Practice Note 2 – Managing Unknown Site Conditions Risks and Utilities Risks

APPLICATION:

This Practice Note is intended to be read together with Site Conditions and Utilities Practice Note 1: Early Risk Assessment.

Practice Note 1 sets out the practices to be followed to assess and minimise unknown site conditions risk and utilities risk in the planning and structuring phase of infrastructure projects.

This Practice Note 2 considers risks associated with unknown geotechnical conditions, contamination and valuable finds (collectively known as "unknown site condition risks") and utilities risks. The Practice note provides guidance on options to mitigate and manage shared risks during the delivery phase of projects.

PRINCIPLE

Best practice in mitigating unknown site condition risks and utilities risks impacting project delivery is to mitigate through early steps taken jointly by Government and industry participants during the project procurement phase to identify and assess the scope of such risks.

Those steps do not guarantee the elimination of unknown site condition risks or utilities risk but provide the project parties with appropriate tools to identify and manage the risks.

In circumstances where early industry dialogue or collaboration is not possible, or does not occur, and unknown site condition risks and/or utilities risk remain, parties to a contract should be collaborative to achieve a fair and reasonable approach to the outcome of the project, where all parties share and are willing to manage and mitigate unknown site condition risks and utilities risk together.

Quantifying the cost and time required to manage utilities is a key issue for both government and industry on infrastructure projects.

The key principles are as follows:

- Regular engagement between government and utility owners around pipeline planning / industry constraints.
- Early engagement with utility owners over scope of project / delivery methods.
- Clear frameworks to establish responsibilities amongst government, industry and utility owners at different phases of a projects lifecycle.
- Early industry dialogue to target most beneficial site investigation / procurement practices.
- Practices to increase dialogue on utilities risk during tender processes.
- Practices to drive enhanced collaboration in the early planning phase of projects to expedite approvals, design and mitigation of utilities uncertainty.
- Practices to drive enhanced collaboration in the management of utilities risks during project delivery.

CURRENT CHALLENGES:

Unknown Site Conditions

Unknown site condition risks often fall outside any pricing or project contingency and can cause significant impact to the progress of the works. The nature of these risks may be manageable within the capability and resources of the project parties, or may cause significant distress if the efficiency of delivery that was relied on for a competitive price is lost, and the scope and time required to overcome the site conditions encountered exceed all reasonable pre-award estimates. The commercial consequences for both Government and industry will be exacerbated by the absence of a collaborative best for project resolution to the management of unknown site condition risks.

Utilities

The key challenge for the construction industry, government and utilities is the timely availability of reliable information. For proponents of construction projects, industry and/or government need reliable information from utilities in the planning and tender phases of a project. To assist industry and/or government during the planning, tender and delivery phases, utility companies need reliable information on project priority, time frame and pipeline to plan and commit their resources. This lack of information from both sides can lead to sub-optimal project outcomes, particularly in brownfield linear infrastructure projects. Challenges for industry, government and utility companies include:

Industry and/government cannot access reliable utility information

- Industry and/or government may not be able to rely on existing asset information held by utility companies, resulting in uncertainty at the planning and tender stages.
- Site access constraints may not allow industry and/or government to conduct full utility investigations, resulting in a lack of information at the planning and tender stages.
- Variability and reliability in the quantity and quality of information on utilities make it difficult to assess risks.
- Unreliable information during the tender process can lead to projects exceeding their budget.
- Unreliable information amplifies risk and the consequences worsen the later the risk materialises.

Utility companies have limited resources working on construction projects

- Resourcing constraints within utility companies may limit their input and availability in the projects planning and tender phases.
- Due to resource constraints, utility companies often have competing priorities on a number construction projects resulting in uncertain timeframes in completing the utilities scope during the projects delivery phase. It is difficult to obtain time and cost certainty in the planning and tender timeframes. This sometimes results in the client evaluating proposals based on risk appetite, rather than on the quality of the solution or quality of the team.

OPTIONS:

Set out below are options available to address the principle of adopting a fair and reasonable approach to managing unknown site condition risks and utilities risks, undertaken jointly between Government and industry.

Options are not mutually exclusive and include strategies to promote open dialogue between Government and industry on ways to efficiently manage risks, and approaches to cost sharing arising from the joint implementation of those strategies.

Practice 1 – Pipeline and project planning associated with utilities risk.
Utility providers should be provided with detailed look ahead information and guidance in relation to Government infrastructure / procurement plans to allow Government and Utility providers to align on capacity and resource requirements/availability prior to tenders being released.
Government and utility owners (with input from Industry as required) may discuss and review regulatory requirements / constraints to determine what changes may be made in order to improve the efficiency of the delivery of the Government's infrastructure programme.
Early engagement with utility owners in the project definition phase to ascertain the quantity and quality of information available along with potential impacts to the business case caused by utilities e.g. existing assets cannot be relocated (or is prohibitive).
Early engagement with industry e.g. through risk workshops prior to formal processes commencing, to help inform business case development / packaging strategy.
Business case to consider packaging strategies to address uncertainty through adoption of alternative delivery models to complete utilities works where scope or time uncertainties exist or where there is a low degree of confidence in the information available during procurement e.g. adopt a utilities alliance or undertake early works to relocate utilities prior to the main works.
Business cases should be appropriately structured and funded to: • allow more detailed investigative work to be undertaken; and • avoid wasting design effort if designs are not aligned to the project outcomes of Government.

Practice 2 – "Best Practice" Management of Issues Related to Unknown Site Conditions Risks
Early Works: Undertake early works to dispose of contaminated materials and remediate contaminated sites prior to handing over site access under the main contract. Contractual and access arrangements will differ depending on the nature of the project and the interfaces between the early works and main contract works. For example, this may be more challenging on a linear project compared to remediation carried out within a defined site boundary for a building site. In each circumstance, the parties will need to agree the extent of reliance on inspections and quality assurance documentation and allocation of risk for defects in early works.
Management controls: Provide in the contract for responsible management methods, which may include:

- Early Warning Notices and escalation of issues to management teams with specialist expertise
- Schedule of rates and certification of quantities
- Opportunities for client rescope / redesign
- Suspension, step-in and termination rights
- Rights to re-tender significant works

Issue Resolution: Include clear and simple contractual provisions that provide for:

- Early warning notices to keep the client informed of the identification of unknown site conditions and proposed management steps;
- Joint review of notified issues at the project management level with timely recommendations on mitigation measures and escalation of issues quickly to senior representatives where they are outside the agreed project scope;
- Clear delegations of decision-making power by all parties (i.e. who from each organisation is authorised to agree entitlements to time and/or cost relief); and
- Parties to act in good faith towards a best for project outcome focussed on resolution in a timely manner.

Practice 3 – Selection of appropriate procurement and contract model

This practice appears in both Practice Notes 1 and 2 on the basis that it is relevant as an output of the risk assessment contemplated by Practice Note 1 and also the ongoing mitigation and management of site conditions risks (including unknown site conditions risks) set out in Practice Note 2. To be reviewed for alignment with PN1.]

Risk Assessment: Introduce risk matrix assessment to inform contract model selection and provide clarity for basis of tendering. Refer to Site Conditions and Utilities Practice Note 1.

Site investigations, Utilities and reports: Undertake site testing and investigation that will produce quantitative reports, e.g. geotechnical baseline report and utilities report, early in the project development process, which can then be provided to tenderers on a reliance basis. Seek input from registered market participants on site locations and/or types of ground conditions that require detailed investigations.

Geotechnical baseline report: A pre-agreed geotechnical baseline report is included with the tender to provide clarity on both tender evaluation criteria and where geotechnical risks are allocated. This may form part of the final contract with a pre-agreed schedule of rates.

Utilities report: A Utilities report is included with the tender to provide clarity on both tender evaluation criteria and where utilities risks are allocated. This may form part of the final contract with a pre-agreed schedule of rates for unknown utilities.

Early Contractor Involvement: Utilise two-stage procurement models (which allow for a planning phase, and then delivery phase) to allow for greater upfront planning and assessment of unknown site condition risks and utilities risk with early contractor involvement.

Practice 4 – Collaborative behaviour
Undertake early market soundings to allow open and frank conversations about risk and uncertainty and to identify optimum quality and quantity of investigation(s).
Establish framework which clearly sets out the roles and responsibilities and how interfaces between Government, Utilities, and Industry will be managed for the entire project lifecycle(i.e. the key contact for each phase)
Engagement with industry in one-on-one briefing sessions to cover topics such as: • Key commercial principles; • Alternative commercial models/frameworks; and • Technical aspects.
Permitting design check-in points with industry during project planning and procurement phases to provide comfort that a proposed solution is achievable and acceptable to all parties (including utility owners).

Practice 5 – Commercial Frameworks
Provisional Sum regime: Inclusion of provisional sum regimes for different types of unknown site condition risks and utilities risks, with the ability for the client to direct the contractor to perform the remediation/relocation work, or have the work performed by others.
Geotechnical Baseline Report: Reimbursement for costs incurred at agreed rates for conditions encountered as set out in a pre-agreed geotechnical baseline report.
Utilities Report: Reimbursement for costs incurred as a result of finding utilities that have not been identified in the Utilities Report. Some guidance on time allowances may also be required.
Reimbursable Costs: Reimbursement for actual costs for dealing with unknown site condition risks and utilities risk quantified on an open book and transparent basis, plus an agreed margin for on-site overheads and profit. Reimbursable costs may be capped or uncapped, or part of a target cost incentive framework (see further below)
Incentivised regime: Incentivised commercial framework to promote timely planning, management and completion of remediation work and the lowest cost to all parties. This may include a number of options, including: • A Target Cost approach to jointly engage contractors to undertake the remediation work/ utility relocation, where both parties agree a target outturn cost and share in the cost and time impacts of the scope of work to be managed by the head contractor. • A target cost approach for the performance of unknown site conditions scope and utilities scope, with payment of direct costs and an agreed margin for work performed within the

target cost, and a reduced margin for work exceeding the target cost. The parties would share in cost underruns to incentivise proper project management by the head contractor.
Cost recovery: Relief regime should contemplate changes to methodology, not just changes to the physical works.
Time relief: Extension of time entitlements for latent conditions and unknown utilities, including protection from payment of liquidated damages where the latent condition or unknown utilities causes delay on the critical path and is beyond the contractor's control.