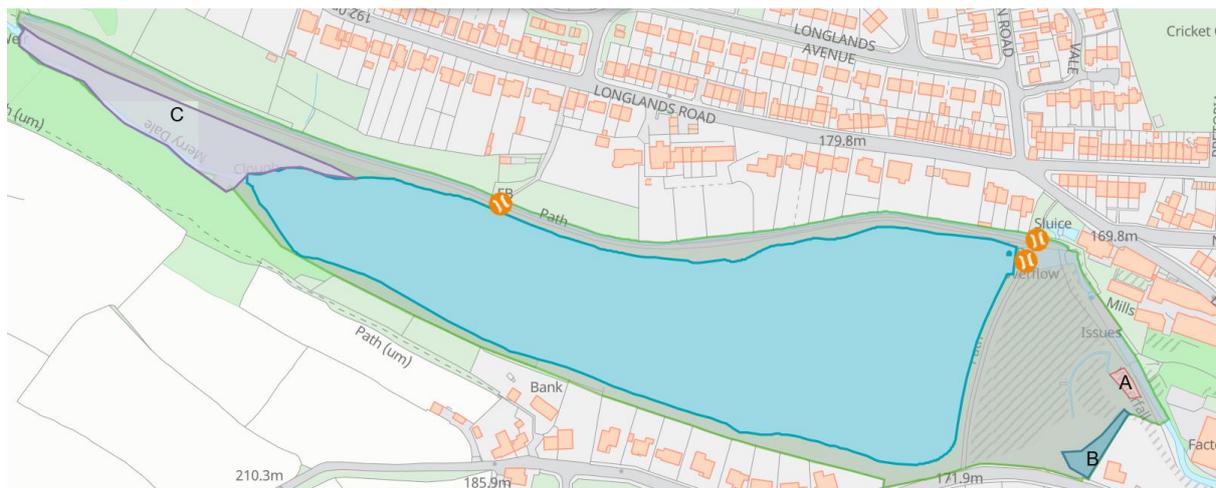
16 trees to be removed from TPO area – 80 replacement trees needed

27 removed from rest of site – 81 replacement trees needed

Total: 161 replacement trees required.

### Planting Locations

There are 3 areas which have been identified to undertake the replacement tree planting at Slaithwaite Reservoir (see map below).



In addition to the planting at Slaithwaite Reservoir, it is proposed to plant to a hedgerow with a minimum length of 10m on Trust estate, the exact location is currently being finalised (once confirmed plans will be updated to reflect this).

### Tree planting schedule

Location	Species	Size/Stock Type	Quantity	Total number of trees per area
Area A	<i>Betula pubescens</i>	Standard, 8-10cm girth Usually, container grown	3	25
		60-90cm bare root whip	10	
	<i>Salix cinerea</i>	60-90cm bare root whip	5	
	<i>Alnus glutinosa</i>	Standard, 8-10cm girth Usually, container grown	2	
		60-90cm bare root whip	5	
Area B	<i>Sorbus aria</i>	60-90cm bare root whip	5	26
	<i>Quercus robur</i>	60-90cm bare root whip	6	
	<i>Corylus avellana</i>	60-90cm bare root whip	10	
	<i>Ilex aquifolium</i>	60-90cm bare root whip	5	
Area C	<i>Taxus baccata</i>	60-90cm bare root whip	10	60
	<i>Quercus robur</i>	60-90cm bare root whip	10	
	<i>Quercus petraea</i>	60-90cm bare root whip	10	
	<i>Fagus sylvatica</i>	60-90cm bare root whip	10	
	<i>Ilex aquifolium</i>	60-90cm bare root whip	10	
	<i>Acer pseudoplatanus</i>	60-90cm bare root whip	10	
Hedgerow (location TBC)	<i>Crataegus monogyna</i>	40-60cm bare root whip	25	50
	<i>Euonymus europaeus</i>	40-60cm bare root whip	10	
	<i>Acer campestre</i>	40-60cm bare root whip	5	
	<i>Malus sylvestris</i>	40-60cm bare root whip	5	
	<i>Corylus avellana</i>	40-60cm bare root whip	5	

Biodegradable tree guards and wooden stakes/canes are also required for each tree whip.

Two large stakes and tree ties to be used to support Standard trees.

## **General guidance**

### **Procurement**

- All trees and shrubs shall conform to the specification for nursery stock as set out in the National Plant Specification where it applies to trees, shrubs and plant handling and establishment: <http://www.gohelios.co.uk/nps/nps.aspx> and British Standard 3936 Parts 1 (1992) and 4 (1984). Advanced Nursery stock trees shall conform to BS 5236. Handling, planting and establishment of trees shall be in accordance with BS 8545:2014 Trees from nursery to independence in the landscape: Recommendations.
- Selected suppliers must be registered with the plant health authorities and be able to issue plant passports as required. Plant passporting documents must be supplied at time of delivery.
- Trees to be grown in the UK and be of local provenance.
- When transporting to site, all bare root tree stock should have their root systems covered and fully protected to prevent desiccation. Ideally transportation to site should be within a closed covered lorry to ensure trees always remain cool and moist.
- When stock arrives on site these should be checked that they are undamaged, free of defects, healthy and vigorous, free of pest and diseases and of the size/species that were ordered.

### **Pre-Planting**

Prior to any planting taking place, a site visit is required with the Operations team, Reservoir Engineer and Ecologist to mark out exact planting locations within the area blocks.

No planting to take place in the following areas:

- Along the by wash embankment
- Along the newly established access route to the weir
- Along the waste channel to the river

A risk assessment must be in place for the tree planting activity. Planting areas to be checked for underground services and a Cat Scan undertaken by an experienced operative to ensure no un-mapped services will be struck during the planting process.

### **Planting**

- Planting of the trees should be done in line with **BS 8545:2014** *Trees: from nursery to independence in the landscape – Recommendations*.
- Planting period for bare root stock should be carried out between Mid-November to Mid-March. Container grown trees can be planted outside of this season. Planting should only be carried out in suitable conditions. Do not plant in periods of wet weather or heavy frosts.
- Tree stakes to be driven in the ground before the tree is planted to prevent damage to the tree roots.
- Trees should not be planted too deep as this can lead to the death of the tree. Refer to standards/published guidelines.

### **Aftercare**

A 5-year aftercare period is required; the aftercare of a tree is extremely important as it helps ensure the tree becomes fully established. The following aftercare should be carried out:

- Tree condition should be assessed annually and any dead, diseased or damaged trees should be replaced to the original specification.
- Weeding – keep the base of the tree clear of weeds
- Watering – Trees should be watered in prolonged dry periods for the first three years after planting ([Young Tree Watering No5 Poster A4.indd](#))
- Stakes and Ties – Tree stakes should be removed 2 years after planting unless the tree can visibly be seen to not be supporting itself (leaning etc). Tree ties should be adjusted annually to allow for new growth.
- Mulch – It is advisable to put a layer of mulch around the base of the trees to suppress weed growth particularly where planted in grassland areas. Mulch should be topped up annually.
- Pruning – dead or diseased wood should be removed at the end of each growing season.