



# **New South Wales Government Procurement System for Construction**

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## **Procurement Practice Guide:**

# **Managing variations**

**July 2008**

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## **Important notices**

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### **Current version**

The current version of this Procurement Practice Guide is maintained on the Internet at:

<http://www.nswprocurement.com.au/Procurement-System-for-Construction/Reference-material/Procurement-practice-guides.aspx>

### **Amendments**

Refer to the Procurement Practice Guide Amendments Log which is available on the Internet at:

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# Managing variations

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## Managing variations

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These general principles apply to contracts for construction work and to agreements for related services. For simplicity, the term “Contract” is used to encompass both construction contracts and service agreements and the term “Contractor” is used to include contractors, consultants and project managers. The term “Principal’s representative” means the Principal’s authorised person or the Principal’s Representative as applicable.

The general conditions in each standard form of contract define what constitutes a variation in that particular standard form. In general terms, a variation is a change to the work required under the Contract. For a construction contract, a variation is usually defined as a change to the Works. Each standard form contract also includes other provisions relating to variations and their management, which should be read in conjunction with these general principles.

If the Principal’s representative instructs (directs) a variation, the Contractor is obliged to carry out the instruction. The Contractor is generally not entitled to change the Works without agreement confirmed in writing by the Principal’s representative. A variation should generally be consistent with, or similar in nature to, the work under the Contract.

A variation becomes part of the Contract and all the contract conditions apply to the changed work, including provisions for extensions of time and site conditions (if applicable).

A variation instruction will often lead to claims from the Contractor for additional payment and for an extension to the period for completion. The additional payment may include additional costs for delay, acceleration and/or disruption associated with the variation. Variations are one of the main reasons for cost and time overruns in construction contracts.

It is therefore important to manage variations effectively in order to reduce the risk of exceeding the budget and completing the Works late.

Ideally, to meet the project budget and program, no variations will be directed during the course of the Contract. The scope of the work under the Contract will have been approved by the client agency before the contract is awarded and should not be changed without good reason. Note that it is not a role of the Principal’s representative to “improve” the approved design.

### Types of variations

A variation can be categorised as one of the following:

- an unavoidable variation;
- a variation for the convenience of the client; or
- a variation for the convenience of the Contractor (or Consultant).

### Unavoidable variations

Unavoidable variations are necessary in order to minimise adverse effects due to unexpected events or circumstances. They may be required to avoid health, safety or security problems. They do not result in a change to the scope of the work.

Examples of unavoidable variations are:

- a variation to minimise the increase in cost or other adverse impact of a latent condition (for example unanticipated ground conditions, hazardous materials or existing services); or
- a variation to overcome a fault (for example an error, ambiguity or inconsistency other than an omission or lack of completeness which may be the responsibility of the Contractor) in the Principal’s design or documentation

which, unless it is remedied, could result in health, safety or security problems or prevent work from continuing; or

- a variation to overcome a change in statutory requirements that has occurred since tenders closed.

A failure to give an instruction in the above circumstances may prevent the Contract from being completed and may therefore be a breach of contract by the Principal. The client must be made aware of the consequences of failing to respond promptly to situations generating unavoidable variations. If an instruction is not given promptly in response to the circumstances giving rise to the necessity for the variation additional extra costs will often be incurred, for example for delays or rework.

#### **Variations for the convenience of the client**

Variations for the convenience of the client are variations requested by the client due to a change in the client's requirements. They are not unavoidable variations in that it is possible to complete the Contract without making the changes requested.

Variations for the convenience of the client will change the scope of the work and almost always increase the cost of the work. Even variations that appear to reduce the scope may increase the cost. This is because variations are valued by adding the cost of the extra work, plus a margin, and subtracting the contractual value of the work taken out of the Contract. The actual cost of the added work can often be greater than the contractual value of the work taken out of the Contract. There may also be associated costs for rework, delays and disruption.

Variations for the convenience of the client cannot be instructed unless adequate funds are available and have been approved. The funds must be sufficient to cover all costs associated with the variation, including all the Contractor's costs and associated fees and charges.

#### **Variations for the convenience of the Contractor**

Variations for the convenience of the Contractor are variations that are requested by the Contractor. They are not unavoidable variations.

There is no obligation on the Principal to agree to a variation for the convenience of the Contractor. However, it may be beneficial to the project. When a request is made, it should be considered if only to maintain good contractual relationships. The Contractor should be required to provide sufficient detail to permit proper evaluation.

Variations for the convenience of the Contractor are not to be instructed until the full impacts have been agreed and the Contractor has taken responsibility for ensuring there are no adverse impacts on the rest of the work.

#### **Authorisation of variations by the client agency**

Contracts are managed by a person authorised by the Principal to undertake certain contract administration functions within agreed financial and administrative limits. Often, for construction works and related services, the Principal's representative is a project manager acting on behalf of the agency responsible for the project.

The arrangements between the client agency and the project manager should include provisions that promote the efficient management of variations. The following arrangements are suggested.

#### **Unavoidable variations**

Action must be taken promptly to authorise an unavoidable variation so that issuing the instruction does not delay the Contractor.

If the Principal's representative is an officer of the public service, the client may either authorise that officer to approve unavoidable variations or establish a procedure that ensures a quick response to requests for approval of such variations. A workable option is to delegate to the Principal's representative authority to approve unavoidable variations up to a defined limit (say \$10,000) and to agree to

respond quickly to requests for approval to variations above that limit. Note that if authorisation involves a financial delegation it must comply with the *Public Finance and Audit Act 1983* (NSW).

The *Public Finance and Audit Act 1983* (NSW) does not permit the delegation of financial authority to a person who is not an officer of the public service. If the Principal's representative is an employee of a private sector firm, then an effective procedure must be established to ensure prompt authorisation of any additional funds from the client.

#### **Variations for the convenience of the client**

The client should undertake that it will not order a variation for the convenience of the client unless it has been advised of the full cost and time implications of the variation and has approved and provided funding to cover all impacts, including any increase in the project management fee.

#### **Variations for the convenience of the Contractor**

The client may either authorise the Principal's representative to approve variations for the convenience of the Contractor at that person's discretion or the client may agree to respond quickly to requests for such variations. If such a variation involves additional costs, then the issue of an instruction must be subject to the agreed financial delegations.

### **Instructing variations**

When the Principal's representative instructs the Contractor to carry out a variation, the resulting change to the work becomes part of the Contract.

If the Contractor requests approval to a variation, before instructing the variation, ask the Contractor to advise whether the variation is an unavoidable variation or a variation for the convenience of the client or the Contractor.

The following principles should be applied to all variations:

- instruct a variation only within the general scope of the Contract, unless the Contractor agrees otherwise
- an instruction can only be given by the Principal's representative
- the instruction must be in writing
- before instructing a variation, unless the instruction is required urgently in order for the work to proceed, request the Contractor to advise the cost and time impacts of the proposed variation
- where possible, instruct a variation only after the full cost and time implications have been evaluated and agreed in writing with the Contractor (the instruction will constitute approval to the cost and time impacts agreed with the Contractor)
- do not alter a Contractor's written quotation without the agreement of the Contractor. If there is a change agreed, it is preferable to have the Contractor submit a revised quotation. Alternatively, if verbal agreement is reached, confirm that agreement in writing
- include in the instruction a brief description of the variation work and a requirement that the work is to be undertaken in accordance with the identified instruction, the Contract Documents or any other document referred to in the instruction. It is sufficient for the instruction to give only a short summary of the variation if reference is made to other documents describing the agreement in detail
- instruct a variation only if it is within the authority delegated by the client and sufficient funds have been confirmed as available
- if agreement to cost and time cannot be reached before the commencement of an unavoidable variation, attempt to reach agreement at the earliest possible time

- if agreement cannot be reached on a variation that is not unavoidable, consider whether it may be preferable to defer the change to the Works to a later date so it can be more economically done by others.
- do not instruct a variation after Completion unless the variation is for the purpose of dealing with defects

The following additional requirements are applicable to the different categories of variations.

#### **Unavoidable variations**

It may be necessary to give an oral instruction if a variation is unavoidable and urgent action is required due to event(s) or circumstances, for example if there is a safety hazard that requires elimination. If an oral instruction is given, confirm the instruction in writing as soon as possible under the authorisation protocols (including confirmation of funding) agreed with the client.

#### **Variations for the convenience of the client**

Before instructing the Contractor to carry out a variation for the convenience of the client, advise the client that it will be necessary to ask the Contractor for the full cost and time impacts of the variation and request the Contractor to provide these details.

If the Contractor provides these details, pass them on to the client for authorisation of the additional expenditure and time, if applicable, before instructing the Contractor to carry out the variation. If the Contractor is unable or refuses to advise the full cost and time impacts, then inform the client.

For a GC21 contract, a Valuer can be engaged to determine the cost and time impacts of a variation. Note that the Valuer's determination is binding if it is less than the amount specified in Contract Information.

If a variation is instructed without the Contractor committing to a price, there is a high risk that the cost will exceed an estimate prepared by others.

Officers of agencies do not have unlimited authority to order variations for the convenience of the client. It is necessary in every case that funds to cover the full impacts are available and have been approved. A client officer who "authorises" a variation for the convenience of the client may be acting outside his or her financial delegation and in breach of the *Public Finance and Audit Act 1983* (NSW) if he or she has not been provided with a reasonable estimate of the full cost and time impacts of the variation.

#### **Variations for the convenience of the Contractor**

It is most important that variations for the convenience of the Contractor are not approved unless the Contractor agrees as a minimum, in writing, that:

- the Contractor will not be entitled to additional remuneration (no increase in the contract price) on account of the variation or its impacts on the work under the Contract;
- the Contractor will not be entitled to an extension of time as a result of the variation;
- the work under the variation will be fit for purpose; and
- the variation will not result in any other variations being required.

Grant approval to variations requested by the Contractor for the Contractor's convenience only after it has been agreed in writing that there will be no increase in the time to complete, and either no extra cost or a reduction in the cost of the Works.

It may be necessary to refer proposals for variations for the convenience of the Contractor to the designer of the Works for consideration before confirming agreement.

## Valuing variations

The cost of a variation can be considered to have three components: direct costs, indirect costs and consequential costs.

- Direct costs are the costs of the actual performance of the work and usually include the costs of labour, plant, materials and subcontract work.
- Indirect costs might include overheads, administration, supervision, attendance and profit. These are often covered by a margin prescribed in the Contract.
- Consequential costs might be incurred as a result of disruption to the work, delay to the program or some critical activity in it, or inefficiency created by undertaking work out of the planned sequence.

An assessment of the total cost of the variation takes into account all the above components.

A variation instruction may be to carry out additional work, to delete work or a combination. To properly assess the Contractor's quotation, details of the cost of the extra work and the cost of the deleted work should be identified separately. Do not accept quotations that include "extra over" costs without identifying the costs of each item of work involved.

### Variations deleting work from the Contract

If the variation involves omitting or deleting work from the original scope of work, the method of determining its value will depend on whether:

- the value of the deleted work is not identified in the Contract; or
- the deleted work has a separate lump sum price identified in the Contract (eg. in a Schedule of Rates & Lump Sums).

If the deleted work has to be valued from first principles because its cost is not identified in the Contract, then a margin should be added to the calculated direct costs to determine the amount to be deducted from the contract price. This allows for the supervision and associated costs that will not be incurred by the Contractor if the work is not carried out.

If the deleted work has a separate lump sum price, then the amount deducted due to its omission would be less than the lump sum price. This is because the tendered lump sum price is assumed to cover some indirect costs that will be incurred by the Contractor whether or not the work is carried out. These costs might include a proportion of the site establishment costs, depending on the breakup of costs in the particular contract. However there are other costs, such as direct supervision of the work or administration of subcontracts, that will not be incurred if the work is deleted. The deduction for deleted work is therefore less than the quoted lump sum amount and more than the direct cost of labour, plant, materials and subcontracts involved in carrying out the work.

Note that the Contractor is not entitled to recover any profit on work that is deleted from the Contract.