



Tree protection Statutory protection

It should be noted that any recommendations outlined in this document do not constitute permission to carry out such works.

In general terms, a Tree Preservation Order (TPO) prevents wilful damage or destruction to trees or woodlands without the prior consent of the local planning authority. Before any works to trees are commenced all necessary checks (including whether the site and its trees are subject to Tree Preservation Orders or are part of a conservation area) should be made and approvals obtained. Note that TPOs or other statutory protection (such as Conservation Area status) may have been applied between the date of any previous investigation and the proposed tree works.

No works to trees or shrubs should be carried out during the bird-nesting season. The season might be considered to start at the beginning of March and continue until the end of August though certain species may nest outside this period and particular weather conditions may extend the season. Checks should be made beyond this period to ensure that trees and shrubs scheduled for removal or other works do not contain nests. Any work which harms birds or destroys their nests may constitute an offence under the Wildlife and Countryside Act 1981. An ecologist should be employed to advise further and to carry out all necessary checks.

Clearance and machinery within Construction Exclusion Zone (CEZ)

Any necessary clearance or demolition of features within the CEZ shall take place after general site clearance and demolition has been completed and after the temporary tree protection fencing has been erected. Such works shall take place only under the supervision of a Landscape Architect, Landscape Manager or Arboriculturalist. A single panel of the temporary fencing shall be removed only when the works are taking place and shall be replaced at the end of each working day.

Great care should be exercised to prevent damage to roots, trunks and branches. Where possible, any necessary clearance should be carried out entirely by hand.

No machinery shall be used within the CEZ except where specific permission has been granted by the local authority. Self-propelled machinery should only be used with appropriate ground protection as described in the BS.

Fuel and other liquids that are required for machinery, that may cause damage to trees, should not be brought into the CEZ. Machines should be re-fuelled beyond the CEZ.

Soil-stripping should not take place within the CEZ.

Excavations and level changes near to retained trees

Deep excavations ($\geq 450\text{mm}$) left open during dry weather will cause excessive drying of the soil profile for some distance either side. Similarly, any excavations allowed to fill with water, will alter the water content of the soil profile and may have damaging effects on tree roots. Any temporary excavations within 2m of CEZs should therefore be backfilled as soon as possible, preferably the same day. Temporary backfilling with topsoil/subsoil should be carried out when circumstances prevent final backfilling within 48 hours.

Placing of piping and backfill should preferably be carried out in one operation. Otherwise such works should be carried out immediately after the previous operation.

Changes in levels and other activities which might cause flooding within or flow across CEZs either during construction or after completion should also be avoided. Where this is unavoidable, bunds or trenches, as appropriate, should be constructed $>2\text{m}$ from the CEZ to divert floodwater.

Other works within CEZ

Planting and works to install play features (see Detailed Landscape Proposals drawing) if commenced before removal of the temporary protective fencing, shall be carried out via the temporary removal of a single panel of the temporary fencing to allow access. The panel shall be replaced at the end of each working day.

Above ground constraints

Cranes, high loads and other tall machinery present during construction may potentially come into conflict with the canopy of trees and shrubs. Banksmen should be employed to ensure that branches are not damaged by the working and passage of such machinery. In addition, before entering site, delivery drivers should be directed along pre-arranged routes to avoid damage.

Where damage to trees or shrubs is likely and an alternative route or procedure is not practical, limited tree surgery may be carried out to avoid more serious damage (statutory constraints notwithstanding). Such work, and the making good of any damage caused during the contract, should only be carried out by a tree surgeon in accordance with BS3998: 2010.

Removal of trees

Trees and shrubs scheduled for removal should be clearly marked to avoid incorrect removal. Removal should avoid damage to trees and shrubs to be retained. Where the removal of stumps and roots might cause damage to the roots or other parts of trees to be retained, such removal should be avoided and chemical stump and root killer used instead. Note that stump killer should not be used on trees such as Aspen that may have interconnected root systems where adjacent trees of the same species are to be retained. Tree protection fencing should be erected immediately after trees scheduled for felling have been removed.

Protection on site

General

All trees and hedges within and bordering the site should be protected from direct and/or indirect damage during the construction process (including demolition) except where removal or surgery is specifically described elsewhere on this plan or in related tree reports.

The location of temporary fencing is shown as an orange line. The area enclosed by the temporary fencing is known as the Construction Exclusion Zone (CEZ) and is shown hatched in orange. Fencing should be constructed in line with BS5837: 2012 figs 2 and 3.

The line represents a minimum provision and fencing panels should be located along or beyond this line. The area enclosed by fencing should be further extended beyond the area shown to protect aerial parts of the tree where these are not accurately indicated on the plan. This is likely where the canopy is particularly irregular in shape.

The following actions are prevented within the CEZ:

- Physical damage to the trunks, branches and roots of hedges and trees.
- Dumping or storage of spoil, rubbish or any materials whatsoever.
- Contamination of the root protection area by diesel, oil, cement, admixtures or other harmful chemicals.
- The use of systemic translocated herbicides unless described by the manufacturer as being suitable for use under trees.
- Driving of any machinery except when such movements are along existing, surfaced paths and drives.
- Installation or re-installation of paths, foundations, drains or other services.
- Stripping, ripping, rotavation, excavation, compaction or disturbance of the topsoil.
- Changing of the existing level of the ground.
- Flooding.
- Fires within the CEZ or within 20m of it.

The above schedule should be prominently displayed in the site office and in the main welfare facility and on tree protection fencing at prominent points.

A single member of the senior, permanent, on-site construction staff should be assigned responsibility for tree protection. Each member of staff working on site should be made aware of the above schedule, the tree protection plan and the importance of the protective fencing. Any damage to trees or hedges should be reported to the member of staff responsible for tree protection.

Temporary Tree Protection Fencing

After the removal of trees as described above and before any other works (including site clearance, demolition and soil stripping) commence on site, temporary fencing shall be installed where shown.

Any temporary fencing subsequently damaged, moved or removed should be replaced in the position shown, to the original specification, as soon as practical, but in all cases, within one working day.

Fencing shall be minimum 2m high heavy-duty steel weldmesh fencing on a steel frame (Heras type) fixed to vertical scaffolding poles driven minimum 600mm into the ground at maximum 3m centres and braced with scaffolding poles angled at c. 45° as per the recommendations laid out in BS5837:2012 and as shown in figs 2 and 3 of BS5837: 2012.

Bracing poles shall be located inside the CEZ. Panels to be fixed to poles by heavy-duty wire ties. Poles to be joined by standard scaffolding clamps.

Fencing shall be fixed and secured so that casual relocation during the contract period is prevented and so that it is able to withstand accidental collisions by site vehicles.

Where only one side of a group of trees is protected by fencing, the fence line shall be ended at a suitable sturdy barrier or extended into the continuation of the tree group itself to a minimum distance of 2m beyond the site boundary (if possible).

Temporary fencing shall only be removed once all groundworks, clearance and construction works are complete.



KEY

- Proposed construction
- Proposed landscape
- Tree, hedge or shrub to be retained
- Tree, hedge or shrub to be removed
- Category U trees to be removed
- Construction Exclusion Zone (CEZ)
- Temporary protective fencing to BS5837
- Root protection area (RPA)
- Site boundary (approximate)

SCALE

0 10 20 30m
1:1000 printed at A3, 1:500 at A1

Project: Bath Road, Stroud
Client: Newland Homes Ltd
Date: 9th October 2023
Drawing number: 23/533/02
Title: TREE PROTECTION PLAN
Notes: Drawing should not be used for measurements.
Revisions

Bath Road, Stroud: Tree Protection Plan