

A photograph of a forest path with sunlight filtering through the trees. The path is covered in fallen leaves and leads into a dense forest of tall, thin trees. The lighting is bright, creating a dappled effect on the ground and foliage.

ALTOFTS TREE SERVICES

Proposed Willow Lane Fishing Ponds at Warmfield Lane Kirkthorpe

**Prepared for:
Pickup Skips**

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Proposed Willow Lane Fishing Ponds
Off Warmfield Lane
Kirkthorpe

PROPOSED TREE REMOVAL

Due to the constant state of flooding and steep unstable terrain, it is difficult to get accurate tree count for the estimated removal

Groups A and B are situated opposite each other on each side of the railway cutting, as are groups C and D. As this is a long term project, it is proposed that rather than complete removal of all groups at the beginning, there should be staged removals allowing the earth works to progress, whilst maintaining the maximum undisturbed tree cover. Initially starting with Groups A and B, a percentage of the length will be removed mirrored on both sides of the cutting. The trees removed shall be replaced one for one within retained Groups 1 and 2 in the next planting season after the corresponding removal is completed. This method should be repeated moving along the site towards the road bridge and continue in to the new groups of C and D for staged removal. The replacement planting within Groups 3 and 4 would be difficult due to the closed healthy canopy and the very steep gradient of the embankments. These two groups also have good age diversity with healthy areas of well situated natural regeneration. New planting areas are proposed in the final carpark area, the field plateau and along the access track/ embankment to help increase tree numbers after the staged removals of C and D.

GROUP A:

Tree species present: Sycamore
Ash
Willow
Elder

Group A is situated north of the road bridge, on the eastern embankment. The group includes the lower part of the wooded belt running adjacent to the flooded area (please see site plan). The predominant tree species in this area are Sycamores, all self-set and many are multi-stemmed, with the occasional Ash and young elder interspersed within the group. Most of the trees are young to middle-aged. Willow have established in lesser groups near the water's edge with a larger stand adjacent to the road bridge. Health varies as expected in a woodland situation, vigorously growing, healthy trees, suppressed smaller specimens, failed dead saplings/trees and fallen root-rocked trees. As individual specimens these trees are unimpressive and these species are present in the upper level of the woodland belt. In the proposed re-development plans, this group would need to be removed to allow for the earth fill and rise in ground level. They would not survive the proposed level change if retained. The loss of Group A consists of approximately one quarter of the total depth the wooded embankment. Leaving three quarters of the total depth standing (Group A + Group 1). The tree species present in group A are also present in Group 1.

GROUP B:

Tree species present: Sycamore
Ash
Oak
Birch
Willow
Elder

Group B is situated north of the road bridge, on the western embankment. The group includes the lower part of the wooded belt running adjacent to the flooded area (please see site plan). A willow stand has established at the northern end of this group, where the earth access track meets the disused railway. These are young specimens standing in water when the area is flooded at its worst. On this embankment, established trees have naturally formed two distinctive rows with a visible gap between the upper (Group 2) and lower (Group B) in the middle of the embankment. A few Oaks have established in this lower group. They are growing, but stressed due to the regular water-logging. Sycamore trees with some interspersed Ash are established as well as Birch and Willow further down the wooded belt. As with Group A, most of the trees are young to middle-aged. As individuals the trees are unimpressive with areas of suppression, forming weak growth, failed saplings and trees. Species are present in the upper level of the woodland belt. In the proposed re-development plans, this group would need to be removed to allow for the earth fill and rise in ground level. The loss of Group B consists of approximately one quarter of the total depth the wooded embankment. Leaving three quarters of the total depth standing (Group B + Group 2) They would not survive the proposed level change if retained.

3.5 GROUP C:

Tree species present: Sycamore
Oak
Ash
Birch
Willow

Group C is situated south off the road bridge, on the eastern embankment. The group includes the lower part of the wooded belt running adjacent to the flooded area (please see site plan). The trees in this group are growing between large areas of exposed rock face, originally cut into to create the railway. This creates a less dense canopy where light can penetrate to the woodland floor and help aid natural regeneration. Stands of Willow have established at the water's edge in patches. As individual trees, they are unimpressive and species are present in the upper level of the woodland belt (Group 3). In the proposed re-development plans, this group would need to be removed to allow for the earth fill and rise in ground level. Some lower Oak and Ash are stressed by location. This group would not survive the proposed level change if retained. The loss of Group C consists of approximately one quarter of the total depth the wooded embankment. Leaving three quarters of the total depth standing (Group C + Group 3) The trees are young/ middle aged self-sets.

GROUP D:

Tree species present: Oak
Ash
Birch
Willow
Hawthorn

Group D is situated south of the road bridge, on the western embankment. The group includes the lower part of the wooded belt running adjacent to the flooded area (please see site plan). As with Group C, the trees in this group are growing between large areas of exposed rock face, originally cut into to create the railway. This creates a less dense canopy where light can penetrate to the woodland floor and help aid natural regeneration. Willow have established stands along the water's edge. There are failed, dead trees in the water where root systems have been destabilised due to repeated flooding and water logging of the ground. As individuals these trees are unimpressive and species are repeated in the upper level of the woodland belt. In the proposed re-development plans, this group would need to be removed to allow for the earth fill and rise in ground level. The loss of Group D consists of approximately one quarter of the total depth the wooded embankment. Leaving three quarters of the

total depth standing (Group D + Group 4). This group would not survive the proposed level change if retained.

GROUP E:

Tree species present: Willow

Group E is situated south of the road bridge where the ground level rises at the southern end of the flooded area (please see site plan). This land is still very wet and boggy. A pioneer stand of young Willow has established. In general the group appears healthy as they are possibly at a slightly higher level than Group F, but there are failed and fallen trees within the group. Few of the trees are reaching a decent maturity due to overcrowding and unstable rooting conditions. This group is maintaining a short life rotation due to the wet conditions. In the proposed re-development plans, partially or all of group would need to be removed to allow for the earth fill and rise in ground level. They would not survive the proposed level change if retained.

WILDLIFE AREA, GROUP F:

Tree species present: Willow

Birch

Hawthorn

In the proposed re-development plans, this group would need to be removed to allow for the earth fill and rise in ground level. The stand is mainly pioneer species of Birch and Willow, with Hawthorn creeping in on the edges as natural regeneration from existing old hedgerow. As expected with a repeatedly waterlogged stand, there are multiple failed and fallen trees within the group. Few of the trees are reaching a decent maturity due to poor and unstable rooting conditions, constantly stressed from waterlogging. This group is maintaining a short life rotation due to the poor conditions.

PROTECTIVE FENCING

BS5837 recommendations for root protection fencing requires that the fence should be constructed with a framework of scaffolding poles/ wooden fence posts driven into the ground and braced together. Onto this, weldmesh panels should be securely fixed with wire or scaffold clamps.

If access is allowed within the root protection area a combination of ground protection and barriers should be erected.

a: for pedestrian access only, a single thickness of scaffold boards placed on top of a driven scaffold frame, giving a suspended walk way or on top of a compression resistant layer (e.g. 100mm depth of woodchip), laid onto a geotextile membrane.

b. For pedestrian operated plant to a gross weight of 2t, proprietary, interlinked ground protection boards placed on top of a compression resistant layer (e.g. 150mm depth of woodchip), laid onto a geotextile membrane.

c. For wheeled or tracked construction traffic exceeding 2t gross weight, an alternative system (e.g. proprietary system or precast reinforced concrete slabs) to an engineering specification designed in conjunction with arboricultural advice, to accommodate the likely loading to which it will be subjected.

One of the main problems affecting this site is that it is quite isolated, but not so remote that it is unknown to less desirable members of society. It has become a popular place for fly tipping, in some cases large articles. Installing any item with resalable or scrapping value in this area, would pretty much guarantee its theft. Also, this site is not strictly a development site, more partial land fill and reclamation.

One firm only will be involved in the process, not a selection of subcontractors, meaning site rules/ restrictions can be easily introduced and monitored. It may be suitable to install more permanent, less financially attractive fencing along some areas of the site, such as post and rail. This could be installed necessary to use weld mesh fencing around the site compound.

Recommendations and Guidance

GROUP 1: The clearance of Group A should allow a distance of 5.5m from the proposed final fill level to the eastern edge of Group 1 and the edge of the staggered removal. Due to difficult terrain until the higher ground level has been reached, the eastern side of Group 1 could be marker fenced with pigtail pins and orange site netting at the distance of 5.5m from the woodland edge.

Post and rail fencing from road side to point where it meets the site compound, to be continued along the bottom of the group back towards the road bridge once the ground levels have been reached. This is to act as a non-threatening barrier to recreational site users in the future.

The fence should be situated approximately 5.5m away from stems of the woodland edge trees. This is an average distance due to variations in age class, still giving enough space for the more established trees.

During the land fill process, Root Protection Area warning signs should attached to the fencing as a constant reminder to staff.

At no point should any equipment or materials be stored in or near exposed tree protection zones. Any chemicals/ material should be stored on a non-permeable surface, preferable a bunded-type construction to allow easy control of any harmful spillage/ leaching.

No tree should be used as an anchor point for any winching activity.

No fire should be lit within 10m of a trees crown.

The local authority's arboriculturalist shall have free access to the site and report any problem areas to the developer and their arboriculturalist. Recommendations can then be made to the developer on how best to rectify the situation.

GROUP 2: The same applies to the Group 2 as with Group 1. The upper eastern boundary post and rail fencing, this can be positioned much closer to the woodland group as this side is not being used for an access track, however great care must still be taken to cause minimum disturbance to the root systems and choosing fence post positions carefully.

This fencing can ultimately be carried on down the eastern boundary of Group F (wildlife area/pond), to continue along its northern and back along the western boundary to where the site access crosses. However there may be issues with land levels for permanent fencing at the start of this project. This fencing is boundary demarcation, not for root protection.

The clearance of Group B should allow a distance of 5.5m from the proposed final fill level to the western edge of Group 2 and the edge of the staggered removal. Due to difficult terrain until the higher ground level has been reached, the western side of Group 2 could be marker fenced with pigtail pins and orange site netting at the distance of 5.5m from the woodland edge.

During the land fill process, Root Protection Area warning signs should attached to the fencing as a constant reminder to staff.

At no point should any equipment or materials be stored in or near exposed tree protection zones. Any chemicals/ material should be stored on a non-permeable surface, preferable a bunded-type construction to allow easy control of any harmful spillage/ leaching.

No tree should be used as an anchor point for any winching activity.

No fire should be lit within 10m of a trees crown.

GROUPS 3 & 4: Both these groups are already fenced with stock fencing, including barbed wire along the upper boundaries. That combined with heavy, low, spiked overhang from the hawthorns along the field edges mean both groups are difficult to access. It is not necessary to further fence these boundaries off as there is no vehicular movement or changes in land use expected further to the existing norm.

Along the lower level, the clearance of Groups C & D should allow a distance of 5.5m from the proposed final fill level to the edges of Groups 3 & 4 and the edge of the staggered removal. Due to difficult terrain until the higher ground level has been reached, the western side of Group 3 & 4 could be marker fenced with pigtail pins and orange site netting at the distance of 5.5m from the woodland edge.

During the land fill process, Root Protection Area warning signs should attached to the fencing as a constant reminder to staff.

At no point should any equipment or materials be stored in or near exposed tree protection zones. Any chemicals/ material should be stored on a non-permeable surface, preferable a bunded-type construction to allow easy control of any harmful spillage/ leaching.

No tree should be used as an anchor point for any winching activity.

No fire should be lit within 10m of a trees crown.

PLANTING

All trees and shrubs shall comply with the minimum requirements of the relevant BS below and the requirements of this specification. Trees shall be true to size and description, and shall be good well formed, healthy specimens free from disease and damage to stems, branches, roots and foliage. They shall be nursery grown and shall have been regularly transplanted.

BS 8545: 2014 Trees : From nursery to independence in the landscape.

Recommendations

Although these have been withdrawn/ superseded by BS8545 they can be used as a solid reference point

BS 3936: Part 1 selected standards; standard; feathered trees under 3.6m high, whips, shrubs.

BS 3936: Part 4 forestry transplants

BS 4043:.Semi mature trees

Topsoil shall be removed to a sufficient depth and width to allow the roots to be fully spread. When planting, the roots of stock shall be evenly spread out. The backfill shall be finely broken topsoil, which was removed when forming the planting pit, or supplemented by topsoil material obtainable on site. The backfill shall be placed in layers and lightly consolidated throughout its total depth to ensure there are no voids around the roots or root ball. In addition, the backfill is to be firmly heeled around the plant collar. The depth at the centre of the pits shall be adjusted to ensure that all stock is planted to the depth of the nursery soil mark on the stem, and this shall be maintained on the finished ground

Slit-planting whips for hedges or woodland stock. Simply push the spade a spit's depth, open the hole by leaning on the spade back and forth, then slip the bare-root plant in to the depth at which it had been growing in the nursery. Remove the spade and push the slit closed with your foot, with a light but firm hold on the whip to ensure a finished upright position. A young plant may also be vulnerable to attack from animals, so all woody plants should be protected by rabbit guards supported by wooden canes to prevent ring-barking.

PARKING AREA

Replacement plant any trees that have been removed for health and safety reasons within the existing hedge line, in the case of Sycamore removal, replace with either Oak or Ash whips. Thicken hedge with hawthorn whips where it has thinned through time.

Trees to be planted

4no 10-12 Select Standard Malus 'John Downie'

5no 10-12 Select Standard Acer campestre

3no 10-12 Select Standard Sorbus aucuparia

ACCESS ROAD: TOP OF FENCED OFF EMBANKMENT

480no 60-80cm Crategus monogyna whips (4 per metre on two staggered rows)

Embankment planted with Ulex europaeus Gorse 30-50 shrubs in staggered rows at 1m spacings (to establish quicker coverage plants could be as close as 50cm spacing). Leaving 2m gap at bottom of embankment.

NORTH WEST BOUNDARY OF THE EXISTING FIELD PLATEAU

1.5-1.8 feathered Quercus robur Oak planted at 15m spacings

GROUP 1

23% 60-90 whips Quercus robur Oak

23% 60-90 whips Betula pendula Birch

17% 60-90 whips Crategus laevigata Hawthorn with red flowers

17% 60-90 whips Crategus monogyna Hawthorn with white flowers

9% 60-80 Corylus avellana whips Hazel

4% 30-40 containerised Ilex aquifolium Holly

4% 60-90 whips Fraxinus excelsior (if suitable due to current concerns over Ash Die Back) Ash

3% 40-60 whips Viburnum opulus Guelder Rose

Used to fill gaps where natural regeneration has not yet established. When in group replant, spacings at 1.5 to 2.5m

GROUP 2

23% 60-90 whips *Quercus robur* *Oak*

23% 60-90 whips *Betula pendula* *Birch*

17% 60-90 whips *Crataegus laevigata* *Hawthorn with red flowers*

17% 60-90 whips *Crataegus monogyna* *Hawthorn with white flowers*

9% 60-80 *Corylus avellana* whips *Hazel*

4% 30-40 containerised *Ilex aquifolium* *Holly*

4% 60-90 whips *Fraxinus excelsior* (if suitable due to current concerns over Ash Die Back) *Ash*

3% 40-60 whips *Viburnum opulus* *Guelder Rose*

133no 60-90cm *Salix caprea* whips at 3m spacings along embankment side of fishing pond A to create shade/ shelter for the fish. Rotational coppicing once the trees are fully established will be essential. To minimise management could be replaced with *Salix cinerea* as this is a small tree.

WILDLIFE POND

7no 1.8-2.4 feathered *Alnus glutinosa*

3no 1.8-2.4 feathered *Salix caprea*

3no 1.8-2.4 feathered *Salix fragilis*

CONCLUSION

Although there is always an argument for retaining relatively healthy, protected trees. I think in this situation it may be justified. The trees to be removed are not of great ecological value due to the age range, also all tree types being removed are present in the higher level groups so no species are being eradicated during this process. To not try to improve this site will result in further fly-tipping and as the area becomes more unkempt it attracts an undesirable element that has been concerning nearby residents

The appointed arboricultural contractor should be able to demonstrate professional levels of expertise, appropriate qualifications, insurance protection cover and shall comply in full accordance with the approved specification and requirements of British Standard BS3998: Treework 2010 and AFAG guidelines.