



**QUEENSLAND**

**DEVELOPMENT  
CONSTRUCTION  
SPECIFICATION**

**C273**

**LANDSCAPING**

## Amendment Record for this Specification Part

This Specification is Council's edition of the AUS-SPEC generic specification part and includes Council's primary amendments.

Details are provided below outlining the clauses amended from the Council edition of this AUS-SPEC Specification Part. The clause numbering and context of each clause are preserved. New clauses are added towards the rear of the specification part as special requirements clauses. Project specific additional script is shown in the specification as italic font.

The amendment code indicated below is 'A' for additional script 'M' for modification to script and 'O' for omission of script. An additional code 'P' is included when the amendment is project specific.

Amendment Sequence No.	Key Topic addressed in amendment	Clause No.	Amendment Code	Author Initials	Amendment Date
1	Revised list of grass and trees	273A	M	GH	22.5.02

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## SPECIFICATION C273 - LANDSCAPING

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## SPECIFICATION C273 : LANDSCAPING

### GENERAL

#### C273.01 SCOPE

1. The work to be executed under this Specification consists of:
  - (a) The vegetation of cut and fill batters, median areas, pathway verges, open drains and other areas within the site. Vegetation includes the initial surface preparation, topsoiling, fertilising, sowing of seed and may include surface protection works, hydroseeding, hydromulching and straw mulching.
  - (b) The supply of plants, planting at locations as shown on the Drawings, fertilising, mulching, staking, watering and maintenance of plants.
  
2. Requirements for quality control and testing, including maximum lot sizes and minimum test frequencies, are cited in the Specification Part for Quality Requirements.

**Quality**

#### C273.02 REFERENCE DOCUMENTS

1. Documents referenced in this Specification are listed in full below whilst being cited in the text in the abbreviated form or code indicated.

**Documents  
Standards Test  
Methods**

##### (a) Council Specifications

- C211 - Control of Erosion and Sedimentation.
- C213 - Earthworks.

##### (b) Australian Standards

- AS 1160 - Bitumen emulsion for construction and maintenance of pavements.
- AS 2507 - The storage and handling of pesticides.
- AS 4419 - Soils for landscaping and garden use.
- AS 4454 - Composts, soil conditioners and mulches.

### VEGETATION OF SLOPES AND DRAINS

#### C273.03 EXECUTION AND TIMING OF WORK

1. In association with the work to be executed under this Specification, the Contractor shall implement effective erosion and sedimentation control measures in accordance with the Specification for CONTROL OF EROSION AND SEDIMENTATION.

**Contractor's  
Responsibility**

2. The work to be executed under this Vegetation of Slopes and Drains includes the vegetation of cut and fill batters, pathway verges, median areas, open drains and other areas within the site. Vegetation includes the initial surface preparation, topsoiling, fertilising and either sowing of seed or turfing as shown on the Drawings.

**Vegetation**

3. Exposed ground shall be vegetated before the area exceeds one hectare or lesser area in compliance with Council requirements.

**Exposed Ground**

## **C273.04 MATERIALS**

### **(a) Topsoil**

1. The Contractor shall use topsoil stockpiled on site under the Specification for EARTHWORKS. Where imported topsoil is required it shall comply with AS 4419 and shall:-

**Quality**

- be of a friable, porous nature;
- be free of weeds and weed seeds, bulbs, corms and vegetable propagules;
- contain no refuse or materials toxic to plant growth;
- contain no stumps, roots, clay lumps or stones larger than 50mm in size;
- have an organic content of at least 3 per cent by mass;
- have a pH neither less than 5.5 nor more than 7.5;
- have a soluble salt content not exceeding 0.06 per cent by mass.

### **(b) Herbicide**

1. Herbicide used shall be a glyphosate based herbicide listed in Annexure C273A.

### **(c) Seed**

**Seed Type and Supplier**

1. All seed used shall be of the species and varieties listed in Annexure C273A and shall be sown at the application rates specified therein. The Contractor shall submit to the Superintendent the name/s of the proposed seed supplier/s within two weeks of the acceptance of the tender.

2. The Contractor's attention is drawn to the lead time that may be required to procure some native seed species. The native seed shall be delivered to the site in separate lots for each species and variety, clearly labelled to show species, variety and weight.

**Lead Time for Native Seed**

3. All seed must be accompanied by a "Certificate of Authenticity" which shall be furnished by the Contractor to the Superintendent upon request at any stage of the work. Grass and clover seed shall be pre-packed commercially with an accompanying certificate of germination.

**Certification**

4. The Contractor shall not take possession of the seed more than seven days before sowing is to occur. The seed shall be stored in clean, air tight containers and kept away from direct sunlight. It shall not be exposed to the elements at any stage during storage.

**Storage**

5. The Contractor shall replace at his own expense any exotic seed batch found not true to type.

**Contractor's  
Cost**

**(d) Turf**

1. Turf shall consist of 25mm depth of dense, well rooted, vigorous grass growth with 25mm depth of topsoil. The type of grass turf to be used shall be selected from Annexure C273A and in accordance with the Drawings. Unless specified, Kikuyu grass shall not be used. Turf shall be free of weeds, soil pests and diseases. The turf shall be supplied as rolls in long lengths of uniform width, not less than 300mm, and shall be in sound unbroken condition.

**(e) Fertiliser**

1. Fertiliser shall be an organic type listed in Annexure C273A with Nitrogen: Phosphorus: Potassium (N:P:K) ratios of 8 : 3.6 : 2.

**Type**

**(f) Vegetable Mulch**

1. Vegetable mulch used in hydromulching shall consist of straw, chaff, wood fibre, paper pulp or similar material all finely shredded to a maximum dimension of 10 mm. Meadow hay or weeds shall not be used and paper pulp if used shall not exceed 50 per cent by mass of the total mulch.

**Composition**

**(g) Water**

1. Water used shall be potable.

**Quality**

**(h) Binder**

1. The binder used in hydromulching and strawmulching shall be Grade ASS, slow setting anionic bitumen emulsion, complying with AS 1160.

**(i) Wetting Agent**

1. The soil wetting agent added in hydromulching or hydroseeding shall be listed in Annexure C273A and applied at the application rate specified therein.

**(j) Pesticide**

1. Pesticide used shall be a liquid or powder listed in Annexure C273A. The storage and handling of pesticides shall be in accordance with AS 2507.

**C273.05 VEGETATION OF SLOPES 3 TO 1 OR FLATTER**

**(a) Preparation of Surface**

1. Slopes shall be sprayed with herbicide applied at the rate specified in Annexure C273A to kill weed infestation. Sprayed areas shall remain undisturbed for two weeks.

**Herbicide  
Treatment**

2. The surface shall then be tined to a depth of 200 mm to produce a loose surface and all large stones, rubbish and other materials that may hinder germination shall be removed before topsoiling.

**Preparation**

**(b) Topsoiling**

1. Topsoil shall be uniformly applied to provide an average compacted thickness of 50mm with a minimum compacted thickness of 30mm at any location. The topsoiled area shall be cultivated to a depth of 50mm to provide a roughened surface with soil lumps not exceeding 50mm dimension.

**Application**

**(c) Mixing of Seed**

1. The Contractor shall give the Superintendent two days' notice before each sowing operation. Seed shall be sown on the day of mixing with pesticide.

**Notice**

**(d) Incorporation of Pesticide**

1. Immediately before sowing, all grass and native seed shall be treated with pesticide. The pesticide shall be thoroughly mixed as a dry powder with the seed at the rate specified in Annexure C273A to the equivalent mass of seed to be spread on 1 hectare of the surface in accordance with Annexure C273A.

**Mixing**

**(e) Sowing**

1. Sowing shall be carried out with an appropriate mechanical seeder. Where practicable, passes shall follow finished surface contours. Seed shall be sown at a depth of 5mm or shall be raked or harrowed to provide 5mm cover.

**Seeder**

2. Seed and fertiliser shall be evenly distributed over the areas to be sown at the rates specified in Annexure C273A. Fertiliser shall be applied concurrently with the seeding operation.

**Sowing Rate**

**(f) Turfing**

1. Turf shall be placed on the prepared topsoiled surface. Runs of turf shall butt hard against each other and be placed perpendicular to the direction of water flow. Turf seams shall then be topdressed with topsoil.

**Placing**

2. Four to six weeks after placement, the turf shall be lightly topdressed with topsoil to correct any undulations or unevenness in the established turf.

**Topdressing**

**(g) Watering**

1. The Contractor shall water areas to be sown to a moist condition and shall rewater areas to a moist condition without surface runoff on a daily basis for a minimum of 15 days after sowing, or as otherwise directed by the Superintendent, to promote and maintain growth.

**C273.06 VEGETATION OF SLOPES STEEPER THAN 3 TO 1**

**(a) General**

1. Where shown on the Drawings or directed by the Superintendent, slopes shall be vegetated by one of the following methods:

**Method**

- (i) Topsoiling and hydromulching;
- (ii) Topsoiling, hydroseeding and straw mulching;
- (iii) Hydroseeding.

**(b) Preparation of Surface**

1. Weeds shall be killed by spraying with herbicides as specified under Clause C273.05(a).

**Herbicide Treatment**

2. No more than seven days before seeding all loose material shall be removed from fill batters and cut batters, which are not stepped, by dragging a heavy steel chain of minimum weight of 30 kilograms per metre of length or by other methods approved by the Superintendent.

**Preparation**

**(c) Topsoiling**

1. Where batters have been stepped, the steps shall be loosely filled with topsoil. Elsewhere, topsoil shall be uniformly applied to provide an average thickness of 50mm with a minimum compacted thickness of 30mm at any location.

**Application**

**(d) Hydromulching or Hydroseeding**

1. The hydromulch or hydroseed shall comprise the materials shown in Table C273.1. The materials shall be applied at the application rates shown in Table C273.1.

**Application Rate**

2. Dry surfaces shall be watered by a fine spray before the application of the hydromulch.

**Watering**

3. The mixing and treatment of seed shall be carried out in accordance with Clause C273.05(c).

**Treatment of Seed**

4. During preparation of the hydromulch or hydroseed slurry, liquid form pesticide shall be added to the storage tank, to facilitate surface application, at a rate of 5 litres of pesticide to the equivalent volume of hydromulch or hydroseed slurry to be spread on 1 hectare of surface in accordance with Table C273.1.

**Pesticide**

5. Storage tanks, containers and equipment to be used in hydromulching or hydroseeding of slopes shall be clean and free of contamination from previous operations.

**Equipment**

6. A slurry mixture shall be produced by addition of the specified materials in the tank and agitated to maintain a uniform consistency during application. It shall be applied uniformly over the whole surface.

**Uniform Mix**

7. Hydromulch or hydroseed shall not be applied under the following weather conditions at the site:

**Weather Conditions**

- when temperature is higher than 35°C
- when winds exceed 15 km/hr;
- where, in the opinion of the Superintendent, the surface is too wet or
- during rain periods or when rain appears imminent.

8. Application rates shall be in accordance with Table C273.1

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Material	Application Rate per Hectare	
	Hydromulching	Hydroseeding
i) Vegetable Mulch (kg)	2,500	Nil
ii) Water (l)	35,000	20,000
iii) Binder (l)	700	Nil
iv) Fertiliser	See Annexure C273A	
v) Seed	See Annexure C273A	
vi) Wetting Agent (l)	35	20
vii) Pesticide (l)	5	5

**Table C273.1 - Materials and Application Rates**

**(e) Straw Mulching**

1. The mulch to be applied after hydroseeding shall comprise a matrix of straw and an anionic slow setting bitumen emulsion binder. Meadow hay shall not be used. The straw mulch shall be uniformly applied by a suitable blower unit at a rate of 250 bales (each of 20 kilograms) of straw per hectare of surface. The bitumen emulsion shall be incorporated as a spray into the air stream of the mulch blower at a rate of not less than 2,500 litres of bitumen emulsion per hectare of surface. The finished straw mat shall have a minimum thickness of 20mm at any location.

**Method**

**C273.07 VEGETATION OF OPEN DRAINS**

**(a) Preparation of Surface**

1. The Contractor shall so execute the work that the excavation of open drains to the specified profiles is followed within seven days by the vegetation of the surface as specified in this Clause. Topsoil shall be spread to provide an average compacted thickness of 50mm with a minimum compacted thickness of 30mm at any location.

**Profile and Topsoil**

**(b) Sowing**

1. Before sowing, the surface shall be watered. Seed and fertiliser shall then be applied uniformly at the rates specified in Annexure C273A by one of the following procedures as directed by the Superintendent:

**Procedure**

- (i) Mechanical sowing.
- (ii) Hydromulching or hydroseeding.
- (iii) By hand.

**(c) Surface Protection**

1. Where shown on the Drawings or directed by the Superintendent, one of the following protective treatments shall be applied immediately to all or part of the sown surface.

**Methods**

(i) Spraying with Bitumen Emulsion

An anionic slow setting bitumen emulsion, conforming with Grade ASS of AS 1160, shall be sprayed over the surface at a rate of 1 litre of bitumen emulsion per square metre of surface.

**Application  
Rate**

(ii) Lining with Organic Fibre Mat

The channel surface shall be lined with an organic fibre mat listed in Annexure C273A. The runs of matting shall be laid along the direction of water flow. The matting shall be laid loosely on the soil surface and not stretched.

**Laying**

The upstream end of the matting shall be slotted into a trench 150mm wide by 150mm deep and pinned to the base of the trench at 200mm centres. The trench shall be backfilled with soil and compacted by foot.

**Anchorage**

The pins shall be 'U' shaped, 4mm gauge wire, 50mm wide and 150mm long legs.

**Pins**

Adjacent runs of matting shall be overlapped 100mm with the higher run lapped over the lower run. The matting shall be pinned along the sides of each run at 500mm centres and along the middle of each run at 1m centres. End overlaps shall be 150mm wide with the higher run end lapped over the start of the lower run and pinned at 200mm centres.

**Lapping**

(iii) Turfing

Turf shall be as specified under Clause C273.04(d).

**Quality**

Runs of turf shall butt hard against each other and be placed perpendicular to the direction of water flow in the drain, and pinned into position at 500mm centres.

**Placing**

Seams of turf shall be topdressed with topsoil.

**Topdressing**

(d) **Watering**

1. The Contractor shall water treated areas in order to promote and maintain growth as specified under Clause C273.05(g).

## LANDSCAPE PLANTING

### C273.08 EXECUTION AND TIMING OF WORK

1. The work to be executed includes the ground preparation, the supply of plants, planting as shown on the Drawings, fertilising, mulching, staking, watering and maintenance of plants.

**Extent of  
Work**

2. The Contractor shall give the Superintendent a minimum of two days' notice of commencement of planting. Landscape planting shall not be carried out in extreme weather conditions (above 35°C or below 10°C).

**Notice of  
Commence-  
ment**

## **C273.09 MATERIALS**

### **(a) Topsoil**

1. Topsoil shall comply with the requirements of Clause C273.04(a).

### **(b) Herbicide**

1. Herbicide shall comply with the requirements of Clause C273.04(b).

### **(c) Fertiliser**

1. Fertiliser shall be a slow-release type in pellet form, listed in Annexure C273A, with a nine months' release period and having Nitrogen:Phosphorus:Potassium (N:P:K) ratios of 6.3 : 1.8 : 2.8. **Quality**

### **(d) Mulch**

1. All mulches used for landscape planting shall consist of organic material complying with the requirements of AS 4454. Mulch shall be composted or pasteurized as indicated in Annexure C273A. The use of other materials as ground cover shall be as indicated on the Drawings and approved by Council. **Quality**
2. A 10 kilogram sample of mulch proposed by the Contractor shall be submitted for approval to the Superintendent two weeks before its intended use. The mulch subsequently used shall be consistent in every respect with the sample approved by the Superintendent. **Sample**

### **(e) Plant Material**

1. The Contractor shall obtain all plants from a nursery located in an area having a similar climate to the site of the Works. **Source**
2. There shall be no substitution of any species without the Superintendent's approval. All plant material shall be true to species and sizes. Plants shall be healthy, of good form, not soft or forced and with large robust root systems. They shall not be rootbound and shall be free from disease and insect pests. All container soil mix shall contain between 20 per cent and 25 per cent clay by volume. Trees shall have a single leading shoot. For hardening off purposes, all plants shall be delivered to a site within the locality of the Subdivision at least four weeks before planting out. Plant root systems shall be maintained moist at all times with particular attention being paid to watering during the on-site period before and during planting. Plant stock shall be classified as indicated in Table C273.2, and planted in accordance with the Drawings. **Quality**

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	Type or Stock				
	50mm Tube	Gro-Tube	Semi Advanced	Advanced Stock	Super Advanced
Plant Container: dia (mm) depth (mm)	50 75	75 100	150 150	200 200	300 300
Plant Height (mm) (leaf & stem)	200 min 300 max	300 min 400 max	300 min 400 max	300 min 500 max	500 min 750 max
Planting Holes: side dia (mm) depth (mm)	200 200	200 200	300 300	400 400	600 600
Number of Fertilizer Pellets	2	3	5	5	7

**Table C273.2 - Plant Stock**

**(f) Stakes**

1. All stakes shall be 25mm square by 1,500mm long hardwood and sharpened at one end. **Size**

**C273.10 PLANTING**

**(a) Mass Planting in Mulched Bed**

1. The area to be planted shall be sprayed with herbicide, as specified under Clause C273.05(a). Sprayed areas shall remain undisturbed for two weeks. **Herbicide Treatment**
2. The surface shall be ripped at 500mm centres to a depth of 300mm and the top 200mm of the planting bed broken up by cultivation to a maximum size of 50mm. Mulch, 100mm thick, shall be spread over the planting bed. After removal of the localised mulch, planting holes shall be excavated to the dimensions and depths as shown in Table C273.2 and the material removed. **Surface Preparation**
3. The specified number of fertilizer pellets as shown in Table C273.2 shall be placed beside the rootball of each plant. **Fertilizer Pellets**
4. The planting hole shall be backfilled with topsoil complying with Clause C273.04(a) and compacted by foot up to surface level, care being taken to avoid mixing mulch with topsoil. A stake shall be driven 300mm deep and 200mm clear of each 'Advanced' and 'Super Advanced' size stock and the stock tied to it by a strip of 50mm wide hessian webbing. **Backfill and Staking**
5. Each backfilled hole shall receive 10 litres of water before the mulch is respread over the disturbed area. The mulch shall be left just clear of the plant stem. **Watering and Mulching**

**(b) Individual Planting**

1. A planting area 600mm dia. or square shall be loosened to a depth of 400mm. Planting holes shall be excavated to dimensions and depths as shown in Table C273.2 and the material spread evenly around each hole **Planting Holes**

- |    |  |                             |
|----|--|-----------------------------|
| 2. | The specified number of fertiliser pellets, as shown in Table C273.2, shall be placed beside the rootball of each plant.   | <b>Fertilizer Pellets</b>   |
| 3. | The planting hole shall be backfilled with topsoil complying with Clause C273.04(a) and compacted by foot up to surface level. A stake shall be driven 300mm deep and 200mm clear of each 'Advanced' and 'Super Advanced' size stock and the stock tied to it by a strip of 50mm wide hessian webbing. | <b>Backfill and Staking</b> |
| 4. | Each backfilled hole shall receive 10 litres of water.   | <b>Watering</b>             |
| 5. | Weed infestation for a distance of 800 mm surrounding each proposed planting shall be killed by spraying with a herbicide as specified in Clause C273.05(a). All due care shall be taken to avoid damage caused by contact between herbicide and the plant by means of spray drift etc.                | <b>Herbicide Spray</b>      |
| 6. | Immediately after planting, mulch 100mm thick, starting just clear of the plant stem, shall be spread over an area of 600mm radius surrounding the plant.  | <b>Mulch</b>                |

### **C273.11 CARE OF LANDSCAPE PLANTING**

- |    |  |   |
|----|--|---|
| 1. | The Contractor shall water all plants, from the time of planting, at the rate of 10 litres per plant every third day for the first twelve weeks.   | <b>Watering</b>                             |
| 2. | Missing plants, dead plants and plants nominated by the Superintendent as unhealthy shall be replaced by the Contractor. Replacement plants shall be of similar size and quality and of identical species and variety to the plant being replaced. The cost of replacement shall be borne by the Contractor.   | <b>Replacement Plants Contractor's Cost</b> |
| 3. | Weed and grass growth in mulched areas shall be killed by treatment with herbicide in accordance with the manufacturer's instructions at monthly intervals during the construction period and contract maintenance period. Contact of the herbicide with the new plants shall be avoided and any damage repaired or damaged plant material replaced by the Contractor at no cost to the Principal. | <b>Weed Control Contractor's Cost</b>       |

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## SPECIAL REQUIREMENTS

**C273.12 RESERVED**

**C273.13 RESERVED**

**C273.14 RESERVED**

**C273.15 RESERVED**

**C273.16 RESERVED**

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## LIMITS AND TOLERANCES

### C273.17 SUMMARY OF LIMITS AND TOLERANCES

1. The limits and tolerances applicable to the various clauses in this Specification are summarised in Table C273.3 below.

Item	Activity	Limits/Tolerances	Spec Clause
1.	<b>Topsoil</b>		
	a) Organic Content	>3% by mass	C273.04a
	b) pH	>5.5 <7.5	C273.04a
	c) Soluble Salt	<0.06% by mass	C273.04a
2.	<b>Turf</b>	Widths >300mm.	C273.04d
3.	<b>Vegetable Mulch</b>		
	a) Material	maximum size <10mm	C273.04f
	b) Paper Pulp	<50% by mass of total mulch	C273.04f
4.	<b>Topsoiling</b>	Minimum compacted thickness at any location of 30mm	C273.05b C273.06c C273.07a
5.	<b>Straw Mulching</b>		
	a) Straw Mat	Finished thickness >20mm.	C273.06e
6.	<b>Landscape Planting</b>		
	a) Temperature	Planting not to be undertaken when temperatures >35°C or <10 °C.	C273.08
7.	<b>Mulch</b>		
	a) Fines	Shall not exceed 5% by volume.	C273.09d
	b) Woodchip	Maximum size <50mm.	C273.09d
8.	<b>Plant Material</b>		
	a) Container Soil Mix	Contain >20% <25% by volume of clay.	C273.09e

**Table C273.3 - Summary of Limits and Tolerances**

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## MEASUREMENT AND PAYMENT

### C273.18 PAY ITEMS

1. Payment shall be made for all activities associated with completing the work detailed in the Specification in accordance with Pay Items C273(a) to C273(d) inclusive.
2. A lump sum price for any of these items shall not be accepted.
3. If any item for which a quantity of work is listed in the Schedule of Rates has not been priced by the Contractor, it shall be understood that due allowance has been made in the prices of other items for the cost of the activity which has not been priced.
4. Notwithstanding any general statements to the contrary that may be made elsewhere in this Specification, in the context of landscape works all areas shall be measured in the plane of the surface and thicknesses specified shall apply perpendicular to the surface.
5. Erosion and sedimentation control measures are measured and paid in accordance with the Specification for CONTROL OF EROSION AND SEDIMENTATION.
6. Topsoil stockpiling is measured and paid in accordance with the Specification for EARTHWORKS.

#### Pay Item C273(a) VEGETATION OF SLOPES 3 TO 1 OR FLATTER

1. The unit of measurement shall be the square metre.
2. The schedule rate shall cover all costs associated with the vegetation of such areas, including surface preparation, topsoiling, sowing and/or turfing, and watering.

#### Pay Item C273(b) VEGETATION OF SLOPES STEEPER THAN 3 TO 1

1. The unit of measurement shall be the square metre.
2. The schedule rate shall cover all costs associated with the vegetation of such areas, including surface preparation, topsoiling, and as appropriate hydroseeding, hydromulching and/or straw mulching, and watering.

#### Pay Item C273(c) VEGETATION OF OPEN DRAINS

1. The unit of measurement shall be the square metre.
2. The schedule rate shall cover all costs associated with the vegetation of such areas, including surface preparation, topsoiling, sowing, surface protection by bitumen emulsion spraying, lining and/or turfing as appropriate, and watering.

#### Pay Item C273(d) LANDSCAPE PLANTING

##### Pay Item C273(d)(i) Provision of Mulched Bed for Mass Planting

1. The unit of measurement shall be the square metre.
2. The schedule rate shall cover all costs associated with the preparatory work of the mulched bed before planting.



**Pay Item C273(d)(ii) Mass Planting**

1. The unit of measurement shall be `each' plant.
2. The schedule rate shall cover all costs associated with the planting in the mulched bed and subsequent care of each plant.

**Pay Item C273(d)(iii) Individual Planting**

1. The unit of measurement shall be `each' plant.
2. The schedule rate shall cover all costs associated with the preparatory work, planting and subsequent care of each plant.

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## ANNEXURE C273A

### LANDSCAPING MATERIALS (SAMPLE ONLY - TO BE COMPLETED BY COMPILER)

MATERIAL	TYPE	MINIMUM APPLICATION RATE
1. HERBICIDE *	'Roundup'	9 litres/200 litres water/ha
2. SEED		Sewing Rate kg/ha
a) Grass	Cynodon	25 – 30
	Dactylon	
	Digitaria	>10
	Didactyla	
	Borhriochloa	10 – 20
	Petusa	
	Legumes	
	Stylosanthes	3 – 10
	Hamata	
	Buffalo Clover	3 – 10
b) Trees		Mature Height
	Townsville Wattle	5m
	North Coast Wattle	7m
	Irvinebank Wattle	4-5m
	"Qld Silver" Wattle	3-5m
	Golden Wreath Wattle	4-5m
	Acacia simsii	3-5m
	Wild May	3m
	Red Bauhinia	3m
	Purple Orchid Tree	5m
	Illawarra Flame Tree	12m
	Broad Leaved Bottle Tree	15m
	Yesterday-Today-Tomorrow	3m
	Ivory Curie	10m
	Leopard Tree	15m
	Red Powder Puff	4m
	Crimson Bottle Brush	5m
	Sandy Soils	4m
	Swamp Bottle Brush	2m
	Red Bottle Brush	5m
	White Bottle Brush	5m
	Weeping Bottle Brush	8m
	Gardenia	3m
	Weeping Tea Tree	3m
	Leptospermum Flavescens	3m
	Lemon Scented Tea Tree	3m
	Braclet Honey Myrtle	6m
	River Tea Tree	8m
	Paperback	6m
	Snow in Summer	10m
	Vivid Flower Tea Tree	15m
	Evodia Butterfly Tree	8m
	Mock Orange	3m
	Pittusporum venulosum	8m

MATERIAL	TYPE	MINIMUM APPLICATION RATE
	"Beach Cherry"	2.3m
	Green Trumpet Tree	10m
	Pink Trumpet Tree	10m
	Golden Penda	8m
	Swamp Bloodwood	10m
	Clumping Palm	8m
	Lillipilli	10-15m
	Macaranga tanarius	6m
	Cassia biflora	4m
	Livistona drudeii	20m
	Grevillea spp	4-6m
3 FERTILISER *		
(a) Vegetation of Slopes/Drains	Dynamic Lifter 'Nitro'	1000 kg/ha
(b) Landscape Planting	'Kokei' pellets	Refer Table C273.2
4. WETTING AGENT *	'Aquasoil'	1 litre/1000 litres of mix water
5. PESTICIDE *		
(a) Liquid	'Lorsban 500 EC'	5 litres
(b) Powder	'Lorsban 250 W'	10 kg
6. ORGANIC FIBRE MAT *	'Sta-firma' (light grade)	-
7. MULCH	Composted/Pasteurized	100mm thick
* Material shall be as listed or equivalent as approved by Council.		

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