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SPECIFICATION AND SCHEDULE OF PRICES FOR:

Construction of car parking areas at
Tinwald Domain, Tinwald.

Contract Number.....

Tenders close noon.....

Deposit with tender.....

A Research Study
submitted in partial fulfilment
of the requirements for the
Diploma in Landscape Architecture
at Lincoln College
in the
University of Canterbury

By

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November

1973

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PART A CONDITIONS OF TENDER

One - STANDARD CONDITIONS OF TENDER

The Conditions of Tender for this Contract shall be Parts 1 and 2 of the Conditions of Contract NZSS 623:1964 (printed) together with the following amendments and additional clauses.

Two - AMENDMENTS TO PART 1

Clause 1.1. The word "Engineer" shall be amended to read "Landscape Architect".

The word "Principal" shall be read as the "Tinwald Domain Board."

Three - ADDITIONAL CLAUSES

1 Interpretation of Specification

Should there be any doubt as to the meaning or interpretation of any of the documents comprising the contract, the tender must set forth such doubt in writing and submit the same with the tender, together with a clear indication of what is provided for in the tender.

2 Variations to Specification

Unless otherwise stated in the tender, the tenderer will be assumed to have accepted without reservation or amendment the whole of the specification. If the tender is conditional upon any amendments to the specification the original contract will not be made, but the Tinwald Domain Board may, at their discretion, offer a new contract incorporating the said changes.

3 Accuracy of Tender

The Tinwald Domain Board accepts no responsibility for the arithmetical or other accuracy of any tender. Should it transpire after the contract has been let that there are arithmetical mistakes in the accepted tender which would have increased the total amount of the tender, the contractor shall not be entitled to any payment in respect of such mistakes.

Four - WITHDRAWAL OF TENDER

Should any tenderer withdraw his tender after tenders close, then the amount of deposit accompanying the tender may without prejudice to any other rights or remedies of the Tinwald Domain Board be forfeited absolutely to the Board as for liquidated damages.

Five - TENDERS TO BE ON THE OFFICIAL FORM

Tenders shall be submitted on the Official Form of Tender and shall be accompanied by the Official Schedule of Bill of Costs, both duly completed by the Tenderer and signed, sealed, and delivered to the Tinwald Domain Board Secretary no later than 4 p.m. on the day of, 1974.

Six - VALIDITY OF TENDERS

Tenders shall remain valid for a period of days immediately following the date of the closing of tenders.

Seven - BILL OF COSTS

Tenderers shall submit with their tender a copy of the Bill of Costs duly priced and completed in all respects.

PART B SPECIAL CONDITIONS OF CONTRACT

(Modifying or Extending the General Conditions of Contract as published in NZSS 623:1964 and subsequent amendments).

One - NATURE, LOCATION, AND EXTENT OF WORK

This is a lump sum contract for the construction of a depressed car parking area situated to the North west of the Domain Lake, labelled carpark B3 on Drawing 6 of the Folio. The surface area is approximately 0.5 hectares, and total excavation volume approximately 2400 cubic metres.

Resurfacing with topsoil on areas to be grassed, and provision and laying of appropriate quantities of local shingle for compacted road areas is also to be done.

The work is to be carried out in accordance with the provisions of the contract documents which include:

- (a) The Conditions of Tenders, and General Conditions of Contract for Building and Civil Engineering Construction (being New Zealand Standard Specifications Number 623:1964) a copy of which is available for inspection;
- (b) These Conditions of Contract;
- (c) The Specifications;
- (d) Drawings, or part drawings from, number 6, 7, and 8 of the Folio;
- (e) The schedule of Quantities.

Two - SCHEDULE OF QUANTITIES

The contractor shall submit a complete schedule of quantities and prices showing how the lump sum has been calculated. Any alterations or additions will be based on these prices. The contractor is required to verify for himself the accuracy of the schedule, and any items not scheduled or wrongly scheduled but required for the completion of the works must be inserted.

Documented evidence of actual earthwork and/or material quantities must be provided with any claims for extra payment.

Three - THE SITE

Tenders shall inspect the site and make themselves conversant with it and verify the conditions regarding the contract, including ground levels, bench mark, and dimensions, before submitting a tender.

The contractor shall use only such means of access to the site as the Landscape Architect of the Tinwald Domain Board shall approve, and shall confine stockpiling of soil and other materials to those areas delineated on the site by that Landscape Architect.

Four - COMPLETION

At the completion of each part of the job, the site shall be left free of rubbish, and generally clean and tidy before being handed over to the next contractor, or to the Landscape Architect.

Five - DRAWINGS

The appropriate sections of the 3 drawings indicated shall be read in conjunction with this specification, and anything shown on the drawings and not specified, and vice versa, shall be equally binding as though included in both.

The drawings shall be held to illustrate the general character of the works and parts not particularly detailed shall be constructed in accordance with the best trade practice for the type of work concerned.

Six - DIMENSIONS

Figured dimensions on scaled drawings shall take preference to scaled dimensions, and large scaled drawings shall be given preference to smaller scaled drawings.

Seven - PERMITS, LICENCES, AND FEES

All permits, licences, and fees necessary for all portions of the work shall be obtained and paid for by the Contractor, and he shall comply with the appropriate requirements of the Ashburton County Council.

Eight - INSURANCES

In addition to the policies required under the General Conditions, the Contractor shall effect a "Public Risk" policy of \$..... indemnifying himself in respect of accidents to persons other than his employees or members of his family, so that the Tinwald Domain Board is fully protected from any claims arising from operations under his contract.

Nine - TEMPORARY SERVICES

The contractor shall make arrangements for, and provide and pay all fees for all temporary services necessary for carrying out the works.

Arrangements for a site for a temporary toilet must be discussed with the Landscape Architect.

Ten - DAMAGE

The contractor shall be responsible for, and shall make good at his own cost, any damage to existing trees that are to remain. Those trees to be retained within the area of contract works shall be protected by erecting a wire fence one metre high, and at least one metre out from the trunk perimeter.

Should, due to the type of excavation necessary, any tree require limbing to allow movement of equipment, the contractor shall immediately notify the Landscape Architect and shall carry out his instructions in accordance.

Eleven - VARIATIONS

No extra charge will be payable unless ordered in writing by the Landscape Architect; - any verbal instructions are deemed to be instructions for the proper execution of the work, not involving extra charges.

Twelve - MATERIALS AND WORKMANSHIP

All materials and workmanship shall comply with the appropriate N.Z.S.S. All workmanship shall be carried out in accordance with best trade practice.

Thirteen - PROGRESS PAYMENTS

The contractor shall submit a monthly claim in accordance with the schedule of quantities for the work done during the month.

Progress payments shall be made monthly on the certificate of the Landscape Architect and retention monies will be withheld in accordance with the Wages Protection and Contractors Liens Act, 1939, and subsequent amendments.

50 per cent of the value of all materials on the site intended and required for inclusion in the works may be included in each payment.

Fourteen - EXPEDITION OF WORKS

Work shall commence early enough so that the contractor's particular section of the work may be finished by the date specified under the appropriate section.

The contractor shall take note of all foreseeable holdups, and allow a suitable safety margin for unforeseen difficulties.

Fifteen - ARTIFACTS

Any artifacts discovered in the course of the work are to be placed in safe keeping and reported immediately to the Landscape Architect.

PART C TECHNICAL SPECIFICATIONS

(General conditions and conditions of Tender shall be read as they apply to each particular trade.).

SECTION ONE - EXCAVATOR

One - EXTENT OF WORK

Excavate car park area smoothly, provide material and form roading pattern.

Spread topsoil over areas to be grassed down.

Two - TOPSOIL REMOVAL

All topsoil and turf shall be removed first over the entire excavation area before deeper work commences. The topsoil removed is to be stock-piled in a position close to the area of excavation, delineated by the Landscape Architect, such pile not to exceed two metres in height. This topsoil to be used later for resurfacing the light grey area shown on drawing 7, for placing in tree-planting pots by the Landscape Contractor, and surfacing the mounds in the childrens play area.

Subsoil and material not considered by the Landscape Architect to be suitable for re-use shall be stockpiled directly to the North of the lake in a position specified by the Landscape Architect for later use in the childrens play area.

Three - FORMATION

This shall consist of the development of the area to the levels shown on the plan (Drawing 7). These levels are based on the drainage direction arrows all having a finished grade of 1 vertical in 50 in the direction shown.

The maximum depth from present is to be 0.5 metres (or approximately 1.7 feet as is shown on the drawing).

Four - ROAD BASE

Provide and lay approved mixture of sand and gravel (1:4 by volume), with maximum gravel size to be 40 mm.. Level to desired gradient, water if necessary and roll to a compacted thickness of

100 mm with a 500 kg vibrating roller.

Cover the base with fine material (maximum size 10 mm) and again water if necessary and roll to a compacted thickness of 15 mm with a 500 kg vibrating roller.

Width of base and fines to be 6.0 metres (20' on drawing 7) but compressed only in the centre 4.5 metres with the vibrating roller to full compaction. The remaining 0.75 metres on either side of the roading areas shall be compacted by 1 pass only of the roller on the base, and 1 pass only of a 250 kg vibrating roller on the fines. This is to ensure that a grass cover can grow some way towards the compacted road, and can cover the drainage swale for stabilisation and appearance.

Five - SLOPES INTO EXCAVATION

The side slopes into the excavation shall not exceed a gradient of 1 vertical in 15, and shall smoothly follow the natural lie of the land and smoothly fit into the extremities of the central earth shaping.

Six - SPOIL FROM EXCAVATION

Spoil from the excavation shall be transported to the site of the mounds in the childrens play ground, which should be taken as approximate on the drawing only.

The Landscape Architect will make any adjustments necessary in the placing or positioning of the excavated material to produce a pleasing artificial landform smoothly relating to the natural landform and proposed tree plantings.

Final adjustments will be done by the Landscape Contractor under the guidance of the Landscape Architect.

Seven - REPLACING TOPSOIL

Stockpiled topsoil is to be evenly spread over the areas to be grassed and sufficient allowed for settling such that the final grade is that of the levels as indicated on drawing 7.

The minimum depth of spread topsoil is to be 150 mm.

Eight - DEFECTS LIABILITY

The period during which the Contractor shall uphold the work against any defects due to faulty workmanship or materials, to the satisfaction of the Landscape Architect, shall be months from the certified date of completion of the works.

SECTION TWO - LANDSCAPE CONTRACTOR

One - EXTENT OF WORK

Supply and sow grass seed as specified.

Supply and plant trees as specified.

Supply and position log bollards as shown, and fill between log bollards for pedestrian access where indicated.

Two - MATERIALS

The Landscape Contractor shall provide documented evidence that the grass seedmix is of the quality and type specified. Plant material shall be of quality and size to the satisfaction of the Landscape Architect.

Three - TREE PLANTING

The whole of the planting is to be carried out during the month of April 1974.

Trees are to be supplied as named varieties shown on plan. Deciduous trees are to be supplied on minimum two metre clean straight stems of 40 millimetre minimum diameter with well formed heads. Evergreen trees are to be supplied 1.5 to 2.0 metres overall, and well formed.

All plants are to be healthy, transplanted or pot grown container stock with vigorous sound root systems true to type and size.

The Landscape Architect has the right to reject any plants which do not meet the specification. In the case of difficulties in acquiring any of the trees at the size or condition mentioned, trees other than those specified may be accepted at the Landscape Architects discretion, but not without his written authority.

Trees to be planted in the positions and numbers as shown on plan, so disposed that no three are in line unless otherwise instructed.

Immediately on receiving trees, the Landscape Contractor shall take all necessary steps to ensure they are adequately protected from sun and wind and are kept adequately moist. All tree holes shall be to a depth of at least 600 mm., be one metre square, and have the bottom adequately forked over.

Material for backfilling is to be selected from the topsoil stockpile and retained before the Excavator spreads and levels it over the areas to be grassed in the car park.

Backfill shall be firmed thoroughly during the planting process and the tree shall be set to the depth at which it grew in the nursery and with an approved stake and tie method.

Any pruning necessary to improve the shape of the tree must be discussed with the Landscape Architect before work is commenced.

Four - STAKING

Stakes shall be of tanalised pine, with a minimum preservative retention rate of .64 lb/cubic foot.

Each stake shall be stout, straight, and free from defects, of square cross section 50 mm to an edge. A clear height of 2.2 metres will project above ground, and there shall be a minimum of 0.8 metres below ground.

In the case of deciduous trees, stakes shall be driven into the hole before planting. Evergreen trees are to be staked after planting using a diagonal stake.

The tie method used is not specified exactly, but it must have part between the trunk and the stake, not injure the trunk, and be secure yet capable of easy removal, or allow for at least a 50% trunk diameter expansion.

Five - SOWING DOWN

Once the Excavator has finished spreading topsoil, scarify all compacted areas to be grassed, and prepare ground to a suitable tilth for sowing.

Minor adjustments of level to remove possible ponding areas and to adjust to those on plan may be necessary. Cultivated areas shall be firmed, and contours inspected by the Landscape Architect to be to his satisfaction before further work is done. Suitable protection fencing is to be erected around the area and grass seed sown at a

rate of 11.0 gms/square metre, together with the specified fertiliser at the same rate. (Both mixtures are by weight). The area is then to be lightly raked.

Grass Mix

- 2 parts best Browntop
- 3 parts best Chewings Fescue
- 4 parts best Perennial Ryegrass,
- 2 parts best White Clover.

A dessicant-type herbicide is to be applied two days before sowing the seedmix, at the manufacturers recommended rates.

Fertiliser Mix

- Ammonium Nitrate - 3 parts
- Potassium Chloride - 1 part
- Super Phosphate - 5 parts

Once the Landscape Contractor is satisfied that the newly established sward is tough enough for limited use, he shall remove the protection fencing and reinstate as necessary.

Six - WATER

The Landscape Contractor shall ensure that an optimum soil moisture content is reached over all sown down areas and around tree plantings.

This is to continue, by irrigation if necessary, to comply with the next clause on maintenance.

Seven - MAINTENANCE

When the grass has grown 100 mm high it shall be cut avoiding root pulling to approximately 30 mm in height. It shall be cut again after a further 25 mm growth, and thereafter shall be cut approximately 8-10 times per season using a gang mower where possible and a mechanical rotoscythe in areas inaccessible to the main mowers.

It shall be maintained to establish a reasonable cover of the specified mixture free of weed to be handed over in good clean and tidy conditions.

The Landscape Contractor shall allow for spraying the whole area with a selective herbicide at a rate recommended by the manufacturer at a date agreed upon with the Landscape Architect. If this

application is not required the Tinwald Domain Board is to be credited with the cost of the operation.

Any sinkage below the specified levels during the contract period shall be rectified.

Eight - LOG BOLLARDS

Supply and erect log bollards as shown, in positions as shown on the relevant drawings.

Nine - DEFECTS LIABILITY

The period during which the Contractor shall uphold the work against defects due to faulty workmanship or materials to the satisfaction of the Landscape Architect shall be months from the certified date of completion of the works.

PART E COSTING

(It should be noted that the following quantities are the estimated quantities of the work, and are not to be taken as the actual and correct quantities of the work to be executed by the Contractor in fulfilment of his obligations under the contract).

SECTION ONE - EXCAVATOR

ITEM AND DESCRIPTION	QTY.	UNIT	RATE	SUB-T.
1. Allow for complying with all conditions of contract.	-	1.s.	-	\$ 100.00
2. Allow for all setting out and survey work	-	1.s.	-	\$ 150.00
3. Excavate and deposit topsoil where indicated	1,000	cubic yards	0.23	\$ 230.00
4. Excavate and deposit subsoil where indicated	2,200	cubic yards	0.23	\$ 506.00
5. Form roading base	6	hours	23.00	\$ 138.00
6. Supply and form road surface	40	cubic yards	3.80	\$ 152.00
7. Re-spread topsoil where indicated, form to indicated levels and firm	700	cubic yards	0.23	\$ 161.00
8. Contingency figure at 10%	-	-	-	\$ 144.00
9. Allow for any other item				
TOTAL				\$1581.00

CARRY TO SUMMARY

SECTION TWO- LANDSCAPE CONTRACTOR

ITEM AND DESCRIPTION	QTY	UNIT	RATE	SUB-T.
1. Allow for complying with all conditions of contract	-	1.s.	-	\$ 250.00
2. Allow for all setting out and survey work	-	1.s.	-	\$ 100.00
3. Plant trees as specified	160	No.	\$12.50	\$2000.00
4. Sow down and reinstate area after preparation	-	1.s.	(say)	\$ 700.00
5. Supply stakes as specified	180	No.	0.20	\$ 36.00
6. Supply railway spikes	360	No.	0.15	\$ 54.00
7. Erect bollards as specified	90	No.	\$ 2.85	\$ 256.50
8. Allow for maintenance over period specified	-	1.s.	(say)	\$ 400.00
9. Contingency figure at 12 $\frac{1}{2}$ %	-	-	-	\$ 379.00
10. Allow for any other item				
TOTAL				\$4175.50

CARRY TO SUMMARY

SECTION THREE - SUMMARY

SECTION ONE - EXCAVATOR	\$ 1581.00
SECTION TWO - LANDSCAPE CONTRACTOR	\$ 4175.50
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TOTAL ESTIMATED TENDER PRICE	\$ 5756.50
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