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## TEMPO

### Tree Evaluation Method for Preservation Orders

A systematised assessment tool for TPO suitability

### GUIDANCE NOTE FOR USERS

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*To be read in conjunction with TEMPO pro forma,  
included at the end of this document*

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## **Introduction**

### **Background**

The impetus to take a fresh look at existing TPO suitability evaluation methods grew out of the preparation for a local authority of a detailed Method Statement for reviewing Tree Preservation Orders (TPOs) in 2002. The client wanted the Method Statement to include a reliable means of assessing trees for TPO suitability, and asked for a bespoke system.

Having looked closely at what was already available, JFL decided that there was considerable room for improvement, as each of the better-known existing methods has disadvantages.

Accordingly, TEMPO was developed by JFL (whilst working as a Senior Consultant at CBA Trees) as a direct response to the apparent continuing uncertainty about what attributes a tree should have in order to merit statutory protection by TPO.

### **Overview**

TEMPO is designed as a field guide to decision-making, and is presented on a single side of A4 as an easily completed pro forma. As such, it stands as a record that a systematic assessment has been undertaken.

TEMPO considers all of the relevant factors in the TPO decision-making chain. In this connection, it is helpful to revisit the wording of central government advice<sup>1</sup>:

‘Although a tree may merit protection on amenity grounds it may not be expedient to make it the subject of a TPO’

From this, it becomes apparent that most existing methods are inadequate, seeking as they do solely to consider the tree rather than any known threats to its retention. TEMPO corrects this omission by including an expediency assessment within the framework of the method.

Excluding the first section, which is simply the survey record and is thus self-explanatory, TEMPO is a three-part system:

- Part 1 is the Amenity Assessment
- Part 2 is the Expediency Assessment
- Part 3 is the Decision Guide

These parts are set out and function as follows:

## **Part 1: Amenity Assessment**

This part of TEMPO is broken down into four sections, each of which are related to suitability for TPO:

- a) Condition
- b) Retention span
- c) Relative public visibility
- d) Other factors

The first three sections form an initial assessment, with trees that 'pass' this going on to the fourth section. Looking at the sections in more detail:

### **a) Condition**

This is expressed by five terms, which are defined as follows:

GOOD	Trees that are generally free of defects, showing good health and likely to reach normal longevity and size for species, or they may already have done so
FAIR	Trees which have defects that are likely to adversely affect their prospects; their health is satisfactory, though intervention is likely to be required. It is not expected that such trees will reach their full age and size potential or, if they have already done so, their condition is likely to decline shortly, or may already have done so. However, they can be retained for the time being without disproportionate expenditure of resources or foreseeable risk of collapse
POOR	Trees in obvious decline, or with significant structural defects requiring major intervention to allow their retention, though with the outcome of this uncertain. Health and/or structural integrity are significantly impaired, and are likely to deteriorate. Life expectancy is curtailed and retention is difficult
DEAD	Tree with no indication of life
DYING/ DANGEROUS	Trees showing very little signs of life or remaining vitality, or with severe, irremediable structural defects, including advanced decay and insecure roothold. Death or catastrophic structural failure likely in the immediate future, retention therefore impossible as something worthy of protection

The scores are weighted towards trees in good condition. It is accepted that trees in fair and poor condition should also get credit, though for the latter this is limited to only one point. Dead, dying or dangerous trees should not be placed under a TPO, hence the zero score for these categories, due to exemptions within the primary legislation.

For trees in good or fair condition that have poor form deduct one point.

A note on the pro forma emphasizes that 'dangerous' should only be selected in relation to the tree's existing context: a future danger arising, for example, as a result of development, would not apply. Thus, a tree can be in a state of collapse but not be dangerous due to the absence of targets at risk.

Where a group of trees is being assessed under this section, it is important to score the condition of those principle trees without which the group would lose its aerodynamic or visual cohesion. If the group cannot be 'split' in this way, then its average condition should be considered.

Each of the condition categories is related to TPO suitability.

## b) Retention span

The reason that this is included as a separate category to 'condition' is chiefly to mitigate the difficulty of justifying TPO protection for veteran trees. For example, it is necessary to award a low score for trees in 'poor condition', though many veteran trees that could be so described might have several decades' potential retention span.

This factor has been divided into ranges, which are designed to reflect two considerations:

- It has long been established good practice that trees incapable of retention for more than ten years are not worthy of a TPO (hence the zero score for this category); this also ties in with the R category criteria set out in Table 1 of BS5837:2005
- The further ahead one looks into the future, the more difficult it becomes to predict tree condition: hence the width of the bands increases over time

Scores are weighted towards the two higher longevities (40-100 and 100+), which follow the two higher ranges given by Helliwell<sup>2</sup>.

The Arboricultural Association (AA) publishes a guide<sup>3</sup> to the life expectancy of common trees, which includes the following data:

300 years or more	Yew
200-300	Common [pedunculate] oak, sweet chestnut, London plane, sycamore, limes
150-200	Cedar of Lebanon, Scots pine, hornbeam, beech, tulip tree, Norway maple
100-150	Common ash, Norway spruce, walnut, red oak, horse chestnut, field maple, monkey puzzle, mulberry, pear
70-100	Rowan, whitebeam, apple, wild cherry, Catalpa, Robinia, tree of heaven
50-70	Most poplars, willows, cherries, alders and birches

The above should be considered neither prescriptive nor exclusive, and it is certainly not comprehensive, though it should assist with determining the theoretical overall lifespan of most trees. However, TEMPO considers 'retention span', which is a more practical assessment based on the tree's current age, health and context as found on inspection.

It is important to note that this assessment should be made based on the assumption that the tree or trees concerned will be maintained in accordance with good practice, and will not, for example, be subjected to construction damage or inappropriate pruning. This is because if the subject tree is 'successful' under TEMPO, it will shortly enjoy TPO protection (assuming that it doesn't already).

If a group of trees is being assessed, then the mean retention span of the feature as a whole should be evaluated. It would not be acceptable, for example, to score a group of mature birches based on the presence of a single young pedunculate oak.

A note on the pro forma identifies for inclusion in the less than ten years band trees which are assessed being an existing or near future nuisance, including those clearly outgrowing their context, or which are having an adverse effect on adjacent trees of better quality.

The nuisance element is introduced to cover situations where, for example, a Section 211 Notice has been received by the LPA for removal of a tree causing subsidence damage. In relation to outgrowing context, some common sense is needed here: if the trees are being considered for TPO protection prior to development, and if it is apparent that demolition of existing structures will be a component of this process, then a tree should not be marked down simply because it is standing hard up against one of the existing structures.

As with condition, the chosen category is related to a summary of TPO suitability.

### **c) Relative public visibility**

The first thing to note in this section is the prompt, which reminds the surveyor to consider the 'realistic potential for future visibility with changed land use'. This is designed to address the commonplace circumstance where trees that are currently difficult to see are located on sites for future development, with this likely to result in enhanced visibility. The common situation of backland development is one such example.

The categories each contain two considerations: size of tree and degree of visibility. I have not attempted to be too prescriptive here, as TEMPO is supposed to function as a guide and not as a substitute for the surveyor's judgement. However, I have found that reference to the square metre crown size guide within the Helliwell System<sup>4</sup> can be helpful in reaching a decision.

Reference is made to 'young' trees: this is intended to refer to juvenile trees with a stem diameter less than 75mm at 1.5m above ground level. The reasoning behind this is twofold: this size threshold mirrors that given for trees in Conservation Areas, and trees up to (and indeed beyond) this size may readily be replaced by new planting.

In general, it is important to note that, when choosing the appropriate category, the assessment in each case should be based on the minimum criterion.

Whilst the scores are obviously weighted towards greater visibility, we take the view that it is reasonable to give some credit to trees that are not visible (and/or whose visibility is not expected to change: it is accepted that, in exceptional circumstances, such trees may justify TPO protection<sup>5</sup>).

Where groups of trees are being assessed, the size category chosen should be one category higher than the size of the individual trees or the degree of visibility, whichever is the lesser. Thus a group of medium trees would rate four points (rather than three for individuals) if clearly visible, or three points (rather than two) if visible only with difficulty.

Once again, the categories relate to a summary of TPO suitability.

### **Sub-total 1**

At this point, there is a pause within the decision-making process: as the prompt under 'other factors' states, trees only qualify for consideration within that section providing that they have accrued at least seven points. Additionally, they must not have collected any zero scores.

The total of seven has been arrived at by combining various possible outcomes from sections a-c.

The scores from the first three sections should be added together, before proceeding to section d, or to part 3 as appropriate (i.e. depending on the accrued score). Under the latter scenario, there are two possible outcomes:

- 'Any 0' equating to 'do not apply TPO'
- '1-6' equating to 'TPO indefensible'

#### **d) Other factors**

Assuming that the tree or group qualifies for consideration under this section, further points are available for four sets of criteria, however only one score should be applied per tree (or group):

- 'Principle components of arboricultural features, or veteran trees' – The latter is hopefully self-explanatory (if not, refer to Read 2000<sup>6</sup>). The former is designed to refer to trees within parklands, avenues, collections, and formal screens, and may equally apply to individuals and groups
- 'Members of groups of trees that are important for their cohesion' – This should also be self-explanatory, though it is stressed that 'cohesion' may equally refer either to visual or to aerodynamic contribution. Included within this definition are informal screens. In all relevant cases, trees may be assessed either as individuals or as groups
- 'Trees with significant historical or commemorative importance' – The term 'significant' has been added to weed out trivia, but we would stress that significance may apply to even one person's perspective. For example, the author knows of one tree placed under a TPO for little other reason than it was planted to commemorate the life of the tree planter's dead child. Thus whilst it is likely that this category will be used infrequently, its inclusion is nevertheless important. Once again, individual or group assessment may apply
- 'Trees of particularly good form, especially if rare or unusual' – 'Good form' is designed to identify trees that are fine examples of their kind and should not be used unless this description can be justified. However, trees which do not merit this description should not, by implication, be assumed to have poor form (see below). The wording of the second part of this has been kept deliberately vague: 'rare or unusual' may apply equally to the form of the tree or to its species. This recognises that certain trees may merit protection precisely because they have 'poor' form, where this gives the tree an interesting and perhaps unique character. Clearly, rare species merit additional points, hence the inclusion of this criterion. As with the other categories in this section, either individual or group assessment may apply. With groups, however, it should be the case either that the group has a good overall form, or that the principle individuals are good examples of their species

Where none of the above apply, the tree still scores one point, in order to avoid a zero score disqualification (under part 3).

#### **Sub-total 2**

This completes the amenity assessment and, once again, there is a pause in the method: the scores should be added up to determine whether or not the tree (or group) has sufficient amenity to merit the expediency assessment.

The threshold for this is nine points, arrived at via a minimum qualification calculated simply from the seven-point threshold under sections a-c, plus at least two extra points under section d. Thus trees that only just scrape through to qualify for the 'other factor' score, need to genuinely improve in this section in order to rate an expediency assessment. This recognises two important functions of TPOs:

- TPOs can serve as a useful control on overall tree losses by securing and protecting replacement planting
- Where trees of minimal (though, it must be stressed, adequate) amenity are under threat, typically on development sites, it may be appropriate to protect them allowing the widest range of options for negotiated tree retention

## **Part 2: Expediency assessment**

This section is designed to award points based on three levels of identified threat to the trees concerned. Examples and notes for each category are:

- 'Immediate threat to tree' – for example, Tree Officer receives Conservation Area notification to fell
- 'Foreseeable threat to tree' – for example, planning department receives application for outline planning consent on the site where the tree stands
- 'Perceived threat to tree' – for example, survey identifies tree standing on a potential infill plot

However, central government advice<sup>7</sup> is clear that, even where there is no expedient reason to make a TPO, this is still an option. Accordingly, and in order to avoid a disqualifying zero score, 'precautionary only' still scores one point. This latter category might apply, rarely for example, to a garden tree under good management.

Clearly, other reasons apply that might prevent/usually obviate the need for the making of a TPO. However, it is not felt necessary to incorporate such considerations into the method, as it is chiefly intended for field use: these other considerations are most suitably addressed as part of a desk study.

As a final note on this point, it should be stressed that the method is not prescriptive except in relation to zero scores: TEMPO merely recommends a course of action. Thus a tree scoring, say, 16, and so 'definitely meriting' a TPO, might not be included for protection for reasons unconnected with its attributes.

## **Part 3: Decision Guide**

This section is based on the accumulated scores derived in Parts 1 & 2, and identifies four outcomes, as follows:

- Any 0 Do not apply TPO

Where a tree has attracted a zero score, there is a clearly identifiable reason not to protect it, and indeed to seek to do so is simply bad practice

- 1-6 TPO indefensible  
This covers trees that have failed to score enough points in sections 1a-c to qualify for an 'other factors' score under 1d. Such trees have little to offer their locality and should not be protected
- 7-11 Does not merit TPO  
This covers trees which *have* qualified for a 1d score, though they may not have qualified for Part 2. However, even if they have made it to Part 2, they have failed to pick up significant additional points. This would apply, for example, to a borderline tree in amenity terms that also lacked the protection imperative of a clear threat to its retention
- 12-15 Possibly merits TPO  
This applies to trees that have qualified under all sections, but have failed to do so convincingly. For these trees, the issue of applying a TPO is likely to devolve to other considerations, such as public pressure, resources and 'gut feeling'
- 16+ Definitely merits TPO  
Trees scoring 16 or more are those that have passed both the amenity and expediency assessments, where the application of a TPO is fully justified based on the field assessment exercise

### **Notation boxes**

Throughout the method, notation space is provided to record relevant observations under each section. For local authorities using TEMPO, it may even be helpful to include a copy of the TEMPO assessment in with the TPO decision letter to relevant parties, as this will serve to underline the transparency of the decision-making process.



## **Conclusion**

TEMPO is a quick and easy means of systematically assessing tree or group suitability for statutory protection. It may be used either for new TPOs or for TPO re-survey, especially where Area TPOs are being reviewed.

From the consultants' perspective, it is also an effective way of testing the suitability of newly applied TPOs, to see whether they have been misapplied, or it can be used to support a request to make a TPO in respect of trees at risk, for example from adjacent development.

TEMPO does not seek to attach any monetary significance to the derived score: the author recommends the use of the Helliwell System where this is the objective.

CBA Trees owns the copyright for TEMPO, however the method is freely available, including via internet download through the FLAC website ([www.flac.uk.com](http://www.flac.uk.com)) and the Arboricultural Information Exchange [www.aie.org.uk](http://www.aie.org.uk)

TEMPO has undergone a number of minor revisions since its inception, many of which are due to helpful comments received from users. Any feedback on the method is gratefully received by the author.

## **JFL**

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## *References*

- 1 'Tree Preservation Orders: A Guide to the Law and Good Practice', DETR 2000
- 2 'Visual Amenity Valuation of Trees and Woodlands', DR Helliwell, Arboricultural Association 2003 [the Helliwell System]
- 3 'Tree Management', Leaflet No. 4, Arboricultural Association 1991
- 4 Helliwell op. cit.
- 5 DETR 2000 op. cit. at para. 3.3 (1)
- 6 'Veteran Trees: A Guide to Good Management', Helen Read, English Nature 2000
- 7 DETR 2000 op. cit. at para. 3.5

# TREE EVALUATION METHOD FOR PRESERVATION ORDERS - TEMPO

## SURVEY DATA SHEET & DECISION GUIDE

Date:	Surveyor:
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<b>Tree details</b>			
TPO Ref (if applicable):	Tree/Group No:	Species:	
Owner (if known):	Location:		

### REFER TO GUIDANCE NOTE FOR ALL DEFINITIONS

#### **Part 1: Amenity assessment**

##### **a) Condition & suitability for TPO**

- |                          |                         |
|--------------------------|-------------------------|
| 5) Good                  | Highly suitable         |
| 3) Fair/satisfactory     | Suitable                |
| 1) Poor                  | Unlikely to be suitable |
| 0) Dead/dying/dangerous* | Unsuitable              |

**Score & Notes**

\* Relates to existing context and is intended to apply to severe irremediable defects only

##### **b) Retention span (in years) & suitability for TPO**

- |           |                 |
|-----------|-----------------|
| 5) 100+   | Highly suitable |
| 4) 40-100 | Very suitable   |
| 2) 20-40  | Suitable        |
| 1) 10-20  | Just suitable   |
| 0) <10*   | Unsuitable      |

**Score & Notes**

\* Includes trees which are an existing or near future nuisance, including those clearly outgrowing their context, or which are significantly negating the potential of other trees of better quality

##### **c) Relative public visibility & suitability for TPO**

Consider realistic potential for future visibility with changed land use

- |   |                     |
|---|---------------------|
| 5) Very large trees with some visibility, or prominent large trees  | Highly suitable     |
| 4) Large trees, or medium trees clearly visible to the public       | Suitable            |
| 3) Medium trees, or large trees with limited view only              | Suitable            |
| 2) Young, small, or medium/large trees visible only with difficulty | Barely suitable     |
| 1) Trees not visible to the public, regardless of size              | Probably unsuitable |

**Score & Notes**

##### **d) Other factors**

Trees must have accrued 7 or more points (with no zero score) to qualify

- 5) Principal components of formal arboricultural features, or veteran trees
- 4) Tree groups, or principal members of groups important for their cohesion
- 3) Trees with identifiable historic, commemorative or habitat importance
- 2) Trees of particularly good form, especially if rare or unusual
- 1) Trees with none of the above additional redeeming features (inc. those of indifferent form)
- 1) Trees with poor form or which are generally unsuitable for their location

**Score & Notes**

#### **Part 2: Expediency assessment**

Trees must have accrued 10 or more points to qualify

- 5) Immediate threat to tree inc. s.211 Notice
- 3) Foreseeable threat to tree
- 2) Perceived threat to tree
- 1) Precautionary only

**Score & Notes**

#### **Part 3: Decision guide**

- |       |                       |
|-------|-----------------------|
| Any 0 | Do not apply TPO      |
| 1-6   | TPO indefensible      |
| 7-11  | Does not merit TPO    |
| 12-15 | TPO defensible        |
| 16+   | Definitely merits TPO |

**Add Scores for Total:**

**Decision:**