

MANAGEMENT AND MAINTENANCE OF EXISTING WOODLAND

1. Woodland Management Objectives

- 1.1 To protect and enhance existing woodland while improving access and amenity value.
- 1.2 To fell and make safe hazardous trees creating gaps in the canopy, encouraging natural regeneration.
- 1.3 To thin the woodland and encourage natural regeneration.
- 1.4 To pro-actively manage and maintain path and woodland edge trees for reasons of public safety.
- 1.5 To utilise standing and felled dead and dying trees to increase the variety and extent of deadwood habitat.
- 1.6 To encourage public support to achieve objectives.
- 1.7 To lay the foundation for continued and controlled management over the long term (+30 years), so that the woodland character and nature conservation values are enhanced through low intervention and sustainable management.

2. Woodland Maintenance

2.1 Control of invasive vegetation.

- Large areas of naturally regenerated *Sycamore*, *Bracken* and *Brambles* should be controlled by cutting and removing from site. These species are to be monitored annually and cut back as necessary (with removal from site) to encourage biodiversity.
- The site shall be inspected for *Snowberry* (*Symphoricarpos alba*) and *Rhododendron* (*Rhododendron ponticum*) in June of each year:
 - Snowberry should be treated with an appropriate herbicide in accordance with the manufacturers' recommendations. All spraying/ herbicide works to be conducted by a fully certified operative.
 - No material should be removed from site.
 - Rhododendron should be cut by hand or chainsaw, cutting as close to the ground as possible to remove above ground growth.
 - Chip or remove the cut material from the area to allow for effective follow-up work and prevent regrowth.
- The removal of above ground growth will not prevent regrowth as *Rhododendron* will regrow from cut stems and stumps. There are four recommended methods to achieve successful management after the initial cut and removal:
 - 1) Digging the stumps out. Remove ALL viable roots. This can be done manually or with a tractor and plough. To avoid regrowth, stumps should be turned upside down and soil should be brushed off roots.
 - 2) Direct stump treatment by painting or spot spraying freshly cut low stumps with a herbicide immediately after cutting. Glyphosate (20% solution), triclopyr (8% solution) or ammonium sulphate (40% solution) are effective during suitable weather conditions i.e. dry weather. The herbicide concentrations used and timings of applications vary according to which chemical is used (apply to manufacturer's recommendations). Use of a vegetable dye to be used to mark treated stumps. ALL stumps should be targeted. All spraying/ herbicide works to be conducted by a fully certified operative.
 - 3) Stem injection, using a 'drill and drop' methodology. If the main stem is cut and is large enough for a hole to be drilled into it, the hole can be used to facilitate the targeted application of glyphosate (25% solution). All herbicide works to be conducted by a fully certified operative.
 - 4) Stump regrowth and seedlings can be effectively killed by spraying regrowth with a suitable herbicide, such as glyphosate. Best practice spraying protocols & manufacturer's specifications should be carefully followed. For herbicide treatment to be effective each individual leaf needs to be thoroughly wetted with herbicide to kill the plant. All spraying/ herbicide works to be conducted by a fully certified operative.

- The site shall be inspected in June of each year for *Japanese Knotweed* (*Fallopia japonica*) this will be followed up by several visits during the growing season to check for any subsequent regrowth. If *Japanese Knotweed* (*Fallopia japonica*) has been identified within or adjacent to the woodland: **DO NOT** undertake cutting, flail mowing, strimming or composting. Contact a qualified Knotweed Solution Provider as necessary OR conduct chemical control only:
 - Only spray in the growing season when there are green leaves present.
 - Only use one of the approved range of Glyphosate based herbicides according to *Pesticides: Code of Practice for Using Plant Protection Products in Scotland (2007)* and manufacturer's instructions/specifications.
 - Spray a minimum of two times in one growing season. More spraying may be needed and is allowed if the plant re-grows during the period of agreement.
 - Do not spray the plant again until early/mid-May or when the plant is between 50 cm and 1.5m tall.
 - Spray must be applied to both the top and underside of the leaves.
 - Following spraying, monitor the plant regularly for signs of re-growth.
 - All spraying/ herbicide works to be conducted by a fully certified operative.

2.2 Pruning is to be kept to a minimum to encourage regeneration and ecological diversity:

- Removed trees should include hazard trees and those selected for poor form, condition and limited life expectancy. Woodland is to be inspected annually and also after storms and high winds by a qualified Arborist, with any necessary work carried out to ensure safety of the public.

2.3 Selective thinning will allow existing regeneration to be released from overhead shade, and to increase light reaching the woodland floor to generate further regeneration:

- An initial thin of 5%, including the removal of hazardous trees should be carried out within the first year.
- A 5% thin in year 10.
- A 5% thin in year 20.
- After these initial phases of thinning, subsequent management should aim to maintain as many mature trees for as long as possible (in a safe condition).

2.4 Retention of standing dead trees and deadwood, both in the canopy and on the ground should be encouraged where it is not considered to be a threat to the public. Habitats such as decaying wood, moss, holes and wet cavities all add to the wildlife value of the site. Dead trees can be retained where possible and inspected regularly with prompt action taken if they become an unacceptable hazard to the public.

2.5 Check tree stakes and ties of newly planted trees and remove where appropriate.

2.6 Litter picking is to be carried out on a fortnightly basis and any litter or deleterious materials are to be removed from site.

2.7 Check and repair any perimeter fencing.

SPECIFICATION FOR THE PROTECTION AND RETENTION OF TREES

Tree Protection shall be compliant with guidance and recommendations set out in BS 5837: 2012 *Trees in Relation to Construction*.

Tree Protection Zone

All trees which are to be retained shall be protected by durable fencing throughout the development period. The fencing shall be erected before any work commences and shall be maintained throughout the contract.

Protective fencing shall be as illustrated in Figure 2 of BS 5837. The area to be enclosed by the fence shall be calculated based on the age, size and vigour of the trees, as set out in Table 1 of BS 5837. Alternatively, the fence shall enclose the area of branch spread, plus 1.8m on all sides. Modification to the fence line may be necessary during the construction process. The Planning Department shall be consulted before each modification and their approval sought.

Avoid locating Drains or Services within this protected zone and **Do Not** raise or lower soil levels within or adjacent to the zone. Avoid changing ground levels elsewhere on site in such a way as to create a sump or puddles around the base of trees.

Prevention of Damage & Contamination

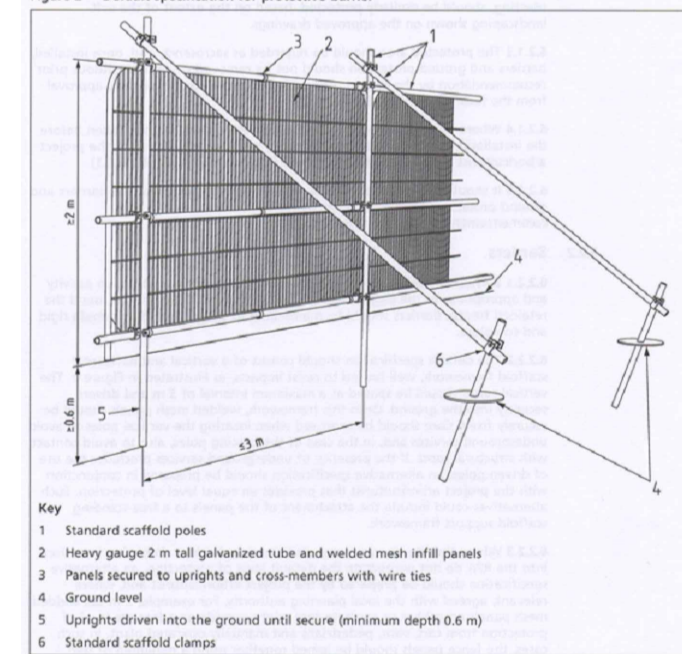
Do Not store Chemicals, Oils, Herbicides or Toxic Substances within or adjacent to tree protection fences.
Do Not locate Compounds, Site Huts, Machinery or stockpiles of Materials within the protected zone around trees.
Do Not locate vehicular routes or parking beneath or around protected trees. If this is unavoidable, temporary Tank Tracks or Sleepers shall be laid to avoid compaction.

Instructions for Work Within Tree Protection Zone

Do Not attach signs or cables to trees.
Do Not light fires close to trees.
Where it is not possible to complete works without crossing the Protected Zone around existing trees, the following procedures must be followed:

- Excavations must be hand dug and supervised.
- All exposed roots greater than 30mm diameter must be left uncut and undamaged.
- Smaller roots may be cleanly cut if necessary and removed.
- Backfill material to excavated trenches must be clean and free of rubble and deleterious material.
- The trees shall be monitored for signs of dieback over the next growing season and if necessary expert arboricultural advice sought.

Figure 2 Default specification for protective barrier



Key

1. Standard scaffold poles
2. Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
3. Panels secured to uprights and cross members with wire ties
4. Ground level
5. Uprights driven into the ground until secure (minimum depth 0.6 m)
6. Standard scaffold clamps

Drawing: **TREE STRATEGY**
(Sheet 6 of 6)

Job: **KINGS PARK DUNDEE**

Client: **PERSIMMON NORTH**

No: **467.07.06**

Date: **Sept 2017** Scale: **1:500**

Drawn: **[Signature]** Checked: **[Signature]**

