

EASTERN HORIZONS

LANDSCAPE SPECIFICATION FOR DEPARTMENT OF HOUSING AND WORKS RETAINED PROPERTIES

October 2002

LANDSCAPE SPECIFICATION

1. ADDRESS OF PROJECTS

As shown on the applicable drawings provided.

2. GENERAL CONDITIONS

The work is to be carried out under the supervision of and to the entire satisfaction of the Commission's Landscape officer or his representative.

3. PLANS AND SPECIFICATIONS

The plan is issued as a guideline for the contractor. The contractor is to inspect the site prior to quoting to ensure that he is familiar with the extent of the works, the accuracy of plans and any problems peculiar to the site. All enquiries are to be referred to Gerard Healy (9250 7277) before submission of the quote.

4. ACCEPTANCE OF QUOTE

The Commission reserves the right to accept any quote submitted by Contractors. The lowest or any quote may not necessarily be accepted.

5. TIME OF COMPLETION

All works as shown and specified are to be completed within four weeks.

Time is the essence of the contractor and the ability to complete the work in the specified time will be taken into account when selecting the contractor.

6. INSURANCE

The contractor is required to, during a period of the works, keep the following insurances current:-

- a) Insurance against liability and claim of every kind, with respect to the Workers Compensation Act 1912 and all amendments thereto.
- b) Contractors to effect an "Annual Public Liability Policy for State

Government Work”, for persons and property to the extent of \$1,000,000 policy with an approved insurer.

7 DAMAGE AND PROTECTION

The Contractor is to protect all building retaining walls, embankments, roads, kerbing, paved areas, underground services, drains, pipes, etc. from damage. The Contractor is to be responsible to the appropriate Authority for the protection of all water, gas, electricity and telephone services and is to make good any damage there to at his expense.

The Commission reserves the right to withhold any payments until such damage is made good.

8 COMMENCEMENT OF WORKS

The Contractor is to personally notify the Landscape Officer or his representative at least forty eight (48) hours before intention to start work.

No works will be commenced until approval has been given.

9 COMPLETION OF WORKS

The Contractor is to accompany the Landscape Officer or his representative on final inspection of the works.

A minimum of forty eight (48) hours notice is to be given to the Landscape Officer or his representative prior to the time of final inspection.

All works embraced in the specifications and shown on the drawing(s) are to be completed in a workmanlike manner. Paths are to be swept clean and the site left in a clean and tidy condition.

Failure to complete the works within the stipulated time will result in Liquidated Damages of \$200.00 per day (excluding Sundays).

10 SCHEDULE OF WORK

The work shall be carried out with the minimum of obstruction and inconvenience to all users of the site. Once work has started, the Contractor shall work the site continuously until the Contract is complete unless he informs the Landscape officer of his intentions to suspend operations.

The Commission reserves the right to suspend work for any period for any reason. In this event the quoted price may be reviewed.

11 SUNDAYS AND PUBLIC HOLIDAYS

No work will be permitted to be done on any Sunday or Public Holiday except with the permission of the Landscape Officer.

12 EARTHWORKS

The Contractor is responsible for any earthworks shown on the drawings or described in the Addenda, unless otherwise directed.

Finished levels are to be:-

- a) 30mm below paths, kerbs, slabs, etc.
 - b) At least on brick course below the damp proof course on buildings.
 - c) Level with the height of bitumised driveways.
- Finished levels are to be free of undulations, irregularities and wheel ruts.

The Contractor is to supply any filling that is considered necessary to establish the required levels.

All filling is to consist of good clean top soil free from clay material and other impurities.

Any embankments are to be graded to an even slope with a maximum gradient of 1:4.

Excess soil is to be spread evenly over the site or removed.

All rubbish is to be removed from the site to an authorised dumping

13 NATURAL VEGETATION

The Contractor is to liaise with the Landscape Officer prior to the removal of any existing vegetation from the site.

14 GRASS RUNNERS

The areas indicated on the drawing shall be planted with Couch grass (*Cynoden dactylon*) runners.

All road verges will also be included in the grass works.

Prior to planting the area is to be cleared of all rubbish, rubble, stones, roots, sticks etc.

Grass runners shall be planted fresh within twenty four (24) hours of being dug, kept constantly moist and free from insect pests, fungus or weeds.

The area to be planted shall be moist to a depth of 100mm before planting and all planted sections will be kept continually moist during and up to completion of the contract. The Contractor will spread sufficient grass runners to form a continuous interlocking mat. Spaces between runners shall not exceed 150mm in any direction.

The area is to be rotary hoed to a minimum depth of 150mm and runners are to be provided with a minimum of 50mm soil cover.

The area shall be lightly rolled to produce an even level surface free of wheel marks, bumps, other irregularities, stones, sticks, rubble etc.

15 TURF GRASS

Provide roll on grass 'Green leas Park' couch to all areas shown on the drawing.

Prior to planting the area it shall be cleaned of all rubbish, rubble, stones, roots, sticks, etc. clear of irregularities, depressions, hollows, abrupt changes in grade or falls will be accepted.

Supply and apply a base dressing of AGRAS plus trace elements (or equivalent approved) at a rate of 250Kg/ha. The roll on lawn shall be freshly cut within 24 hours, healthy and free from pests, diseases and weeds. Store, transport and lay the rolls as recommended by the turf farm on the same day they are delivered. Lay the lawn to provide full coverage, roll and compact, top dress with yellow sand to provide a level even surface without depressions and ridges. Allow to fertilise and water.

Thoroughly water and roll turfed areas to produce true even grades and falls free from wheel marks, waves, depressions and other irregularities.

16 PLANTS

Contractor is responsible for the supply of all trees and shrubs as shown on the drawings unless otherwise directed in the addenda.

All plants selected are to be the best available through registered plant nurseries. The Landscape Officer or his representative has the right to reject all or any plants which do not meet the desired standard.

All plants to be delivered to the site will be tagged to indicate correct botanical classification.

Plants will be supplied in container sizes as indicated on the drawings. Plant species may only be substituted with the prior approval of the Landscape Officer.

17 PLANTING

All plants are to be removed from containers in such a way as to cause as little as possible disturbance to the roots. No root bound plants will be acceptable.

Plants are to be placed in a hole dug to a depth of 100mm deeper than the size of the container.

An 800mm depression is to be created depression is to be created around the plant ensuring that all roots are covered with soil.

The placement of trees is to have regard for overhead power lines.

All trees/shrubs in grass areas to have plastic stem protectors fitted.

18 STAKING AND TYING

All trees and large shrubs are to be supported with a 2.0m long 50mm x 50mm pointed square jarrah timber stake.

All shrubs, which are considered to require support, are to be staked with 1.2m long 20 pointed square jarrah timber stakes.

Stakes are to be driven firmly into the soil ensuring that the plant roots are not damaged.

The stake is to be placed on the prevailing wind side of the plant.

Plants are to be tied with durable non-abrasive plastic tubing secured tightly to the stake and loosely to the plant stem.

19 WATERING IN

Each plant will be thoroughly hand watered at the time of planting, receiving a minimum of 4.5 liters each second day up to the completion of the contract.

20 GARDEN AREAS –SHRUBBERIES

All areas which are designated in the drawings for shrub planting are to be leveled out to:-

- a) 100mm below grassed areas.
- b) At least one brick course below the damp course on buildings.
- c) Level with the height of bitumised driveways.
- d) 50mm below mowing edges

All weeds, rubbish, rubble and other foreign materials are to be removed and the area raked clean.
Soil improver mix to be added to all garden beds 50mm thick and dug in.

21 MOWING EDGES

Mowing edges will be constructed as shown on the drawings.

Concrete to be mixed in the proportion of 1 part cement to 3 parts sand, 5 parts 9mm granite aggregate.

Dimensions for the mowing edge are :- width 100mm, Depth 135mm.

The Contractor is to ensure uniform width, continuity of shape and smooth surface finish of concrete.

Expansion joints are to be included every 6 meters.

22 FERTILISATION

All plants to be fertilized with "Osmocote 280" applied as a surface dressing and fertilised with pelleted fowl manure.

All lawn fertilised with a slow release fertiliser & applied to the manufactures specified rate.

23 MULCHING

All garden areas are to be covered with Peat and Pine mulch to a minimum thickness of 100mm. Any other substitution requires approval of the Landscape Officer or his representative.

The finished level of Peat and Pine Mulch is to be just below the level of footways and kerbs.

24 SPRAYING

Any weeds in the designated garden areas are to be poisoned, using a suitable poison (Glyphosate 360GL) prior to the commencement of work and completely removed.

25 LIMESTONE WORKS

GENERAL

Standards

Materials and workmanship shall comply with the following standards unless otherwise specified:

- * AS 1315 Portland Cement;
- * AS 1316 Masonry Cement;
- * AS 2758.1 Concrete Aggregate;
- * AS 1672 Building Limes; and
- * AS 2701 Methods of Sampling and Testing Mortar for Masonry Construction.

LIMESTONE

Stone shall be sound, free from shakes, cracks, vents, pockets, veins, fissures, and other like defects. Limestone shall have a density not less than 1600 kg /m³. Limestone shall be either tungsten or diamond cut, to the sizes and position indicated on the Drawings and palletised for delivery to site. Blocks shall be sizes as shown on the drawing.

Stone shall be stored on site clear of the ground on pallets and the stacks shall be covered with a waterproof cover to prevent wetting.

MORTARS

General

Mortars shall comply with AS 3700 –1988 and be used within 30 minutes of initial Adding of water.

Materials for Mortar

fine aggregate shall be sand;

- water shall be clean and of drinking quality; and
- colouring pigments shall be metallic oxides insoluble in water.

Do not use admixtures unless specified. When specified, use admixtures strictly in accordance with the manufacturer's recommendations.

When coloured mortar is specified, mix colouring pigments with the cement and use fine aggregates compatible with the colour required.

Mortar Mixing

Measure parts in mixes by volume in calibrated devices.

Thoroughly mix any colouring pigments with the cement before adding other ingredients.

Mechanically mix mortar to an even colour and consistency.

Mortar Mixed

Mix mortar in the proportions as follows:

- 1 part ordinary Portland cement,
- 1 part lime putty, and
- 6 parts fine aggregate.

Coloured Mortar

Mortar in face stone work to be cream mortar matching limestone blocks to the approval of the Superintendent.

WORKMANSHIP

All stone work shall be carried out by tradespersons experienced in limestone work.

Provided all accessories and perform all operations necessary for the proper execution of first class masonry work, including selecting, cutting, dressing, carving, bedding, setting, fixing, pointing, grouting, caulking and the like.

Build where indicated and as necessary, all reinforcements, ties and the like.

Cut openings, chases, mortices and the like for other services and fixings. Well wet down stone which is to be laid or grouted in cement mortar.

Use non-staining softwood wedges or lead or plastic buttons for positioning stones.

Set work out plumb, level and properly bonded, with no part rising more than 1000mm above adjacent unfinished work.

Corners and other advanced work shall be raked.

Re-lay in fresh mortar any stonework which has been moved or jarred after initial laying.

COURSING AND BOND

Stonework shall be to face sizes shown on Drawings and shall consist of carefully cut and dressed stone with even joints unless otherwise shown on the Drawings.

Stone shall be selected on site to ensure that only clean, square edges are visible in top course and facework.

All edges shall be kept true and straight, with jointing running horizontally and vertically and finished to dimensions indicated.

JOINTS

Form joints uniformly in facework, filled solidly with mortar, finished flush with surfaced and finished with clean, straight edges against the stone, not spread over surface. Mortar to be struck jointed with a trowel to match existing jointing.

The top course of the wall shall have flush joints on the top surface.

Do NOT fill minor chips or hollows in stone of facework with mortar.

Joint thicknesses shall be 15mm.

STANDARD OF FINISH OF SAMPLES

Erect one wall, including top course, and obtain the Superintendent's approval before building other walls.

LIMESTONE WALL FOOTINGS

Compaction of Sub-grade

Ground under walls shall be compacted and checked with a falling weight penetrometer to not less than 8 blows per 300mm to depth of 750mm. The Penetrometer shall consist of a 9kg mass, falling 610mm on 16mm diameter rod.

Ducts and Conduits

Provide ducts and conduits as necessary through walls to accommodate the requirements of the irrigation system and any other services.

CLEANING

Upon completion, clean down all new work, and adjoining surfaces where necessary, by appropriate methods, which shall be subject to the Superintendent's approval.

PROTECTION OF FINISHED WORK

Clean off mortar drippings and the like as soon as they occur. Protect all finished stonework from staining or damage. Use sheeting or casing where necessary.

Do not use hardwoods in contact with stone.

Stained or damaged stonework shall be replaced, not repaired, unless otherwise permitted by the Superintendent. Similarly protect adjoining surfaces during masonry work.

26 IRRIGATION

Following installation the contractor will supply and install a fully operational reticulation system.

The construction of the irrigation system shall include all necessary labour, plant, tools, transport and materials for the proper installation and operation of the system.

Areas to be watered include all grass and shrub areas.

For Grouped developments:

The contractor is to supply and install the 'Richdile 476' six station controller in a lockable cabinet securely fixed to a galvanised pole in the location shown. Locks for the cabinet shall be D key lock (night latch type lock). It is the Contractor's responsibility to programme the automatic reticulation and to reprogramme at the expiration of 30 days. The initial programme is to allow for 20 minutes per station in the middle of the day and one other watering outside of the "watering restrictions" period.

For Single houses/units:

The Contractor is to supply and install a tap timer with 6 stations 24hours/7days Hardie/Pope or similar approved. Tap to be fitted with 'T' piece (manual operation).

Design Specifications:

Precipitation: The design shall provide for a minimum of 40mm precipitation per week throughout all sections of the irrigation system.

Sprinkler Placement: Sprinklers shall be placed no further apart than the distance recommended by the manufacturer according to the pressure and volume of water available.

Verge Watering: Overspray onto roads is not permitted. In verge areas sprinklers shall be installed along the kerb facing back towards the property. All verge sprinklers to be fitted with a concrete collar (300mmdiameter x 90mm thick minimum)

Shrub Beds: Sprinklers installed in shrub beds abutting paths and driveways shall be pop up type so as to minimise vandalism and prevent the public and tenants from tripping on them.

Separate Stations: Lawn and shrub beds areas shall be on separate stations.