

Series 3000: Landscape and Ecology (05/01)

Definitions

1 Landscape and ecology works in this Series shall comprise new works and maintenance of existing areas.

Ground Preparation and Cultivation

Units

2 The unit of measurement shall be:
 (i) vegetation clearance, subsoil treatment, final preparation of soils, final cultivations square metre.

Measurement

3 The measurement of ground preparation and cultivation shall be the plan area.

Vegetation clearance shall be measured in addition to any items of general site clearance measured in accordance with Series 200.

Itemisation

4 Separate items shall be provided for ground preparation and cultivation in accordance with Chapter II paragraphs 3 and 4 and the following:

Group	Feature
I	1 Vegetation clearance.
	2 Subsoil treatment.
	3 Final preparation of soils.
	4 Final cultivations.
II	1 Surfaces sloping at 10° or less to the horizontal.
	2 Surfaces sloping at more than 10° to the horizontal.

Ground Preparation and Cultivation

Item coverage

5 The items for ground preparation and cultivation shall in accordance with the Preambles to Bill of Quantities General Directions include for:

- (a) cutting;
- (b) removal of weeds;
- (c) ripping and ploughing;
- (d) herbicide;
- (e) fertiliser, soil ameliorants;
- (f) achieving tilth;
- (g) grading and re-grading to contours and levels;
- (h) removal of stones, undesirable and deleterious material;
- (i) disposal of material (as Series 600 paragraph 39);
- (j) notices.

- (t) watering including water supply;
- (u) disposal of material (as Series 600 paragraph 39);
- (v) weed control (as this Series paragraph 20);
- (w) maintenance of grassed areas (as this Series paragraph 34);
- (x) maintenance of wildflower areas (as this Series paragraph 38);
- (y) supply of certificates;
- (z) notices.

Planting

Units

10 The units of measurement shall be:

- (i) trees, shrubs and plants number.
- (ii) bulbs square metre.

Measurement

11 The measurement of bulbs shall be the plan areas of bulb planting.

Itemisation

12 Separate items shall be provided for planting in accordance with Chapter II paragraphs 3 and 4 and the following:

Group	Feature
I	1 Trees.
	2 Shrubs.
	3 Wildflower plants.
	4 Hedge plants.
	5 Emergent, marginal and aquatic plants.
	6 Bulbs.
II	1 Species and type.
III	1 Different sizes.
IV	1 In pits.
	2 In trenches.
	3 In beds.
	4 In grassed areas.
	5 In or adjacent to water areas.
V	1 Surfaces sloping at 10° or less to the horizontal.
	2 Surfaces sloping at more than 10° to the horizontal.

Planting

13 The items for planting shall in accordance with the Preambles to Bill of Quantities General Directions include for:

Item coverage

- (a) notices, inspections, provenance and reporting;
- (b) transportation, packing and unpacking;
- (c) storage, handling and distribution;
- (d) making arrangements for selection;
- (e) treatment of nursery stock;

- (f) protection;
- (g) stakes, labelling, ties, strapping, spacers, anchors, timber frames, root barriers, cables and the like;
- (h) marker posts;
- (i) tubes, guards and ties;
- (j) excavation, breaking up subsoil, backfilling, compaction and firming;
- (k) topsoil;
- (l) reinstatement;
- (m) multiple handling;
- (n) compost, fertiliser and mixing;
- (o) cultivation;
- (p) sprays, dips and additives;
- (q) drainage layers;
- (r) ameliorants;
- (s) root spreading and other measures;
- (t) measures to avoid root disturbance of adjacent plants;
- (u) support;
- (v) pruning roots;
- (w) planting through turf and mulch mats;
- (x) disposal of material (as Series 600 paragraph 39);
- (y) anchors;
- (z) irrigation pipes;
- (aa) measures for planting in or adjacent to water areas;
- (bb) protective posts;
- (cc) additional ground preparation for wildflower planting;
- (dd) establishment maintenance of new planting;
- (ee) marking out and awaiting approval;
- (ff) anti-desiccant measures;
- (gg) notch planting;
- (hh) watering including water supply;
- (ii) weed control (as this Series paragraph 20);
- (jj) pruning shrubs and climbers (as this Series paragraph 24);
- (kk) scrub control (as this Series paragraph 26);
- (ll) hedge cutting, hedge laying (as this Series paragraph 27);
- (mm) maintenance of trees (as this Series paragraph 28);
- (nn) maintenance of grassed areas (as this Series paragraph 34);
- (oo) maintenance of wildflower areas (as this Series paragraph 38);
- (pp) management of waterbodies (as this Series paragraph 45).

Mulching

- Units **14** The units of measurement shall be:
- (i) organic mulching, mulch mats, sheet mulchsquare metre.
 - (ii) sheet mulch collars number.

Itemisation **15** Separate items shall be provided for mulching in accordance with Chapter II paragraphs 3 and 4 and the following:

Group	Feature
I	1 Organic mulching.
	2 Mulch mats.
	3 Sheet mulch.
	4 Sheet mulch collars.
II	1 Different thickness, gauge or weight.
III	1 Different types.
IV	1 Different sizes.
V	1 Different tree locations.
VI	1 Surfaces sloping at 10° or less to the horizontal.
	2 Surfaces sloping at more than 10° to the horizontal.

Note: Group V Feature 1 shall only be measured in connection with Group I Feature 4.

Mulching

16 The items for mulching shall in accordance with the Preambles to Bill of Quantities General Directions include for:

- Item coverage
- (a) preparation;
 - (b) spreading and levelling;
 - (c) working in and around plants;
 - (d) hollowing out;
 - (e) placing around plants;
 - (f) splitting and cutting;
 - (g) securing edges;
 - (h) lapping and joints;
 - (i) pegging;
 - (j) stapling;
 - (k) disposal of material (as Series 600 paragraph 39);
 - (l) inspections.

- (d) disposal of material (as Series 600 paragraph 39);
- (e) inspections and reports.

Maintenance of Established Trees and Shrubs

- Units** **21** The units of measurement shall be:
- (i) pruning shrubs and climbers, thinning and coppicing and scrub control square metre.
 - (ii) hedge cutting, hedge laying linear metre.
 - (iii) maintenance of trees in urban streets, tree surgery and tree felling number.
- Measurement** **22** The measurement of pruning shrubs and climbers, thinning and coppicing and scrub control shall be the plan area.
- The measurement of hedge cutting and hedge laying shall be the plan length.
- Maintenance of established trees and shrubs shall be measured separately only when required to be carried out in connection with areas of trees and shrubs that have been established prior to the commencement of the Contract.
- Itemisation** **23** Separate items shall be provided for maintenance of established trees and shrubs in accordance with Chapter II paragraphs 3 and 4 and the following:

Group	Feature
I	1 Pruning shrubs and climbers.
	2 Thinning and coppicing.
	3 Scrub control.
	4 Hedge cutting.
	5 Hedge laying.
	6 Maintenance of trees in urban streets.
	7 Tree surgery.
	8 Tree felling.
II	1 Different species and type.
III	1 Different tree size categories.
IV	1 Different types of felling.
V	1 Different styles of hedge laying.
VI	1 Different locations.
VII	1 Surfaces sloping at 10° or less to the horizontal.
	2 Surfaces sloping at more than 10° to the horizontal.

Note: Group VII features shall be applied only to Group I Features 1 to 5.

- Pruning Shrubs and Climbers** **24** The items for pruning shrubs and climbers shall in accordance with the Preambles to Bill of Quantities General Directions include for:
- Item coverage** (a) coppicing;
- (b) removal of suckers;

- (c) repairs or replacement of supports;
- (d) re-attaching;
- (e) chipping;
- (f) windrowing;
- (g) processing for mulch;
- (h) dealing with infected prunings or timber arisings;
- (i) disposal of material (as Series 600 paragraph 39);
- (j) inspections and reports.

Thinning and Coppicing

25 The items for thinning and coppicing shall in accordance with the Preambles to Bill of Quantities General Directions include for:

Item coverage

- (a) selection;
- (b) dealing with infected prunings or timber arisings;
- (c) chipping;
- (d) windrowing;
- (e) processing for mulch;
- (f) disposal of material (as Series 600 paragraph 39);
- (g) inspections and reports.

Scrub Control

26 The items for scrub control shall in accordance with the Preambles to Bill of Quantities General Directions include for:

Item coverage

- (a) herbicide;
- (b) cutting;
- (c) furrowing and frilling;
- (d) disposal of material (as Series 600 paragraph 39);
- (e) allowing for re-growth;
- (f) inspections and reports.

Hedge Cutting, Hedge Laying

27 The items for hedge cutting and hedge laying shall in accordance with the Preambles to Bill of Quantities General Directions include for:

Item coverage

- (a) pruning;
- (b) coppicing;
- (c) grubbing out or treating stumps;
- (d) selection;
- (e) stakes and binders;
- (f) removing clippings, litter, debris and foreign objects;
- (g) disposal of material (as Series 600 paragraph 39);
- (h) inspections and reports.

Maintenance of Trees in Urban Streets

28 The items for maintenance of trees in urban streets shall in accordance with the Preambles to Bill of Quantities General Directions include for:

Item coverage

- (a) pruning;
- (b) adjusting supports, stakes, ties, anchor systems, guards and grilles;

- (c) removal of stakes and ties;
- (d) backfilling stake holes;
- (e) making up levels beneath grilles;
- (f) disposal of material (as Series 600 paragraph 39);
- (g) inspections and reports.

Tree Surgery

29 The items for tree surgery shall in accordance with the Preambles to Bill of Quantities General Directions include for:

Item coverage

- (a) pruning;
- (b) dealing with damage to limbs and boles;
- (c) repairing bark wounds;
- (d) probing cavities;
- (e) removal of debris and loose decayed wood from cavities;
- (f) wire netting including felt tacks;
- (g) removal of foreign objects;
- (h) severance of climbing plants;
- (i) crown lifting, thinning, reduction and reshaping;
- (j) disposal of material (as Series 600 paragraph 39);
- (k) sterilising tools and the like;
- (l) inspections and reports.

Tree Felling

30 The items for tree felling shall in accordance with the Preambles to Bill of Quantities General Directions include for:

Item coverage

- (a) herbicide;
- (b) drilling and frill girdling;
- (c) treating re-growth;
- (d) stump grinding;
- (e) filling voids with topsoil;
- (f) reinstatement of paved areas;
- (g) grubbing up stumps;
- (h) dealing with infected timber arisings;
- (i) disposal of material (as Series 600 paragraph 39);
- (j) sterilising tools and the like;
- (k) inspections and reports.

Maintenance of Established Grassed Areas

Units

31 The unit of measurement shall be:

- (i) Grass cutting square metre.

Measurement

32 Maintenance of grassed areas shall be measured separately only when required to be carried out in connection with grassed areas that have been established prior to the commencement of the Contract.

Grass cutting shall be measured once only for each feature in Group II irrespective of the total number of cuts required to be carried out during the contract period.

The measurement of grass cutting shall be the plan area.

Itemisation

33 Separate items shall be provided for maintenance of established grassed areas in accordance with Chapter II paragraphs 3 and 4 and the following:

Group	Feature
I	1 Grass cutting.
II	1 Central reserves. 2 Verges. 3 Visibility splays. 4 Islands and roundabouts. 5 Areas outside the highway boundary. 6 Banks and ditches. 7 Planting areas. 8 Side slopes to embankments and cuttings. 9 Other stated areas.
III	1 High frequency. 2 Medium frequency. 3 Low frequency. 4 Minimal frequency.

Note: Group III Features 1 to 4 shall be applied only to Feature 1 of Group I.

Maintenance of Established Grassed Areas

34 The items for the maintenance of established grassed areas shall in accordance with the Preambles to Bill of Quantities General Directions include for:

Item coverage

- (a) temporary removal and replacement of seats, litter bins and the like;
- (b) removal of stones, litter, undesirable and deleterious material;
- (c) cutting around obstacles and between plants;
- (d) strimming;
- (e) sweeping;
- (f) cutting edges;
- (g) re-forming edges;
- (h) raking;
- (i) dispersal;
- (j) disposal of material (as Series 600 paragraph 39);
- (k) inspections and reports.

- Measurement **43** Management of established waterbodies shall be measured separately only when required to be carried out in connection with waterbodies that have been established prior to the commencement of the Contract.
- Itemisation **44** Separate items shall be provided for management of waterbodies in accordance with Chapter II paragraphs 3 and 4 and the following:

Group	Feature
I	1 Removal of rubbish and debris.
	2 Inspections of inlets and outlets.
	3 Silt inspection.
	4 Reed bed inspection.
	5 Silt removal.
II	1 Different types of waterbody.
III	1 Different locations.

- Management of Established Waterbodies**
- Item coverage **45** The items for management of waterbodies shall in accordance with the Preambles to Bill of Quantities General Directions include for:
- (a) notices and reports;
 - (b) excavation (as Series 600 paragraphs 18 and 19);
 - (c) deposition and spreading;
 - (d) disposal of material (as Series 600 paragraph 39).

Special Ecological Measures

- Units **46** The units of measurement shall be:
- (i) installation of tunnels and underpasses, maintenance of tunnels and underpasses..... item.
 - (ii) installation, maintenance of otter ledges, otter-proof grilles, reflectors, artificial nests, boxes, perches and other stated habitat creation measures number.
- Measurement **47** The measurement of installation of tunnels and underpasses shall be the complete installation at each stated location.

Itemisation

48 Separate items shall be provided for special ecological measures in accordance with Chapter II paragraph 3 and 4 and the following:

Group	Feature
I	1 Installation.
	2 Maintenance.
II	1 Tunnels and underpasses.
	2 Otter ledges.
	3 Otter-proof grilles.
	4 Reflectors.
	5 Artificial nests.
	6 Boxes.
	7 Perches.
	8 Other stated habitat creation measures.
III	1 Different locations.
IV	1 Different types.
V	1 Different sizes.

Installation of Tunnels and Underpasses, Otter Ledges

Item coverage

49 The items for installation of tunnels and underpasses and otter ledges shall in accordance with the Preambles to Bill of Quantities General Directions include for:

- (a) drains and service ducts (as Series 500 paragraph 16);
- (b) excavation of acceptable material (as Series 600 paragraphs 17 & 18);
- (c) excavation of unacceptable material (as Series 600 paragraph 19);
- (d) excavation in hard material (as Series 600 paragraph 23);
- (e) deposition of fill and compaction (as Series 600 paragraphs 33 and 52);
- (f) disposal of material (as Series 600 paragraph 39);
- (g) imported fill (as Series 600 paragraph 45);
- (h) concrete (as Series 1700 paragraphs 5 and 10);
- (i) formwork (as Series 1700 paragraph 15);
- (j) reinforcement (as Series 1700 paragraph 26);
- (k) miscellaneous metalwork (as Series 1800 paragraph 14);
- (l) waterproofing (as Series 2000 paragraph 4);
- (m) sealants (as Series 2300 paragraph 10);
- (n) waterbars and waterstops (as Series 2300 paragraph 11);
- (o) brickwork (as Series 2400 paragraph 4);
- (p) blockwork and stonework (as Series 2400 paragraph 8).

Installation of Otter-proof Grilles

Item coverage

50 The items for installation of otter-proof grilles shall in accordance with the Preambles to Bill of Quantities General Directions include for:

- (a) miscellaneous metalwork (as Series 1800 paragraph 14).

Installation of Reflectors, Artificial Nests, Boxes, Perches and Other Stated Habitat Creation Measures

Item coverage

51 The items for installation of reflectors, artificial nests, boxes, perches and other stated habitat creation measures shall in accordance with the Preambles to Bill of Quantities General Directions include for:

- (a) licences;
- (b) fabrication and construction;
- (c) fixings.

Maintenance of Tunnels and Underpasses, Otter Ledges, Otter-proof Grilles, Reflectors, Artificial Nests, Boxes, Perches and Other Stated Habitat Creation Measures

Item coverage

52 The items for maintenance of tunnels and underpasses, otter ledges, otter-proof grilles, reflectors, artificial nests, boxes, perches and other stated habitat creation measures shall in accordance with the Preambles to Bill of Quantities General Directions include for:

- (a) reports;
- (b) cleaning and clearing;
- (c) removal of obstructions;
- (d) repairs;
- (e) disposal of material (as Series 600 paragraph 39);
- (f) licences;
- (g) inspections.