TREE PROTECTION PLAN for TAVERHAM PARISH COUNCIL

Sandy Lane play area

November 2022

The play area is to have existing play equipment removed, followed by re-surfacing and installation of new play equipment.

The site has mature / early mature trees along its northern, western and eastern borders. The remains of a hedge along its southern border is to be removed as part of the renovation scheme.

All trees are to be retained. There is obvious scope for damage to retained trees during the site clearance works and, to a lesser extent, during the works associated with installation of new play equipment.

Protection measures should be put in place to ensure that no significant damage is caused to roots, branches and stems of all trees.

BS 5837: 2012 "Trees in relation to design, demolition and construction – recommendations" provides a system for organising such works in such a way that the risk of any damage is minimised. I have used BS 5837: 2012 to guide this survey and tree protection plan.

I have plotted all trees on a sketch plan. This is not intended to be a pinpoint accurate plan, but it will serve as an adequate guide for TPC and its contractors throughout the design and works process. If required, I can mark the ground immediately prior to commencement of clearance work, using ground marker paint to show the RPA of each tree (I would recommend this).

The trees are numbered 1 to 10 on the plan. The accompanying tables list each tree with its species, DBH (stem diameter) and RPA (Root Protection Area). RPA's are calculated by using a simple formula, ie: a circle, drawn concentrically to the tree's base, with a radius os 12 x dbh. It is also acceptable, where expediant, to draw RPAs as squares of the same area, the centre of the square being the tree's base.

The tables give figures for both RPA radii and RPA area. Using the area figure, the lengths of the sides of the equivalent square can be determined. I have included RPAs shown as squares as well as the usual circles on the accompanying plan. RPA squares are outlined in orange. RPA circles are outlined in pencil, except T8 (silver birch) which is outlined in red. This is because the RPA circle should be used here, due to this species' habit of growing roots very close to the surface, and also due to this species' sensitivity to root damage (and any other damage).

It is vital that, before any work involving ground disturbance begins, all concerned individuals (TPC officials, main contractors and any sub-contractors they may be using) are fully aware of, and fully understand the tree protection plan.

The most important aspects of all works, where tree protection is concerned, is to avoid damage to roots. The rule of thumb is to strictly avoid cutting through any roots that are above one inch / 25mm in diameter. This will mean avoiding mechanical excavation, other than merely scraping turf off in progressive scrapes of no more than 25mm each to a depth of not more than 50mm, wherever RPA circles or squares are shown on the plan. Below this 50mm mechanical scraping depth, all digging within RPAs must be carried out by hand.

CAREFUL scraping to a depth of no more than 50mm below grass level may only be carried out acceptably within RPAs if the excavator operator has been fully briefed and can be confidently expected to follow the 50mm maximum rule in 25mm increments.

It is likely that only a few, very small diameter roots will be encountered in the top 50mm of soil, BUT, where surface roots can be seen to occur during the first 25mm scrape (which will mean, effectively, just a tiny bit below the surface – not even to the full depth of the roots of the turf), these roots are marked and hand-dug around (with NO damage to the bark of the roots). The mechanical excavation may be continued where no roots are evident, with the same proviso to apply, ie: STOP whenever any root over 25mm diamter is found, to be hand-dug only.

Existing hard surfacing within RPAs may be lifted, WITH GREAT CARE, whatever its depth, as long as it can be lifted in sections small enough to ensure that their edges won't dig into ground when tilted (this will risk injuring any roots).

Existing furniture within RPAs may be removed using a mechanical excavator WITH GREAT CARE. Benches, for example, can be levered loose intitially and then lifted and then dragged backward from the RPA of any nearby tree/s. It is important that furniture is LIFTED initially: roots may have grown flush to the foundations and if furniture is simply levered backward or forward, it could crush roots

The rule to follow where removing hard surfacing or furniture is concerned should be that whoever is involved should carry the operations out with the same level of care as if the material being removed is going to be re-used.

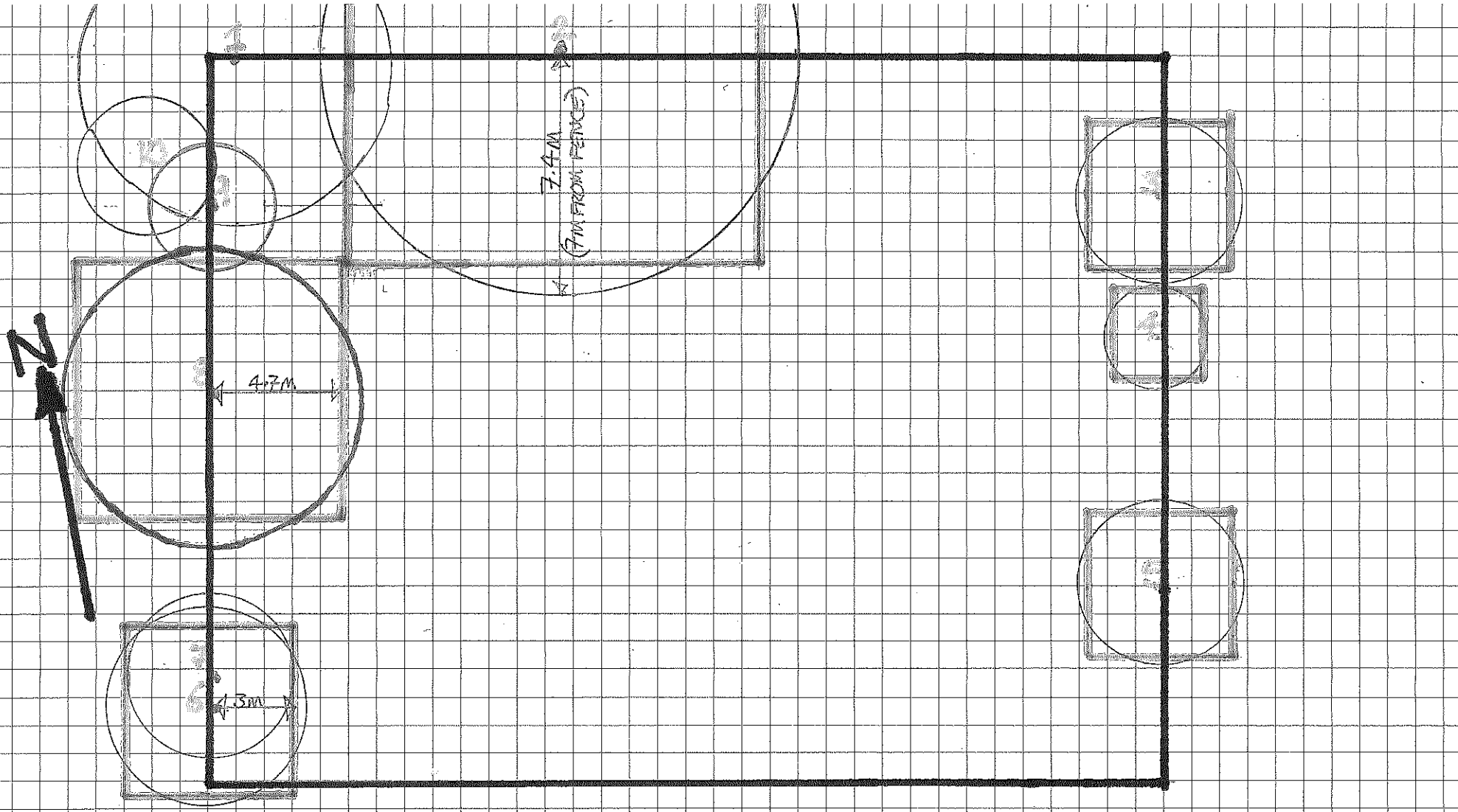
Outside of RPAs there are no restrictions where tree protection is concerned, EXCEPT that, if by chance any roots are found, they should not be cut through if they are over 25mm in diameter (with hand-digging to ensure avoidance of damage).

If the above precautions are followed to the letter, there will be no damage to tree roots.

Above-ground parts of the trees are also to be protected from damage. Low branches are vulnerable to damage from digger arms, hoists used to move equipment out of or into place, etc. Under BS 5837 the usual practice is to erect Herras type fencing around the RPA and/or the crown spread of each tree. In this case such a measure would prove unworkable for contractors, who will need to work within RPAs. But the prnciple that ALL damage to ALL parts of ALL trees must be understood and followed. We will be relying on the good will, professionalism and intelligence of the contractors and sub-contractors to ensure a good job is done, both of installing the new equipment and of protecting all trees throughout the clearance and installation processes.

The Root Protection Area information is given in the table below:-

Tree no.	Species	DBH (mm)	RPA radius (m)	RPA area	Notes All trees may have UP TO 50mm of soil/turf scraped mechanically within RPAs in two 25mm increments, up to the limts specidied below...
1	Sweet chestnut	490	5.8m	105 sq m	HAND-DIG ONLY WITHIN 1m OF BASE
2	Sweet chestnut	700	8.4m	221 sq m	HAND-DIG ONLY WITHIN 2m OF BASE
3	Field maple	250	3.0m	28 sq m	HAND-DIG ONLY WITHIN 0.5m OF BASE
4	Hawthorn	160	1.9m	11 sq m	HAND-DIG ONLY WITHIN 0.5m OF BASE
5	Field maple	250	3.0m	28 sq m	HAND-DIG ONLY WITHIN 0.5m OF BASE
6	Field maple	290	3.5m	38 sq m	HAND-DIG ONLY WITHIN 0.5m OF BASE
7	Field maple	260	3.1m	30 sq m	HAND-DIG ONLY WITHIN 0.5m OF BASE
8	Silver birch	440	5.3m	88 sq m	HAND-DIG ONLY WITHIN 2m OF BASE Birch can have very shallow roots GREAT CARE WITH ALL EXCAVATION WITHIN RPA & be prepared for hand-digging within 3m+ of base
9	Field maple	190	2.3m	16 sq m	HAND-DIG ONLY WITHIN 0.5m OF BASE
10	Cherry plum	200	2.4m	18 sq m	HAND-DIG ONLY WITHIN 0.5m OF BASE (this tree appears to be outside of the working area but should still be treated with care to avoid damage to roots, branches etc)



NOT TO SCALE

(1 SQUARE = 1M APPROX)