



DESIGN AND BUILD

1 INTRODUCTION

1.1 Background

This Practice Note discusses issues relating to the method of project delivery known as “Design and Build”.

Design and Build varies from more traditional delivery methods in that the design Consultant is employed by the Contractor (or sub Contractor) rather than directly by the Client. [Note that the term Design-Build is also used to refer to contractors who employ in-house designers. It is also possible for the Consultant to be the employer or equity partner of the Contractor. These forms of Design-Build are not discussed in this Practice Note]

Design and Build can be a very rewarding and enjoyable way of doing business. When it works well, it eliminates confrontational relationships and builds strong teamwork.

Many of the issues facing the Consultant in a Design and Build relationship are the same as those encountered in traditional Client/Consultant relationships but there are some important differences that need to be recognised and addressed. Consultants need to carefully consider the risks and to set their fee levels accordingly.

1.2 Definitions

For the purposes this Practice Note the following terms are defined.

- Client:** Owner, Principal or end user who forms a contract with the...
- Contractor:** to design and build the project. The Contractor engages the...
- Consultant:** (Engineer, designer etc) to prepare the design and monitor the work.

2 TYPES OF DESIGN BUILD RELATIONSHIPS

There are many variations in the details of the Client-Contractor-Consultant relationship but a significant point of difference is whether the Contractor is in **competition** to secure the project or if he has **negotiated** the contract.

When the Contractor is in a tender situation the Consultant can be in a strong position with regard to negotiate his total fees and conditions for the project because his input is vital to

secure the project. However the Consultant is usually under pressure to carry out pre-award work on a “reduced fee” or “No-job-no-fee” basis. When the Contractor has already secured the project he is in a stronger position to reduce fees and has the opportunity to call for fee bids.

3 BENEFITS AND DISADVANTAGES

3.1 Benefits of Design and Build

For All

- Working in a team environment;
- Avoidance of conflicts, disputes and claims. (Note: this requires commitment from all parties to create the required team relationships and clear understanding of the commercial impacts of the process on Contractor and Consultant);
- Conducive to innovation with all parties having input;
- Robust design process with Client, Contractor and Consultant all having input into design review procedures;
- Quality based selection of consultants;
- Faster delivery of construction if fast track processes are employed.

For the Client

- Obtains “one stop shop” solution;
- Offloads design management;
- Offloads design risk;
- May obtain fixed price contract;
- May obtain cost determination early in project.

For the Contractor

- Is able to manage design and hence cost;
- May not have to compete on cost;
- Can have input into buildability;
- Can control design documentation process.

For the Consultant

- Can design for the strengths and preferences of the Contractor;
- Can obtain direct buildability/costing input from the Contractor;
- Avoids adversarial processes of tendering and variation negotiation;
- Increased opportunities for design innovation and flair.

3.2 Disadvantages of Design and Build

For the Client

- May not know if he has obtained the most competitive solution;
- Loses some design control and interaction with designers;
- Requirement for Client to adequately and unambiguously define the project scope;
- Variations may be more expensive.

For the Contractor

- Assumes design risk;
- Increased cost of bidding, especially if paying fees for design(s) without winning the tender(s);
- Reliance on choosing the right Consultant to have reasonable chance of success with tender;
- Requires expertise in-house to manage design processes, resource consent processes and risk management processes. This may exclude all but the larger Contractors.

For the Consultant

- May lose direct access to Client;
- May lose contract administration role;
- Pressure to accept low or no fees if unsuccessful in tender;
- Pressure to compromise design standards to lower cost of construction for the Contractor as the client.

4 CONSULTANT SERVICES

A Consultant working in a Design and Build relationship may expect to deliver the same technical services as in a traditional relationship, broken down, typically, into the following phases:

- Concept;
- Design development;
- Documentation;
- Construction/implementation.

The significant difference is that with Design and Build, the Contractor is likely to commit himself to a firm construction/project cost based on preliminary or concept drawings. This entails risk for the Contractor and Consultant and requires the Consultant to produce preliminary drawings that describe the scope and complexity of the project. It also requires a Contractor who can price off skimpy documentation and make adequate allowance for detail that won't be fully described!

Consultants can expect to be involved in vigorous value engineering processes as the Contractor attempts to keep the design within the cost plan.

Consultants may also be required to give some assurance to the Client, of quality and/or quantity. This should be done with caution.

5 DESIGN RISK

There is often an enhanced level of design risk in Design and Build primarily because the Contractor may be entering into a fixed, lump sum agreement with the Client, based on incomplete design and documentation.

It is vital that this risk is recognised and addressed by the Contractor and Consultant in a transparent process. This involves identifying the risks and unknowns and applying appropriate contingencies. This is a delicate process. If the contingency is too generous, the

Contractor may not secure the job.

In most situations the Consultant should ensure that the design risk is carried by the Contractor rather than by the Consultant but obviously if the Consultant is negligent he will be exposed. Many Consultants will introduce some design “fat” in the preliminary design to allow for “swings and roundabouts” in the final design.

Both parties should recognise that design risk is accompanied by measuring-risk and estimating-risk. The Consultant needs to ensure the Contractor recognises these risks and makes appropriate allowance.

5.1 Risks with Resource Consents

Design and Build contracts which include responsibility for obtaining designations and/or resource consents carry additional risks:

- a) Unforeseen delays in a consenting authority’s decision can make tight project programmes un-achievable.
- b) Conditions of consents obtained after Design and Build tenders have been awarded may place unforeseen costs of compliance onto the Contractor.
- c) In the event that consent is not obtained there must be a clear process for recovering costs and fees.

5.2 Contractors’ Design Professional Indemnity

The primary attraction of Design and Build for the end client is the “one-stop-shop” or “single point of contact”. This extends to a single point of responsibility for design. In most significant Design and Build projects the Client requires the Contractor to take full design responsibility for the project. Legally, it is inferred in most Design and Build projects, but some smaller Contractors will not appreciate the relevance.

Consultants should recognise this fact and encourage all Contractor clients to carry Design Professional Indemnity insurance (PI). Bigger contractors usually carry Design PI. but with large excesses. Consultants and Contractors should ensure that the Consultant’s PI cover has a significant margin over the Contractor’s Design PI excess.

Consultants and Contractors should review the wording of their PI cover to check that they will provide the cover that is intended (e.g. some policies will not respond if the services are otherwise insured).

5.3 Fees

There are as many views on fees for Design and Build as there are Consultants and Contractors. Rabid debate revolves around the subject of “No-job-no-fee”. In a “No-job-no-fee” engagement the Consultant only gets paid if the Contractor secures the project.

There is no set right or wrong on this issue and each Consultant has to make his own commercial decision based on the situation as he sees it. It is sensible to assess the situation on a “risk versus reward” basis.

No-job-no-fee should only be contemplated if:

- The Consultant only has to do a relatively small amount of work to secure a large job;
- The Contractor is a regular client and has a high success ratio;
- The project may lead on to repeat work, at margins that will recoup the original investment;
- The Consultant can afford the opportunity cost;
- When the job is won, the Consultant receives a “more than fair” fee.

No-job-no-fee is not justifiable if:

- The Consultant has to do more than (say) 25% of his work prior to award;
- The project is large or complex projects requiring significant or specialist work up front;
- The Contractor is one of many competing for a project;
- The Consultant will be screwed down to a mean fee or even have to compete on fees after the job is won.

Typically, in a competitive Design and Build the Contractor should pay at least the Consultants costs (charge out less profit) for pre-award preliminary work. This is because:

- a) The Consultant is doing relatively a greater portion of his work than the Contractor;
- b) It ensures that the Contractor is serious about his bid and is not taking a punt at the Consultant’s expense.

What is vitally important is that the fees for the whole job are agreed at the beginning of the process. It should be clearly spelt out between Consultants and Contractors that if an element of “reduced fee” or “no-job-no-fee” occurs for preliminary work, pre-award, then there must be a corresponding “success fee” element if the job is won.

In no circumstance should the Consultant agree to do more than preliminary phase work on a reduced fee basis. This means that for certain disciplines (e.g. geotechnical), work on a reduced fee basis will seldom if ever occur.

6 CONTRACTOR/CONSULTANT CONTRACTS

6.1 Standard Contracts

Non-standard Conditions of Engagement can be common in Design and Build. Whenever possible the Consultant should steer his agreement back to standard forms of contract ¹. The Short Form of Contract is often appropriate for smaller projects.

6.2 Risks in using Non-Standard Contracts

When presented with a non standard contract the Consultant should scrutinise it carefully to ensure it does not expose him to excessive risk or invalidate his insurance. Consultants should be particularly wary of the following:

¹ Refer to “Conditions of Contract for Consultancy Services” 2000 ACENZ/IPENZ/ALGENZ/Transit NZ Short Form of Agreement (Domestic) and (Commercial) (1996) ACENZ/IPENZ These documents are available free from the ACENZ and IPENZ Websites

- a) Clauses that include the following words or phrases.
 - “Warranty”
 - “The Consultant shall indemnify.....”
 - “The Consultant shall hold harmless.....”
 - “Best, highest or expert service”
 - “Fitness for purpose”.
- b) Contracts with no specified limit of liability.
- c) Contracts with excessive duration of liability (should be no longer than six years typically or ten years for issues covered by the Building Act).
- d) Contracts that refer to warranties given within the main Client/Contractor contract.

If in doubt, get the contract reviewed by a lawyer or insurer. Be aware that if risk is limited in such a way, PI cover may be invalidated. It is sometimes worth pointing this out to Clients because if the Consultant is not covered then they are exposed to greater risk. The “wound-up” value of a Consultant is usually not great.

7 CLIENT/CONTRACTOR CONTRACTS

The Design and Build Consultant usually has little or no say on the format of the main contract between the Client and Contractor. He should, if possible, discover the risks and warranties that the Contractor has agreed to, as these may have an effect on the risks passed on to the Consultant.

Typically Contractors (and in particular sub Contractors) may accept terms and conditions that the Consultant would find quite unacceptable. In this situation Consultants must be very wary of Deeds of Novation or other documents which require the Consultant to “be aware of the warranties provided by the Contractor in the main contract”.

8 NOVATION

(Refer also to Practice Note P18)

Novation occurs in some Design and Build contracts where the Consultant is initially engaged directly by the Client to prepare preliminary/consent documentation. A Contractor is then selected on the basis of the preliminary documents and the Consultant is novated to the Contractor. This means that the Consultant is then engaged by the Contractor with, in theory, the same terms and conditions of his original engagement. The Client can no longer directly instruct the Consultant and the Consultant has no direct claim on the Client for fees. However the Consultant is usually asked to maintain a Duty of Care in favour of the Client.

The advantage of a novated Consultant to the Client is that he can shift all design risk onto the Contractor (i.e. so that increased costs that may become apparent as the design is developed, become the responsibility of the Contractor).

The Contractor has to allow for this risk but has the advantage of being able to manage the design process to keep the project within what is usually an agreed maximum price. “Managing the Design Process” means directing the Consultant to specify materials, forms and processes that will meet the budget and programme.

Novated contracts can be difficult, particularly if the Client and Contractor are adversarial or if the Contractor is not experienced in design management. While it is not ACENZ policy to promote novation, there are projects for which it is appropriate.

Consultants need to be aware of the extra risks that can occur in a novated situation. These risks occur as the Client and Contractor both attempt to transfer liability to one another.

In a novated contract the Consultant may be asked to execute one or more of the following deeds (or combination thereof)

Deed of Novation:

A three party deed in which:

- The Client hands design control to the Contractor.
- The Contractor agrees to engage and pay the Consultant with the same terms and conditions that the Consultant had with the Client.
- The Consultant agrees to work for the Contractor and to give up any claims on the Client for fees.

Deed of Duty of Care:

A two party deed in which:

- The Consultant covenants to maintain a Duty of Care in favour of the Client. This deed requires the Consultant to look out for the interests of the Client, particularly with regard to the contracted scope, quality and standards. This deed also makes it easier for the Client to sue the Consultant directly.

Deed of Continuity:

A two party deed in which the Consultant covenants to continue working, even if the Contractor who has engaged him becomes bankrupt or if the main Client/Contractor contract is terminated.

8.1 A Note of Caution

ACENZ has a suite of model documents that cover the above Deeds. The Consultant should scrutinise alternative wordings very carefully. Both Clients and Contractors, with help from their lawyers, have come up with some very pro-risk deeds. Consultants should be particularly wary of clauses that require the Consultant to warrantee the Contractor's work or to assume responsibility for design risk (see above).

9 FAST TRACK

An advantage of Design and Build is that the speed of project delivery can be increased. This is achieved by deleting the tender period and sometimes by carrying out design and construction concurrently. This is known as "fast-track".

Fast track can include the following:

- Staged consents.

- Staged subtrade tendering.
- Increased numbers of document issues.

Fast track can result in significant extra work and risk for Consultants. Consultants should determine early in the project if fast track is required and to make due fee allowance.

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