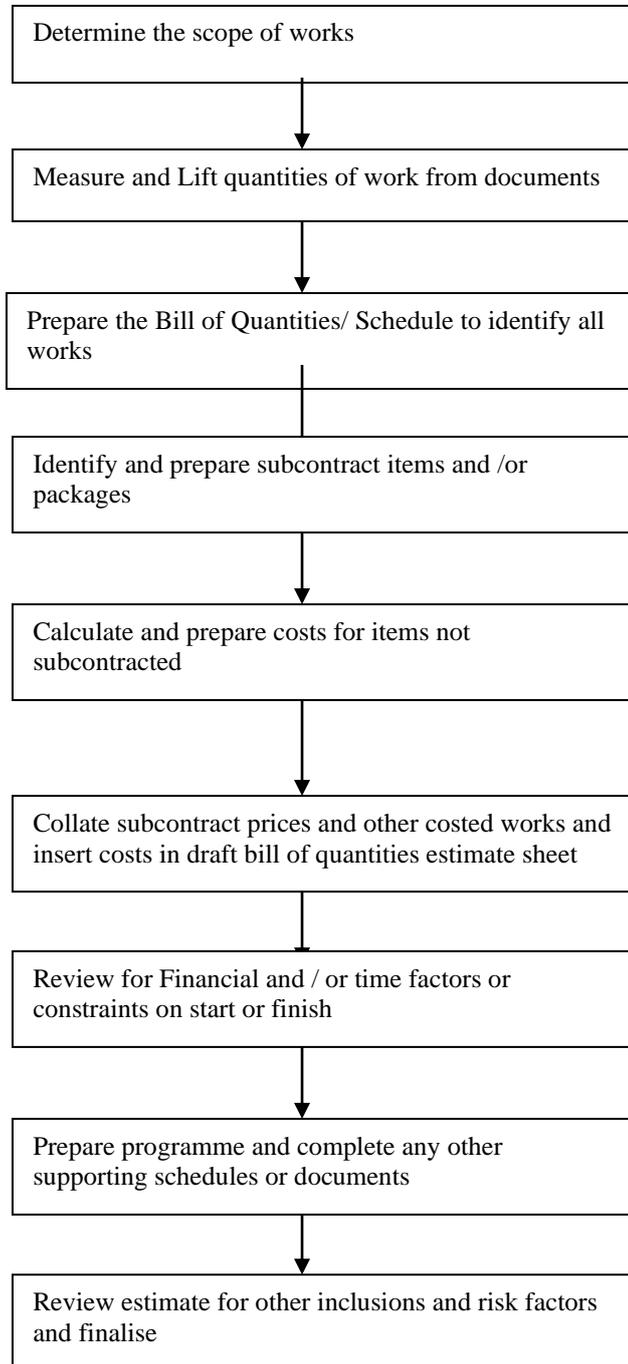




THE GARDENMAKERS

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THE PROCESS OF ESTIMATING





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Topic : The Process of Estimating.

The process of estimating is a logical series of steps undertaken to determine the full extent of works that are being priced and applying the appropriate profit, overhead and administrative costs to the estimate as well as analyzing the degree of contractor risk which will differ from task to task in some jobs and certainly will change from project to project.

There are 2 approaches used

1. A rates basis using published guides
2. Calculation from first principles by compiling costs using estimates of labour, materials and incidentals to formulate overall cost and then dividing back by the required units of qtys to determine a rate.
3. Published guides are indicative only and can be as much as 100% too high or 100% too low in individual jobs and should be used with care and examination of site factors.

Step 1 : Determine the Scope of Works

The scope of works is simply the full extent of activities required in the tender documents or clients brief. For instance, the drawings may indicate a retaining wall to be built. For the wall to be built a number of individual tasks are required –

*demolition of a possible existing structure,
bulk excavation to a level from which the detailed footing excavation can occur
maybe temporary propping or shoring,
formwork for the footing,
place reinforcing steel,
pour concrete,(Is a pump required?)
construct wall
backfill including drainage and what about Waterproofing?*

Since the items identified on the plans may require a number of sub tasks to enable them to be completed it is useful to prepare an estimate summary page indicating the major items of work and then providing space for sub categories for listing of each task within an item. This can be in the form of a checklist that you develop as you build up a repertoire of estimates.

Generally the items of work are listed in the order or likely sequence of works on site.

E.g.

Set out and Site Establishment

Herbicide spraying, weed and tree removal and demolitions

Excavations-“ bulk” then detailed for individual elements

Drainage and Services to be buried

Footings and basecourses

Structural elements – walls, sheds, pergolas, decks, water features etc.

Cultivation and soilworks incl soil additives



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*Applied finishes – mulch, turf, paving, planting
Irrigation, Lighting
Maintenance*

In order for the process to be complete it is essential to fully examine all the documents or instructions provided to ensure that no items of work have been inadvertently omitted.

Step 2: Measure the Quantities

This is in fact the easiest phase of the estimate if Step 1 has been undertaken thoroughly. It's the calculator, scale rule, pen and paper rote part of the job. Thoroughness is essential.

It can be observed that an area or length once measured may apply to a number of items of work.

Example: once the area of a garden is calculated initially from plan, it will be used for say excavation, cultivation, soil volume and mulch volume.

It is also important to identify at this stage the access constraints to the whole of the site or individual parts of a site. It may be that part of the materials are placed by wheelbarrow and part by Bobcat or even crane. Separation of areas of the same finish such as turf or paving but which may have different costs applicable to their installation is recommended.

It may also be necessary to stockpile materials in an area prior to commencement because access will be closed before the actual item of work can be undertaken. This will necessitate "Double handling " and the additional costs need to be considered.

It is also at this stage that careful examination of the specification is required to see whether approvals are required and how long these may take. Are there any fees payable to say council or other Authorities?

Step 3 : Prepare the Bill of Quantities

Put simply, this means entering all the collected data from steps 1 and 2 into the BOQ format so the full extent of the job can be viewed and analysed. This format lists items of work, units of measurement and task costs.

It is pertinent to perhaps reorganize the items at this stage to a revised order or works if this becomes apparent after seeing the full scope of work.

Step 4 : Applying the Costings

Once all the items of work are identified and arranged in a logical order the next step is to prepare or separate out the items of work that require sub contract or supplier prices to be obtained.

Things such as: the Plant schedule for nurseries, or a plan and the appropriate quantities for a paving or fencing subcontractor.



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It is important to note that the easier the task is made for the supplier or subcontractor to prepare a price for their element of work the more likely it is that the price will be accurate and returned in a short period of time.

It is also essential that all the relevant specification descriptions, detail drawings, access constraints, special conditions etc. are communicated to suppliers and subbies to ensure true and accurate costs are obtained.

If it is anticipated that shared use of a hoist, storage area or tools and equipment will occur then this should be made clear. A further important item to request of subbies and suppliers is a time frame for completion of their works and any special items of preparation or cleaning up that may be necessary. Also is there a lead time from order to delivery or commencement of their work.

Once the specialist supplier and subcontract items are prepared and sent, it is time to apply costings for the contractors own staff to carry out their components of the works. Each business will apply different rates for the items of work based upon experience, available resources and the overheads applicable to each enterprise.

It should be noted that in general the area of highest 'Risk ' in contracting is in the area of employed labour since there is really no fixed cost as occurs with subcontractors and suppliers. Consequently it is good practice to consider a higher margin or percentage added to items that are costed as direct labour hours.

Supervision of the works is also a factor. This applies to both direct labour employed and subcontractors.

Step 5 - Determine Site Establishments and Preliminaries

Once the previous steps have been undertaken it is then possible to have a better grasp of the project as a whole. It is then a matter of applying some other non task- specific costs to the project.

These are items that may be influenced by the duration of the works on site, the total value of the job or even the number of people required on site.

Examples are:

Site Allowances

Contract Works Insurance

Hire of storage container, port a loo and/or site shed.

Temporary silt and erosion controls

Temporary security fencing

Provision of samples

Financial requirements

Waste and Rubbish removal

Temporary power, water or other services to be provided.

Other: e.g. Parking in the CBD,



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Step 6 - Review

This is the final stage of the estimate where the overall tender is reviewed by the manager of a business and any adjustments in price for financial requirements, risk, quality and accuracy of documents, time for construction of the job, current work load and other factors pertinent to the business are made.

After all this preparation of the tender letter can be prepared

In practice, information gained in the estimating stage should be incorporated into a draft tender letter as the estimate is being prepared. This enables the finalisation of the tender covering letter to be achieved in a relatively short time and with less chance of critical information, conditions or exclusions about the prices being omitted.

The tender letter will incorporate the Bill of quantities with all the assumptions, exclusions and conditions of the tenderer submitting to the client.