

INFORMATION TO BE PROVIDED FOR SUBSIDENCE-RELATED TREE PRESERVATION ORDER APPLICATIONS

Application Address:	
Tree Location:	

TPO Ref:		Application Ref:	
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Introduction

This checklist has been prepared by Epping Forest District Council for use in relation to applications to fell trees in relation to subsidence. It relies on subsidence of low-rise buildings, 2nd EO, I.S.E., August 2000, and Arboriculture Research and Information Note 142-98-EXT, Tree Roots and Foundations, Dr P G Biddle. Account has also been taken of Tree Root Damage to Buildings, P G Biddle 1998, in particular Chapter 11, Strategy for Investigating Damage, and Amenity Trees and Insurance Issues, ISA 1999. The checklist will be used to help determine whether applications are valid, and the information given will be used to balance the reasons given against the value of the tree(s) as part of consideration of a valid application.

In most cases it will be essential to present both arboricultural and engineering reports. The engineering report is particularly important to provide information that would not be available from a single visit, in a form that allows the conclusions drawn to be tested.

The evidence required is the minimum necessary for the Council to balance the value of the tree(s) against the reasons given for the felling. Not all categories of information will be required in all circumstances. However it will be helpful to explain the reasons if information is not supplied. For example a distortion survey may be conclusive, and will generally eliminate the need for crack monitoring; or a tree of poor quality or low amenity value will generally require a lower standard of evidence to justify felling.

Arboricultural report supplied?

Engineering report supplied?

The Tree

Information about the tree is not mandatory, however, it may help to support the applicants' case. Where a tree is accepted to have low public amenity the need for information under other categories may be lessened.

For each tree:

1. Details of species, height, trunk diameter and crown spread.
2. Statement of age, health, vigour and pruning history, with consideration of its impact on water demand;
3. Statement of contribution to public amenity.

Location

Information in relation to the relationship to the property is essential. In relation to the surrounding area it is important and may be essential to eliminate other potential causes of damage.

A plan and statement are required to show:

4. Relationship to property;
5. Details of surrounding area, including changes of level, soil/ground surfaces, other vegetation and locations and depths of drains/soakaways.

The Site

Information about the site is important and may be essential to support the conclusions drawn from the site investigation and to eliminate other potential causes of damage to the property.

6. Normal soil profile, plasticity index, shrinkage potential (as per BRE Digest 240, revised 1993), moisture content and soil moisture deficit, all from area outside the influence of tree/vegetation;
7. Apparent vegetation history of site.

The Buildings

Information under this heading need not be exhaustive but is essential to support the application.

- 8. Description, method and date of construction and history of building/structures involved.
- 9. Foundation details; to include method of construction and depth of foundations and any variation across the building/structures affected.

The Incident

Full information of the incident is essential to consideration of the validity of the application and to evaluation of the nature and seriousness of the damage to the property.

It is recommended that both a building distortion survey and building distortion monitoring be carried out. This is likely to eliminate the need for lengthy crack movement monitoring.
NB. see introduction, need for engineering report.

- 10. The history of the incident;
- 11. A full description and analysis of the damage to the building/structures, including its location and significance.
- 12. Investigations including:
 - building distortion survey; ^{see note ii}
 - building distortion monitoring;
 - boreholes to test for soil profiles etc (as per 6) In areas affected;
 - crack monitoring is helpful, but definitive only if continued for sufficient time to determine that the movement is seasonal and its degree and direction, together with a diagrammatic record of the cracking;
 - identification of roots (including DNA if necessary), whether live or dead, and locations found and to eliminate other potential causes;
 - a drain survey, where drains are a potential factor; and
 - a soil sheet value strength test.

Additional Information

Information under this category will be helpful and may be essential to assessment of the validity and merits of the application.

13. Description and likely costing of remedial works in the case of:
- tree removal; or
 - tree retention.
13. A statement of the heave potential of the site, with supporting calculations in relation to the application property, and any others that might be adversely affected.

Notes:

- (i) A preliminary site visit may establish that the need for certain information may be waived in particular circumstances.
- Visit offered
- (ii) Minimum requirements in respect of a Distortion Survey are:

Wall verticality projections

Wall verticality measurements to be taken at one metre centres vertically and five metre centres around the perimeter of the building (subject to obstructions etc) and also at building corners.

Drawings to be prepared in isometric projection.

Brick course levels

Levels to be recorded on the selected brick course at one metre intervals. Chosen brick course to be described, i.e. dpc or 4 courses above dpc etc. Drawings to be prepared in isometric projection.

Floor and/or perimeter ceiling levels

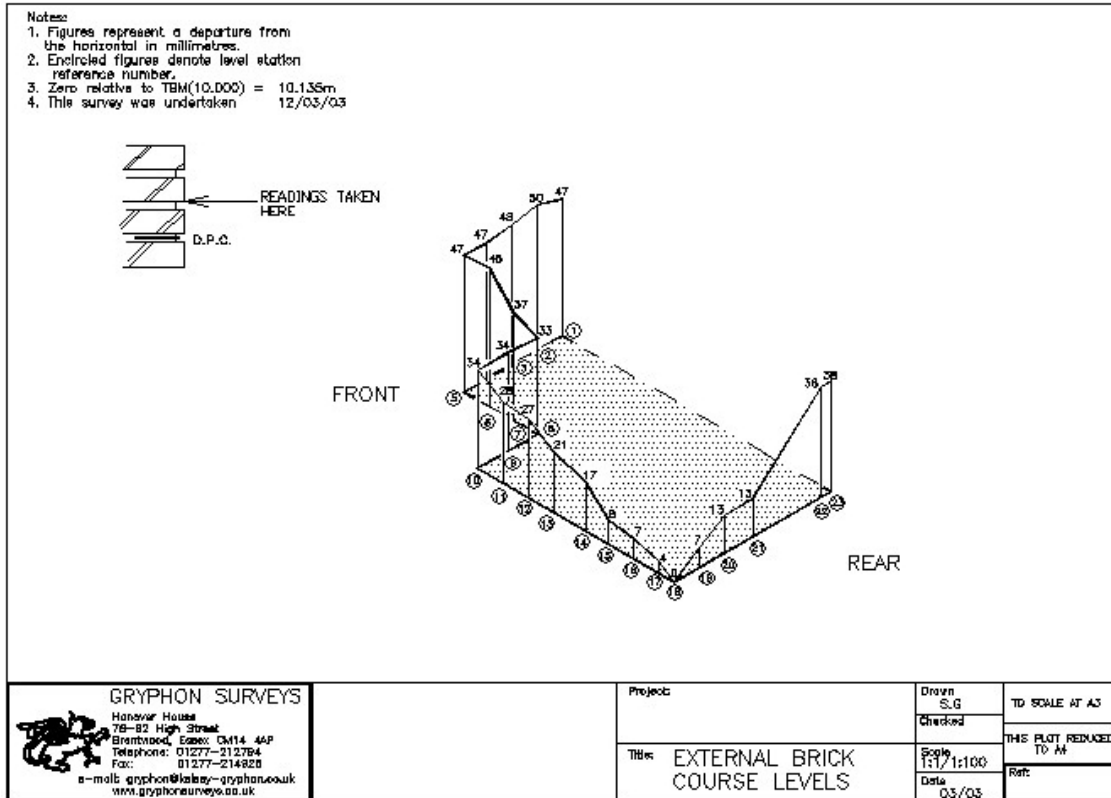
Levels to be recorded as contours and as spot levels on a one metre by one metre grid. If required, perimeter ceiling levels have an advantage in respect of tracing building movement as few ceilings are replaced during the life of a building but floors are frequently re-screeded to level or have later added wearing courses.

Results to include projections of results. See examples below.

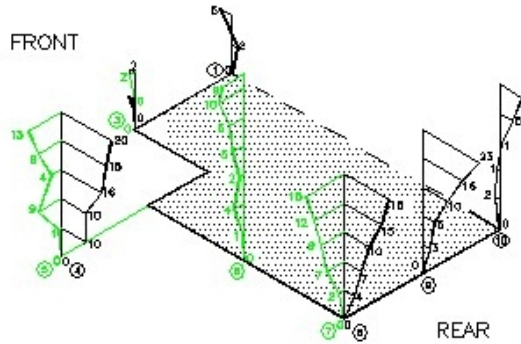
Note, for distortion monitoring all levels to be related to a temporary benchmark, preferably a deep datum.

Examples to show presentation of results.

Example 1



- Notes:
1. Figures represent a departure from the vertical in millimetres.
 2. Encircled figures denote vertically reference station number.
 3. This survey was undertaken 12/03/03

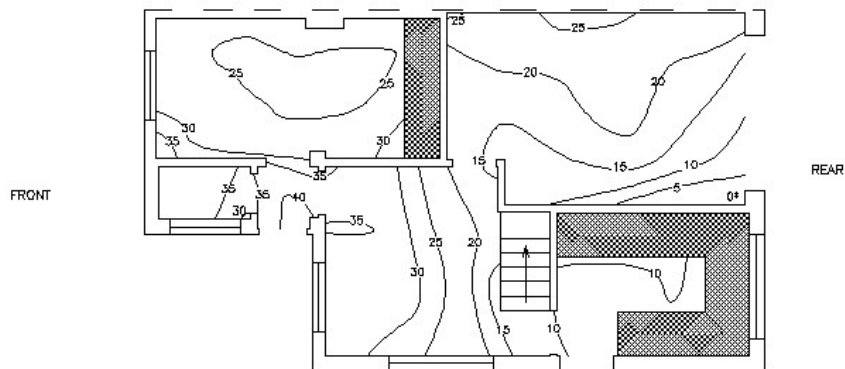



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	Title: WALL VERTICALITY SURVEY	Checked	THIS PLOT REDUCED TO A4
		Scale 1:1/1:100	Ref:
		Date 03/03	



Example 3

- Notes:
1. Figures represent a departure from the horizontal in millimetres.
 2. Contours are based on a 1 metre grid of levels taken on the ground floor.
 3. Zero relative to TBM(10.000)= 10.081m
 4. This survey was undertaken 12/03/03



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	Title: INTERNAL GROUND FLOOR LEVELS	Checked	THIS PLOT REDUCED TO A4
		Scale 1:50	Ref:
		Date	