



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

Procurement Practice Guide

Single and multiple contract options

July 2008

Important notices

Current version

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<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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Single and multiple contract options

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Single and multiple contract options

1 Introduction

The construction phase of a project is generally delivered by engaging a single contractor to undertake the majority of the work. However, under some circumstances, there can be advantages gained by adopting a procurement method that involves “multiple contracts”. Multiple contracts can be for:

- work packages; or
- trade packages.

Note that a procurement method is not considered a “multiple contract” method if it involves one or more small separate contracts, often in advance of the main construction contract, for items such as:

- the purchase of materials or equipment with long lead times, or
- the installation of utilities such as power or water, or
- preparatory site work, for example to demolish an existing structure or remove known hazardous materials.

The number of contracts used to deliver a project affects the allocation of certain risks and the probability that they will be realised. For example, if a single contract is awarded, the risks associated with the coordination of the components of the construction work are allocated to the contractor. With a multiple contract system, the agency bears this coordination risk. However if multiple contracts are used, the agency has greater flexibility to change its requirements during the course of the work while reducing the risk of incurring substantial delay and disruption costs.

This document outlines when it is appropriate to use a single main contract and when to use multiple contracts and describes the main benefits and risks of each arrangement.

2 Single Contract

A “single contract” procurement method is where the majority of the construction work required for the project is included in one contract, which then determines most of the cost of the project. The project may involve other small associated contracts for activities of different kinds, such as project management or consultancy services, site preparation, equipment supply or landscaping.

Any type of construction contract may be used for a single contract procurement method. Refer to Procurement Practice Guide [Contracts used for construction projects](#) for a discussion of the available options.

2.1 When to use

A single contract is suitable where:

- the project requirements can be clearly defined and are unlikely to change after the contract is awarded;
- sufficient time is available to specify the requirements for the whole of the work before construction commences;
- there is no advantage in splitting work activities;
- one contractor can most efficiently manage the mix and scale of work;
- limited skilled resources are available for managing the construction work;
- the construction area can be clearly defined (where the site is occupied).

A single contract is the most common arrangement. It allocates more risk to the contractor than a multiple contract arrangement and should always be considered.

2.2 Benefits

A single contract offers the following benefits:

- most coordination risk is allocated to the contractor;
- a firm price for the work is available when the contract is awarded; and
- less management resources are required for documentation, tendering and contract administration than for multiple contracts.

2.3 Risks

A single contract has the following risks:

- if the agency's requirements are not clearly and comprehensively described when the contract is awarded, the required outcomes may not be achieved or variations may be required, with associated delays and costs;
- changes to project scope after contract award, including reductions in scope, may be costly;
- cash flow requirements may not be met, since the contractor controls cash flow once the contract is awarded; and
- programming is controlled by the contractor once the contract is awarded and if staging or early completion are required, acceleration costs may be incurred.

3 Multiple contracts

With "multiple contracts", the agency generally engages design and documentation consultants and awards a number of separate construction contracts of the "developed design" type for the construction work. These contracts can be either for different elements of the project ("work packages") or for different building trades ("trade-based packages").

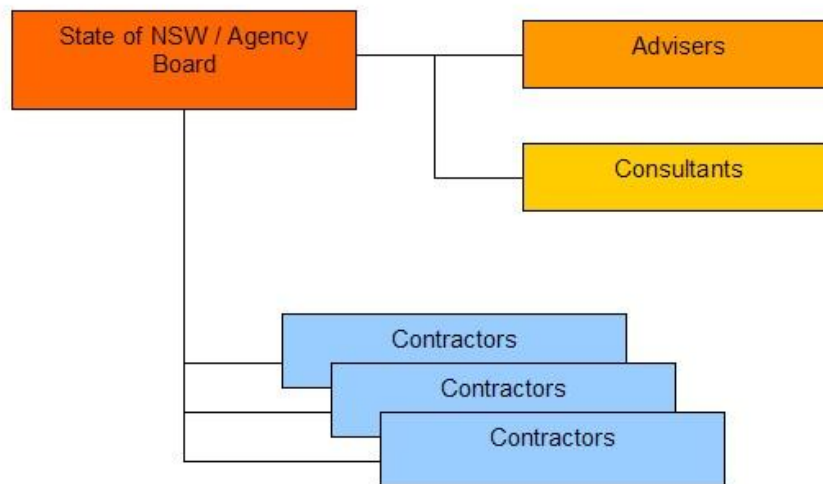
Where developed design type contracts are used, the agency bears the risks of errors and omissions in the design, coordination of the many contracts and, usually, latent conditions.

Multiple contracts can be effective in compressing the project program. Contracts can be let for separate elements of the work as documentation is completed, to implement a staged program or provide more time for the agency to develop the design.

If multiple contracts are used, then the agency needs to decide on the appropriate type of contract for each package. Decisions must also be made as to whether the contracts will be for trade packages or for work elements, and whether these will be independent or integrated.

Multiple contracts provide flexibility but have significant drawbacks because of the increased coordination risks for the agency. They also require more resources to manage the contracts than are required for a single contract. Unless there is a compelling need to use multiple contracts, a single contract is preferable.

A multiple contracts arrangement may be represented as follows:



3.1 When to use

Multiple contracts may be suitable for projects where:

- it is imperative that the construction work commence before the design can be completed and the agency's requirements cannot be defined adequately for the contractor to complete the design;
- technological changes are likely to occur during the course of the work;
- the elements of the project involve different types of work suited to different contractors, and are located on independent sites;
- it is necessary to stage the work in order to manage budget or cash flow constraints;
- unresolved heritage, archaeological or hazardous materials issues are likely to affect the work;
- site availability is limited, for example because it will continue to be occupied during the course of the work.

3.2 Benefits

Multiple contracts offer the following benefits:

- changes to budget or service requirements can be accommodated by accelerating or decelerating, omitting or re-ordering work elements;
- the potential impacts of changing the design brief after construction commences are reduced;
- there is greater capacity to react to rapid changes in technology and other developments;
- the agency retains more control of cash flow, through staging of the work packages;
- it is possible to meet time targets by commencing construction before the completion of design, or overlapping design and construction, or awarding long lead time contracts before the majority of the work is designed;
- contracts can be awarded after risks are defined, reducing risk allowances in tender prices;
- better control of the quality of the finished product is possible, through the direct selection of particular work or trade contractors; and
- better control of the interfaces between construction areas and occupied areas of the site.

3.3 Risks

Multiple contracts have the following risks:

- the likelihood of incurring delays and avoidable additional project costs is increased due to the agency's ability to direct changes as the work progresses;
- more management resources are required to prepare multiple tender documents, manage tender processes and coordinate and administer contracts, increasing overhead costs;
- cost forecasting and cost control are difficult since the costs are not known until the last contract package is let;
- the agency commits to construction contracts before knowing whether the project is affordable;
- the agency bears the risk of claims from every contractor for the acts and defaults of every other contractor;
- the agency bears the responsibility and risks involved in coordinating the work; and
- the agency accepts the risk of changes in market conditions during the construction period.

3.4 Work packages

A project can be delivered using several discrete contracts awarded progressively as work packages. The work packages may be for separate elements of the work, for example separate buildings or facets of a building. Foundations, roadworks and services could be constructed under separate contracts as parallel activities. The silos, wharf and loading equipment required for a grain terminal could be packaged separately to attract better competition from specialist contractors. For a water supply augmentation, separate contracts could be let for the water treatment plant structure, the mechanical equipment, reservoirs, reticulation and pumping machinery, to accommodate different contractor competencies.

A project manager and management team is needed for this type of arrangement. A construction manager (see Construction Management below) may be required.

The work package system is suitable for projects where:

- separate work elements are independent in terms of timing, for example where staging is required or different parts of the work have different lead times or completion times;
- separate work elements are on different sites;
- separate work elements have significantly different natures and require contractors with different specialist expertise;
- risk management requires some work elements to be completed separately to address the risks of subsequent work.

A Managing Contractor contract (refer to Procurement Practice Guide [Contracts used for construction projects](#)) can provide for these circumstances without the additional coordination risks and increased management resource requirements associated with multiple contracts.

3.5 Trade packages

A project such as a building may be constructed using a separate contract for each different trade. Trade packages are interrelated to each other and the trade contractors are highly dependent on each other's performance. The success of this arrangement relies on a highly developed and detailed program for construction, and requires that design and documentation activities be completed to a schedule that supports the construction program.

A construction management approach (see below) is essential if the project is to be delivered using this method.

The work and trade package system is particularly used for building projects, often in combination with major work packages where:

- there is insufficient time available to prepare documentation for a single contract or larger work packages;
- there is potential for the rapid development of technology in a trade/equipment area during the construction period, for example with special hospital equipment;
- the design brief, by the very nature of the facility, must be developed over time, with some areas to be addressed separately; and
- the work in a specific trade is an experiment or trial for new processes or technologies.

4 Construction management

Under a construction management approach, the work is split into work and/or trade packages which the agency contracts out to specialist contractors. The agency engages a construction manager to provide coordination services and often preliminaries and common services such as cranes, amenities and the like. The engagement of the construction manager is generally on a “cost plus” fee arrangement.

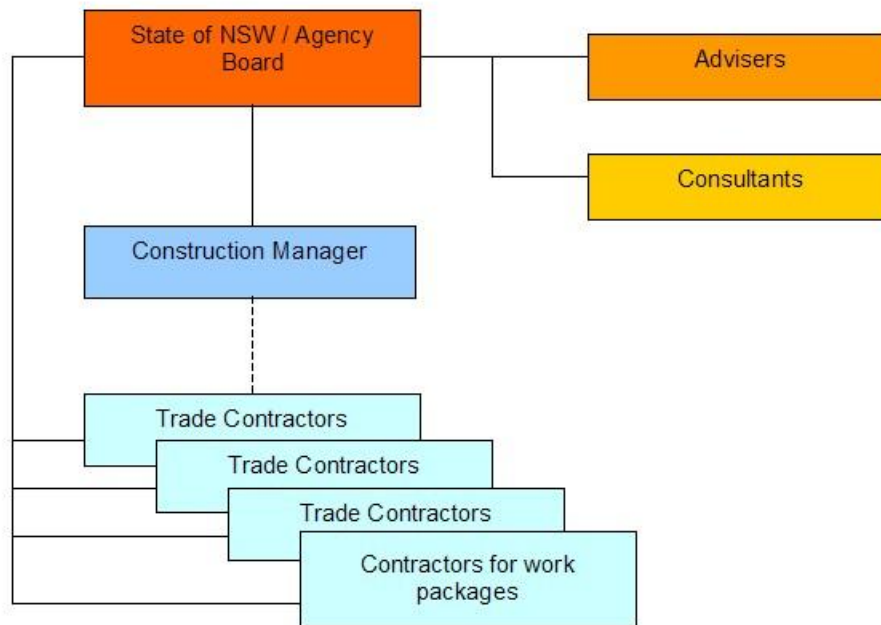
The construction manager generally does not undertake construction work, except possibly for providing common services, but oversees the activities of the various construction contractors. The construction manager may be engaged to:

- work with a design manager before and during construction, to assist in programming the design programming and addressing buildability issues;
- assist in determining appropriate contract packages for the project;
- assist in calling tenders and awarding contracts;
- program the construction work;
- direct the day to day activities of the construction contractors;
- process claims for payment and variations on behalf of the agency;
- undertake the role of principal contractor (in terms of the Occupational Health and Safety Regulation 2001).

The construction manager is commonly a construction contractor with expertise in managing construction projects. Under this arrangement, the agency enters into contracts with the construction manager and the many trade or work packages contractors. The agency must have the capability to manage the financial and administrative aspects of those contracts, including suitable procurement and delegation systems and sufficient internal resources with appropriate skills.

The Department of Commerce is also able to undertake the role of construction manager. In this case, the Minister for Commerce may agree to act as the Principal in the trade or work package contracts, providing the agency with the required resources and systems.

A construction management arrangement may be represented as follows:



4.1 When to use

A construction management form of multiple contracts should be used where a project has the following requirements in addition to those applicable for multiple contracts:

- it is imperative that the construction work commence before the design can be completed and the agency's requirements cannot be defined adequately for the contractor to complete the design;
- technological changes are likely during the course of the work;
- the project involves different types of work suited to different contractors;
- it is necessary to stage the work in order to manage budget or cash flow constraints;
- unresolved heritage, archaeological or hazardous materials issues are likely to affect the work;
- site availability is limited, for example because it will continue to be occupied during the course of the work;
- the separate contracts for work or trade packages are interdependent;
- the site is confined; and
- the separate contractors are to share services such as crantage, amenities.

4.2 Benefits

Construction management has the benefits of a multiple contract arrangement and in addition:

- the construction manager applies its specialist expertise to manage the contract package interfaces, call tenders and award contracts, program the work and control the budget.

4.3 Risks

Construction management has the risks of a multiple contract arrangement and in addition:

- there are a limited number of experienced construction managers;

- the success of the project depends on the quality of personnel provided and
- there is little incentive for a construction manager external to the agency to control costs.

5 Novation

The primary risk the agency bears with a multiple contract arrangement is the coordination risk. It is possible to reduce this risk under some circumstances by novating early contracts to the main construction contractor.

Under a novation, the main contractor takes over the agency's rights and responsibilities under the novated contract, which becomes a subcontract to the main contract. The main contractor becomes responsible to the agency for the performance of the work under the novated contract.

Both the main contract and the contract that is to be novated must include provisions foreshadowing the novation, and each generally includes a copy of the proposed novation agreement.

5.1 When to use

Novation can be used for long lead time items such as imported equipment, or for specialist work that must commence prior to the construction work, for example power supply to a remote site.

5.2 Benefits

Novation offers the following benefits:

- The agency can initiate time-critical items of the work in advance of the main contract;
- After the novation, the agency does not bear the risk of coordinating the different contractors; and
- The risk of non-performance of the novated contract work is allocated to the main construction contractor after the novation takes place.

5.3 Risks

Novation has the following risks:

- the contractors may refuse to enter into the novation agreement, or may be reluctant, causing delays due to lengthy negotiations or disputation;
- the contractors may load their tender prices to cover the risks of entering into a contract on terms predetermined by others; and
- complex litigious problems could arise if the relationship between the contractors deteriorates.