



PERFORMANCE AUDIT REPORT

17 May 2022

Contract management for new infrastructure

Report 16: 2021–22

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17 May 2022

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Brendan Worrall
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Report on a page

The Queensland Government plans to spend \$52.2 billion on infrastructure projects over the next 4 years and has identified investment in such projects as a key element of its COVID-19 economic recovery plan. In the past, poorly managed contracts for infrastructure projects have contributed to delays and unexpected costs. Effective contract management is fundamental to reducing the risk of cost and time overruns and ensuring public sector entities achieve value for money and the project's intended benefits. In this audit, we examined how effectively government entities have designed their contract management frameworks and applied them in managing contracts for new infrastructure projects. We focused on the Department of Energy and Public Works and the Department of Education because between them, they deliver approximately 60 per cent of the state's building infrastructure projects. We examined contract management for 6 of their projects, with a combined value of around \$1.4 billion.

As of September 2021, the contracts we reviewed had over \$127 million in contract variations. In most cases, project budgets were increased to cover additional costs. Some of the variations could have been avoided by better planning before awarding the contract. Our analysis identified lessons and opportunities to improve the contract management of future infrastructure projects.

The whole-of-government framework for managing infrastructure contracts needs updating

The Capital Works Management Framework (a whole-of-government framework) is the Queensland Government's key guiding document for managing risks in planning and delivering infrastructure projects. The framework provides some high-level guidance to public sector entities. However, it does not reflect contemporary practice, does not provide a clear and standardised approach for managing infrastructure contracts, and is not used by many entities. The Department of Energy and Public Works (which is the entity responsible for the framework) has not appropriately reviewed it since it was introduced in 1999. The department is now replacing the Capital Works Management Framework with a new framework.

Departments need to improve their management of contract performance

The Department of Energy and Public Works and the Department of Education have developed internal guidelines, processes, and systems for managing infrastructure contracts, however, these do not adequately align with the Capital Works Management Framework, to the extent that the framework remains relevant. They are not comprehensive nor consistently applied, resulting in important aspects of contract management being overlooked.

We found instances where the 2 departments had not adequately planned their contract management, had not clearly defined and documented roles and responsibilities or expected project deliverables, and had not undertaken enough (or effective) stakeholder consultation. In some cases, these limitations reduced the departments' ability to deliver, monitor, and report on projects as well as they may have done so otherwise. At times, this contributed to scope and cost changes after the contract was awarded. The extent to which some of the additional costs may have been avoided varies and is difficult to accurately gauge.

Some contract variations are unavoidable, and in some cases, they are desirable – especially where they result in enhanced outcomes. Entities can, however, avoid unnecessary variations and promote effective project delivery by appropriately defining deliverables before awarding contracts.

We found issues with the processes for approving some contract variations across the 2 departments. These were due to issues related to internal control weaknesses and limited oversight and guidance. Some project teams did not obtain appropriate approvals before varying contracts. In some cases, appropriate departmental approval was provided after variation works had commenced. Both departments are currently reviewing and updating their internal frameworks and aim to finalise them by mid- to late-2022.

Our recommendations

We have made 11 recommendations to assist entities in improving their design and implementation of relevant frameworks for managing infrastructure contracts.



1. Audit conclusions

Good contract management is a necessity, given the billions of dollars allocated or spent on infrastructure projects annually and the importance of these projects to the state's economy. The 6 projects we examined represent a combined cost of approximately \$1.4 billion. As of September 2021, the contracts we reviewed had over \$127 million in contract variations, equating to 9 per cent of the cost of the projects we examined.

During a project, the scope of work may change for various reasons, resulting in contract variations. Some variations can be positive as departments recognise and act on unforeseen opportunities or risks to enhance project outcomes. In other cases, the number, timing, and nature of variations can indicate a range of issues. This includes where project teams have not properly consulted with key stakeholders and appropriately defined the contract deliverables before finalising the contracts.

In this audit, we examined how effectively government entities have designed their contract management frameworks and applied them in managing contracts for new infrastructure projects. We found that the Department of Energy and Public Works and the Department of Education have designed their contract management frameworks to manage new infrastructure projects. However, they have not effectively updated their frameworks to keep them current.

While the existing frameworks have key elements of good contract management, they are outdated, have gaps, and are not always effectively applied by project teams or used by some government entities. The Capital Works Management Framework (for which the Department of Energy and Public Works is responsible) is the whole-of-government framework for managing infrastructure projects. It should provide entities across the public sector with the best and most up-to-date guidance. Instead, it is over 20 years old, has not been appropriately updated, and is not fit-for-purpose. This contributes to inconsistent practices, some entities not using it, and, in some cases, leads to cost and schedule overruns.

At the whole-of-government level, the Department of Energy and Public Works could further promote its services for managing infrastructure contracts. At the same time, entities could be making more use of the department's knowledge, expertise, and experience. For example, the department could help improve project planning by ensuring relevant stakeholders are engaged during the project design phase, and that the project design briefs clearly specify what the contracts are expected to deliver.

At a departmental level, the 2 departments need to provide better guidance, training, and support to their project teams in managing contracts for infrastructure projects. The limitations of their current guidance and support sometimes leads to ineffective practices and non-compliance with relevant frameworks. These limitations (often combined with time pressures) also contributed to limited consultation, planning oversights, and a lack of performance management.

In general, the projects we examined had many variations and, in some instances, lacked appropriate processes and procedures for effectively managing them. We found examples of variations that were not appropriately approved by departmental delegates prior to work commencing, and unsatisfactory documentation of approvals for some variations. Due to the size and scale of these projects, the value of variations and the associated costs to manage them are usually in the hundreds of thousands – if not millions – per variation. This can collectively contribute to significant increases in project costs. Ensuring the government's frameworks, guidance, and practices are fit-for-purpose and meet contemporary better practice is important in mitigating avoidable costs and schedule overruns.

Despite the importance and value of the infrastructure contracts, project teams have not consistently demonstrated that they appropriately manage contract risks and issues. Nor have they always adequately assessed the performance of contractors. This means they have breached the requirements of the whole-of-government framework and they do not always know whether they are receiving value.

The 2 departments have both recently completed internal reviews of their contract management frameworks and practices. These reviews were well overdue and identified some of the same gaps and weaknesses we identified in our audit. Periodic reviews – particularly when they involve internal audit teams and audit and risk committees – can help deliver continuous improvement.



2. Recommendations

Government frameworks for managing infrastructure contracts

We recommend that the Department of Energy and Public Works:

1. strengthens its whole-of-government framework to ensure it clearly states the minimum requirements for managing infrastructure contracts and provides supporting guidelines to public sector entities in applying the framework
2. reviews and where necessary updates its whole-of-government framework at least every 3 years to ensure it reflects contemporary better practices and lessons learned from contract management activities.

We recommend that the Department of Energy and Public Works and the Department of Education:

3. revise their internal policies, procedures, and guidance for managing infrastructure contracts by
 - outlining specific contract management processes and requirements to complement the government frameworks for managing infrastructure contracts
 - clearly defining and communicating the roles and responsibilities for managing contracts
 - providing appropriate training and support to staff managing contracts
 - improving contract registers to ensure a complete record of all awarded contracts
4. review their internal policies, procedures, and guidance for managing infrastructure contracts at least every 3 years to ensure they reflect contemporary better practices and lessons learned.

Managing contract performance

We recommend that the Department of Energy and Public Works and the Department of Education:

5. strengthen their contract management by ensuring their planning is in line with the government frameworks and reflects better practice approaches
6. implement clearly defined processes and procedures to ensure all contract risks and issues are identified and effectively managed
7. apply standardised processes and procedures for recording, evaluating, approving, and reporting on contract variations
8. implement clearly defined processes and procedures for developing project design briefs (including specifying what the contract is expected to deliver) and for undertaking stakeholder consultations during the project design stage
9. assess, report, and where necessary act on contractor performance
10. implement appropriate processes and procedures for sharing lessons learned and better practices from contract management activities.

Good practice for all government departments

11. We recommend that all government departments review their internal policies, procedures, and guidance for managing infrastructure contracts at least every 3 years and, where necessary, implement changes to enhance their contract management performance.

Reference to comments

In accordance with s.64 of the *Auditor-General Act 2009*, we provided a copy of this report to relevant entities. In reaching our conclusions, we considered their views and represented them to the extent we deemed relevant and warranted. Any formal responses from the entities are at [Appendix A](#).

3. Government frameworks for managing infrastructure contracts

The Queensland Government plans to spend \$52.2 billion on infrastructure projects over the next 4 years. Public sector entities engage with the private sector to manage and deliver many of the state's infrastructure projects. To ensure public sector entities achieve value for money from their contracts, they need appropriate frameworks to support the entire contract management life cycle.

The Capital Works Management Framework (a whole-of-government framework) is the Queensland Government's key guiding document for managing risks in planning and delivering building projects. The Department of Energy and Public Works owns this framework and is responsible for ensuring it is up to date and reflects better practices.

The Queensland Government has also taken a whole-of-government approach to procurement activities by grouping them into key expenditure categories. The Department of Energy and Public Works manages the expenditure category for building construction and maintenance, which includes delivering building projects such as schools and government buildings and maintaining existing infrastructure.

Public sector entities responsible for managing infrastructure contracts should have policies, procedures, and guidance material available to contract managers that align with the whole-of-government framework and support better practice application of it.

This chapter examines how effectively the Department of Energy and Public Works has designed, evaluated, and maintained the whole-of-government framework for managing infrastructure contracts. We also examine to what extent the systems, guidance, and procedures of both the Department of Energy and Public Works and the Department of Education align with relevant government frameworks for managing infrastructure contracts, and support teams in effectively managing contracts. We focused on these departments in this audit because they deliver around 60 per cent of the state's building infrastructure projects (in the building construction and maintenance expenditure category).

Is the whole-of-government framework well designed?

The whole-of-government framework, which is the responsibility of the Department of Energy and Public Works, does not clearly articulate the minimum requirements for managing contracts and does not outline requirements for effectively managing project risks. As a result, this framework does not support robust and consistent contract management across the public sector.

In comparison, for the general goods and services expenditure category, the Office of the Chief Advisor – Procurement (part of the Department of Energy and Public Works) has published the Contract Management Framework, which provides a clear and standardised approach to managing and administering contracts. In fact, Queensland Treasury, in its Project Assessment Framework publication, recommends using the Contract Management Framework as a guide for managing infrastructure contracts.

While the Contract Management Framework does not specifically mention infrastructure contracts, its guidance materials can be used as a reference for managing any type of contract. The Contract Management Framework includes aspects of contract management not captured in the Capital Works Management Framework, such as guidance for developing contract management plans and recording and sharing lessons learned.

DEFINITION

A **contract management plan** is a project document outlining the key strategies, activities, and tasks required for managing a contract, including but not limited to communication strategies, roles and responsibilities, contract milestones, performance management, and contract payment terms.

Figure 3A shows which frameworks for managing infrastructure contracts were used by the project teams we audited.

Figure 3A
Use of whole-of-government frameworks for managing infrastructure contracts

Project team	Capital Works Management Framework (administered by the Major Projects unit, Department of Energy and Public Works)	Contract Management Framework (administered by the Office of the Chief Advisor – Procurement, Department of Energy and Public Works)
Department of Energy and Public Works – Project Delivery Unit	✓	X
Department of Energy and Public Works – Capital Delivery Unit	✓	✓
Department of Education – Infrastructure Services Branch	✓	X

Source: Assembled by the Queensland Audit Office from project documents.

Recommendation 1

We recommend that the Department of Energy and Public Works strengthens its whole-of-government framework to ensure it clearly states the minimum requirements for managing infrastructure contracts and provides supporting guidelines to public sector entities in applying the framework.

Is the whole-of-government framework contemporary?

The Department of Energy and Public Works has not appropriately reviewed the whole-of-government Capital Works Management Framework since it was first published in 1999. Some of the related available guidance documents are also out of date. For example, the department last updated the guidance document for procurement strategy and contract selection in 2008.

The existing framework provides some guidance for managing infrastructure contracts, though this is relatively high level and key areas could be strengthened. For example, it does not include adequate guidance on the need to develop contract management plans.

The guidance the Department of Energy and Public Works provides about contract management plans is not easy to find, as it is spread across many documents and sources. This makes it difficult for project teams to be aware of all the requirements.

Because the policies and procedures are outdated and difficult to navigate, some public sector entities, including some of the department’s project teams, stopped using them several years ago. The Department of Energy and Public Works advised that these issues have existed for several years, but no comprehensive reviews had been undertaken.

The Department of Energy and Public Works is replacing the Capital Works Management Framework with a new framework – the Queensland Government Building Policy Framework – Growth and Renewal. The current draft of the new framework does not address the lack of guidance in the Capital Works Management Framework and in some respects, provides even less guidance. For example, the new framework does not adequately cover the frequency of contractor performance reporting. The Department of Energy and Public Works advised that it is developing supporting guidelines on contract and project management to complement the new framework.



After updating the framework and guidance, the Department of Energy and Public Works should appropriately promote its services for managing infrastructure contracts. The department has significant knowledge, expertise, and experience in this area and if entities properly used it, it could assist in better management of contracts across the public sector.

Recommendation 2

We recommend that the Department of Energy and Public Works reviews and where necessary updates its whole-of-government framework at least every 3 years to ensure it reflects contemporary better practices and lessons learned from contract management activities.

What support and guidance do entities provide internally?

The Department of Energy and Public Works and the Department of Education do not have fully documented internal contract management policies, procedures, and guidelines. These documents do not fully reflect better practice. They do not provide enough guidance to their project teams on planning and managing contracts, resulting in inconsistent and sometimes ineffective and inefficient contract management practices.

For example, these entities do not have adequate guidelines and processes for adapting contract and management activities to suit different project values, levels of complexity, and risk profiles. As a result, each project team generally determines the contract management processes, documents, and approvals to apply on their projects. This results in project teams following inconsistent contract management practices while engaging with the same building contractors on different projects. Consequently, important aspects of contract management can be rushed or overlooked, resulting in contract variations and leading to cost and schedule overruns.

In late 2020, the 2 entities self-reviewed their internal procedures for delivering capital works. These reviews highlighted several strengths and weaknesses. In May 2021, the Department of Energy and Public Works engaged an external consultant to develop an overarching project management approach for managing projects. It aims to finalise its project management approach by mid-2022 and start improving the internal contract management framework from early- to mid-2022.

The Department of Education is currently reviewing and updating its framework for managing contracts and projects. The primary purpose of both entities' current reviews is to ensure they provide a clear and standardised approach for managing and administering contracts for infrastructure projects.

Training and skills for managing contracts

The audited entities use a mix of employees and contractors to manage their infrastructure contracts and projects. While they generally have skilled and experienced staff, they have few structures in place to ensure their skills and qualifications remain contemporary.

While both entities deliver some ad hoc training, there is limited evidence of specific training on managing contracts and projects. Both entities are currently developing training materials to assist their staff in effectively and consistently applying the updated frameworks.

Defining roles and responsibilities in managing contracts and projects

The audited entities have not clearly defined and documented the roles and responsibilities for managing contracts and projects. For most of the projects we reviewed, the project teams focused on defining the project-level duties, such as managing the project budget, but not critical contract management activities, such as assessing the performance of contractors.

Clearly documented roles and responsibilities could assist in driving consistent practices across projects. In 2020, the Department of Energy and Public Works initiated a process to merge its 2 key project delivery teams (the Project Delivery Unit and Capital Delivery Unit) to improve consistency and efficiency. It is aiming to clearly define the roles and responsibilities, including for project management and contract management activities, through this process.

The Department of Education outsources the project manager role for its infrastructure projects to the private sector, with oversight from internal staff (as project coordinators). Like the Department of Energy and Public Works, the Department of Education did not clearly define the roles and responsibilities of staff involved in managing contracts and projects. It intends to address this as part of its review.

The number of infrastructure projects delivered by the Department of Education has increased by 40 per cent over the last 4 years. In 2020–21, it delivered 3,362 infrastructure projects, compared to 2,388 projects in 2016–17. During the same period, the number of project delivery staff had remained relatively stable. The Department of Education suggested this increase in projects is causing a strain on resources, with the potential to affect contract management quality.

Do entities' systems support efficient and effective contract management?

The audited entities do not have appropriate systems to efficiently and effectively manage their infrastructure contracts. Their current systems do not capture information on initial procurement activities (for example, tendering) or on developing, managing, and closing contracts. Nor are these systems integrated with the entities' financial management systems.

This means important contract information is scattered across different systems. As a result, neither of the entities have complete, easily accessible information on individual projects, nor the ability to manage their projects at the portfolio level.

DEFINITION

A **contract management system** provides a platform for managing contracts over their entire life cycle, generally from procurement stage to contract closure. It can be used for managing various aspects of contracts, including contract variations and the performance of contractors.

Managing contract registers

Neither the Department of Energy and Public Works nor the Department of Education had complete and accurate records of infrastructure contracts to enable efficient monitoring and reporting on contract progress and performance. For entities to manage their contractors, they need appropriate processes to collect, manage, and distribute timely, complete, and accurate information. The audited entities' main method for recording such information is through their contract register.

DEFINITION

A **contract register** is a listing of each contract entered into by an entity that includes information on its purpose, duration, how much will be spent, and who it is with.

The Department of Energy and Public Works' contract register was incomplete and, in some cases, inaccurate. It did not include all major infrastructure projects the department delivers, such as those delivered by its Capital Delivery Unit. These include the Capricornia Correctional Centre Expansion and the Southern Queensland Correctional Precinct – Stage 2 projects.

The Department of Education's contract register did not provide a complete and accurate record of its infrastructure contracts or enable an effective audit trail for tracking and reporting. While the department records all projects in its SAP financial system, individual contracts on each project are recorded and maintained in its contract register. We found several instances of incomplete and inconsistent contract records – such as for contract values and dates – limiting the register's usefulness in supporting effective monitoring and reporting.

Our previous report, *Confidentiality and disclosure of government contracts* (Report 8: 2017–18), emphasised the importance of maintaining a complete record of all awarded contracts, with sufficient information about each contract. Without a complete and up-to-date record of their contracts, entities cannot manage the contracts effectively.



Systems to support contract and project management activities

The 2 departments' contract management systems do not integrate with their financial systems, resulting in a significant amount of manual work, such as collating information for project and portfolio reporting purposes. This inhibits their ability to monitor and report on:

- contract completion measures (where they are finished on time and budget)
- contract variations and their causes
- progress (including time and cost issues and their causes)
- disputes and complaints, and their outcomes.

Since the audited entities do not have fit-for-purpose systems to manage their contracts, they are having to use makeshift systems, resulting in inconsistent and sometimes ineffective and inefficient contract management practices across projects. Their systems are also restricting their ability to manage risks, plan resources, and improve contract management practices.

There are opportunities for the entities to leverage the existing contract and project management systems being used by other entities. For example, the Department of Transport and Main Roads uses an integrated system (the Portfolio, Program, Project and Contract Management system) to manage its contracts and projects. The advantages of using a fit-for-purpose system for managing contracts and projects include:

- increasing efficiency by facilitating consistent and effective contract and project management approaches
- providing a unified approach for managing contracts and projects
- reducing the risk of non-compliance with required frameworks and standards
- making it easier for project stakeholders to keep up to date with project status and outcomes through aligned governance and project reporting
- enabling easier transfer of business knowledge by ensuring it is recorded and shared with other team members
- increasing opportunities for sharing lessons learned and continuous improvement processes.

Recommendation 3

We recommend that the Department of Energy and Public Works and the Department of Education revise their internal policies, procedures, and guidance for managing infrastructure contracts by:

- outlining specific contract management processes and requirements to complement the government frameworks for managing infrastructure contracts
- clearly defining and communicating the roles and responsibilities for managing contracts
- providing appropriate training and support to staff managing contracts
- improving contract registers to ensure a complete record of all awarded contracts.

Recommendation 4

We recommend that the Department of Energy and Public Works and the Department of Education review their internal policies, procedures, and guidance for managing infrastructure contracts at least every 3 years to ensure they reflect contemporary better practices and lessons learned.

Recommendation 11

We recommend that all government departments review their internal policies, procedures, and guidance for managing infrastructure contracts at least every 3 years and, where necessary, implement changes to enhance their contract management performance.

4. Managing contract performance

In this chapter, we examine how effectively the Department of Energy and Public Works and the Department of Education have been managing contracts, projects, and risks, including their management of:

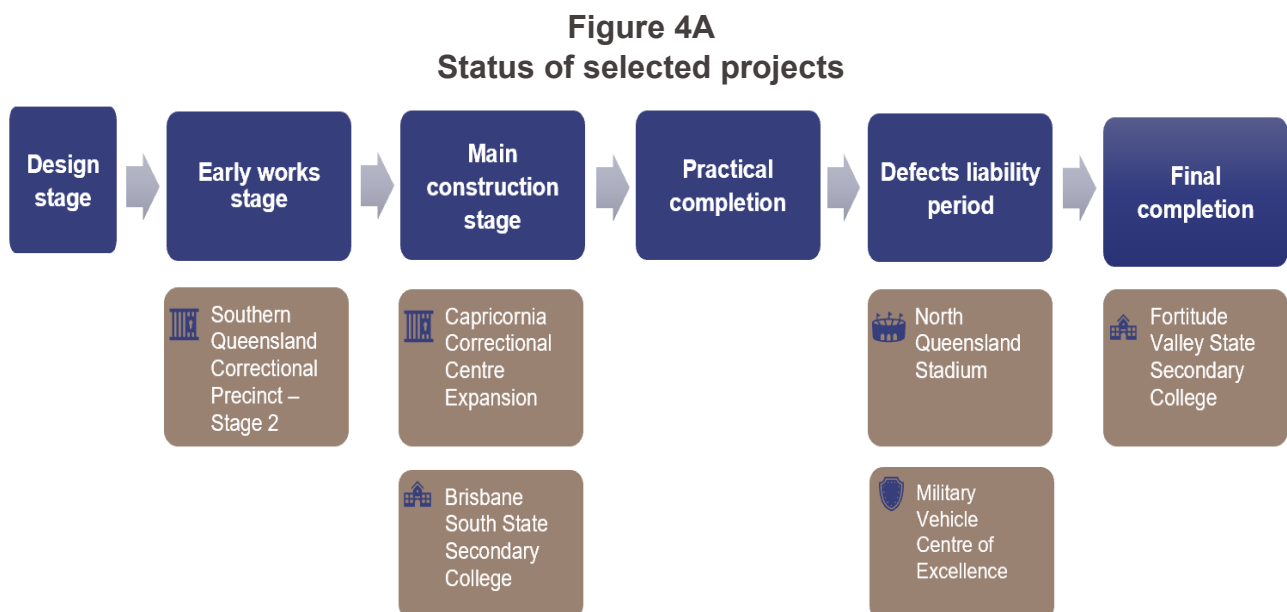
- contract planning activities
- contract risks and issues
- contract variations
- contractor performance, complaints, and disputes
- lessons learned.

To assess the performance of the 2 departments in managing their infrastructure contracts, we selected:

- 2 projects delivered by the Department of Energy and Public Works – Project Delivery Unit: North Queensland Stadium and Military Vehicle Centre of Excellence
- 2 projects delivered by the Department of Energy and Public Works – Capital Delivery Unit: Capricornia Correctional Centre Expansion and Southern Queensland Correctional Precinct – Stage 2
- 2 projects delivered by the Department of Education: Brisbane South State Secondary College and Fortitude Valley State Secondary College.

In 2020, the Department of Energy and Public Works initiated a process to consolidate its 2 project delivery teams (the Project Delivery Unit and Capital Delivery Unit) to improve consistency and efficiency. The Project Delivery Unit was established in the then Department of State Development between 2014 and 2018 to deliver the key infrastructure for the 2018 Gold Coast Commonwealth Games. In August 2018, because of machinery of government changes, this unit was transferred into the then Department of Housing and Public Works, now the Department of Energy and Public Works.

Figure 4A shows the status of the selected projects as of October 2021.



Notes: Practical completion refers to the stage of a construction contract when the works become reasonably fit for use for their intended purpose. Defects liability period refers to a set period after practical completion of a project where the contractor has the right to return to the site to remedy any defects.

Source: Assembled by the Queensland Audit Office from project documents.

Is contract management planning effective?

Whole-of-government frameworks such as the Capital Works Management Framework (Department of Energy and Public Works) and the Project Assessment Framework (owned by Queensland Treasury) require entities to develop and implement key planning documents like contract management plans and legislative compliance strategies for projects.

The 2 departments have not appropriately reinforced these requirements in their internal frameworks and do not provide sufficient guidance and support to their project teams to enable them to comply with the requirements.

DEFINITION

A **legislative compliance strategy** identifies all legislative requirements that apply to particular government building works and outlines a process to ensure compliance with these requirements.

The Capital Works Management Framework requires that government entities consult with the Department of Energy and Public Works before entering into contracts for high-risk/significant building projects. The department established a contracts committee to assist entities with this process, but we found instances where some entities had not consulted with the committee to determine the most appropriate contract type. For example, there was no committee consultation for the North Queensland Stadium project, which was initiated outside of the Department of Energy and Public Works.

DEFINITION

The Capital Works Management Framework defines **high-risk/significant building projects** as projects where:

- failure to meet project objectives of time, cost and quality would critically affect the delivery of services to the community, or
- the lack of clear and transparent processes in the procurement of high-value projects may impact on government in terms of industry development and consistency of approach.

For the projects we reviewed, compliance with relevant frameworks and better practice approaches varied, with 4 of the 6 projects not fully compliant with the whole-of-government planning requirements. While the Department of Energy and Public Works – Capital Delivery Unit's project teams generally applied relevant frameworks and better practice approaches, the project teams from the Department of Energy and Public Works – Project Delivery Unit and the Department of Education did not do so consistently.

We assessed the contract management planning for the 6 selected projects against better practice, as shown in Figure 4B.



Figure 4B
Contract management planning

Project team	Project	Contract management plan	Project management plan	Legislative compliance strategy	Risk management plan	Document management plan
Department of Energy and Public Works – Project Delivery Unit	North Queensland Stadium	●	●	●	●	●
	Military Vehicle Centre of Excellence	●	●	●	●	●
Department of Energy and Public Works – Capital Delivery Unit	Capricornia Correctional Centre Expansion	●	●	●	●	●
	Southern Queensland Correctional Precinct – Stage 2	●	●	●	●	●
Department of Education	Brisbane South State Secondary College	●	●	●	●	●
	Fortitude Valley State Secondary College	●	●	●	●	●

Notes:

- Specific planning document developed which fully covered relevant frameworks' requirements and better practice approaches.
- Specific planning document not developed – relevant frameworks' requirements and better practice approaches were partially covered in other project documents.
- Specific planning document not developed – limited coverage of relevant frameworks' requirements and better practice approaches in other project documents.

Source: Assembled by the Queensland Audit Office from project documents.

The Department of Energy and Public Works had been delivering the Capricornia Correctional Centre Expansion and Southern Queensland Correctional Precinct – Stage 2 projects from their inception. However, for the North Queensland Stadium and Military Vehicle Centre of Excellence projects, the project teams were in another department when the projects commenced. Because of machinery of government changes in August 2018, these project teams were transferred to the then Department of Housing and Public Works, now the Department of Energy and Public Works.

Contract and project management planning

Contract management plans generally establish processes to ensure the contractor and project owner comply with terms and conditions during the contract's life. Contract management plans are valuable tools for managing risks to the success of contracts. Despite this, only the Department of Energy and Public Works – Capital Delivery Unit's project teams had developed contract management plans.

The Department of Education projects did not have project management plans and this contributed to several instances of project scope changes that lacked appropriate oversight and approvals. It also impacted on project budgets and timelines. The 2 Department of Education projects we reviewed collectively required budget increases of approximately \$18 million (8.5 per cent of overall value of the projects). The budget increases were mainly needed to cover project scope changes after the project teams used the projects' contingency allowances.

The details required in a project management plan and contract management plan depend on the risk, value, and complexity of the project. The plan may range from a simple summary of essential information to comprehensive documentation for more complex contracts.



DEFINITION

A **project management plan** is an internal document that defines how a project will be executed, monitored, and controlled. It is generally a higher-level document, which does not cover all specific aspects of a contract management plan.

Compliance with legislative requirements

The Capital Works Management Framework requires a legislative compliance strategy to be developed and implemented for each government building project. While the Department of Education’s internal framework is consistent with this requirement, its project teams did not develop legislative compliance strategies for the projects we reviewed.

The Department of Energy and Public Works’ internal framework does not explicitly require the development of legislative compliance strategies. Nevertheless, 3 of the projects we reviewed had developed adequate legislative compliance documents and implemented them.

Various legislative requirements affect the planning and delivery of government building projects, and it is critical that project teams appropriately comply with these. Some of these legislative requirements relate to disability access, and environmental and natural hazards protection.

For some of the projects, the project teams developed specific plans to ensure compliance with various legislative obligations applicable to each project. Through these plans, the teams aimed to create an integrated and consistent approach to compliance. The plans articulated the process for identifying, recording, assessing, prioritising, and monitoring the legislative obligations applicable to each project.

While the other projects did not develop appropriate legislative compliance strategies, they recorded and managed some of their compliance obligations in various project documents, including project status reports. However, in most cases, these project teams provided minimal information on their compliance obligations and on the processes for ensuring compliance. As a result, there was no assurance that the project teams had identified and responded to all the compliance obligations.

Risk and document management planning

Processes for managing project risks and documents are critical to project planning and decision-making throughout the project life cycle. Despite this, the 2 departments have not clearly established the requirements and guidelines for developing and implementing risk, nor document management plans in their internal frameworks. This results in project teams not always appropriately monitoring and managing project risks and managing project documents, including for some of the projects we reviewed.

DEFINITION

A **risk management plan** outlines processes for managing project and contract risks, including how risks will be identified, analysed, mitigated, monitored, and reported.

A **document management plan** identifies documents that are to be developed and delivered throughout the project. It also identifies how a project team will manage documents, handover, and archiving requirements, and includes what is needed to be done to keep the documents secure.



A risk management plan, which documents how risks will be managed, is different from a risk register, which is used to hold information on identified risks. We found that some project teams, despite the lack of clear guidance, had developed and implemented comprehensive risk management plans for their projects. For example, the risk management plan for the Capricornia Correctional Centre Expansion:

- establishes the context of risk management
- sets criteria by which the project team will monitor, evaluate, escalate, and mitigate risks
- defines the associated governance and assurance mechanisms to support effective risk management
- assigns specific roles and responsibilities for risk management across the project team
- outlines key risk management outputs, including reporting requirements
- schedules key initiatives and activities to drive continuous improvement.

Neither of the 2 departments had standardised procedures and templates for developing document management plans. Their project teams generally determine document management and storage approaches on a project-by-project basis. This is resulting in inconsistent and sometimes ineffective and inefficient practices in how teams manage their documents across different projects. Some project teams had not retained appropriate documents to support some key decisions.

For projects that do not have appropriate document management plans, there is no assurance that the teams have identified and developed key documents in line with whole-of-government frameworks and better practice. This could be particularly critical for teams when managing any contractual disputes or complaints as appropriate and sufficient documents are essential to support their case.

The project teams had established document management plans for 2 of the projects we reviewed: Capricornia Correctional Centre Expansion and the Southern Queensland Correctional Precinct – Stage 2. For these, the project teams had outlined the document management and control approaches in the project management plan and separately developed document management plans.

Recommendation 5

We recommend that the Department of Energy and Public Works and the Department of Education strengthen their contract management by ensuring their planning is in line with the government frameworks and reflects better practice approaches.

Are contract risks and issues effectively managed?

The Capital Works Management Framework provides limited information on managing contract risks and issues. We found neither of the 2 departments had appropriately supported their project teams in managing the project risks and issues by providing clear guidelines and processes for managing these aspects.

The project teams had not consistently demonstrated that they appropriately managed contract risks and issues, and there was no standardised approach across project teams. Inadequate processes for managing these important aspects increase the likelihood of not meeting the intended outcomes and the client's expectations.

While the projects we reviewed had risk and issues registers in place, the registers were not always complete or regularly reviewed. Some of the project teams had not updated their risk registers for over 15 months at the time of the audit. In other projects, key information was missing – such as when the risks and issues were raised, action dates, and due dates. As a result, it was difficult to assess whether timely steps were taken to deal with the identified risks and issues. It is critical that project teams adequately identify, assess, and manage risks. For some of the projects we reviewed, deficiencies in these processes contributed to key risks not being appropriately managed, leading to significant schedule and cost overruns.



The Department of Education's project teams had mainly monitored and reported on project risks and issues through monthly project reports. However, this reporting was generally very high level and lacked sufficient detail to adequately inform executive management on project risks and issues. This contributed to delays in decision-making on some of the risks and issues for the projects we reviewed.

Two of the Department of Energy and Public Works' project teams had regularly monitored and reported on risks affecting project delivery. However, the other 2 had not. We found they had issues still open at the completion of their projects, even though the issues were addressed as early as the project design stage.

While project boards were set up for all the projects we reviewed, the level of information project teams provided to their boards on risks and issues varied significantly. This resulted in a varied level of oversight by the project boards. While some project boards did adequate reviews of risks and issues, some only did high-level reviews based on the information included in the monthly project reports.

Recommendation 6

We recommend that the Department of Energy and Public Works and the Department of Education implement clearly defined processes and procedures to ensure all contract risks and issues are identified and effectively managed.

Are contract variations effectively managed?

While the Capital Works Management Framework does not spell out the requirements for managing contract variations, both departments included some requirements and guidelines in their internal policies and procedures. But these are not well defined, resulting in the project teams inconsistently managing contract variations across different projects and, in some cases, not in line with better practice.

DEFINITION

Contract variation is the process of adding to or altering the terms of an original contract in a way that is mutually agreed by both parties to the contract. Contract variations may be proposed by either party (project owner or contractor) and may refer to adding, removing, or changing an existing contract provision.

For the projects we reviewed, neither of the 2 departments always clearly defined and documented what the contracts were meant to deliver. In some cases, this contributed to changes in scope and substantial extra costs after the contracts were awarded.

During a project, the scope of work may change for various reasons, resulting in contract variations. Although variations can be for unforeseeable reasons, the number, timing, and nature of variations can indicate a range of issues. For some of the projects we reviewed, we found project teams did not adequately consult with key stakeholders and define the contract deliverables appropriately before awarding the contract.



Figure 4C shows details of the number and value of contract variations on the projects we reviewed.

Figure 4C
Contract variations

Project delivery team	Project	Project stage as of September 2021	Number of variations	Net value of variations	Original contract value	% Contract value
Department of Energy and Public Works – Project Delivery Unit	North Queensland Stadium	Defects liability period	142	\$48.4 mil.	\$231 mil.	21%
	Military Vehicle Centre of Excellence	Defects liability period	35	\$6.6 mil.	\$171.9 mil.	3.8%
Department of Energy and Public Works – Capital Delivery Unit	Capricornia Correctional Centre Expansion	Construction	24	\$10.9 mil.	\$198.5 mil.	5.5%
	Southern Queensland Correctional Precinct – Stage 2	Early works	n/a	n/a	n/a	n/a
Department of Education	Brisbane South State Secondary College	Construction	167	\$8.6 mil.	\$109.9 mil.	7.8%
	Fortitude Valley State Secondary College	Completed	116	\$14.5 mil.	\$67.4 mil.	21.5%

Notes:

Net value of variations includes variations that either increase or decrease the value of the contract. A decrease in contract value is usually a result of reduction in scope to meet project budget. For example, on the Brisbane South State Secondary College project, the Department of Education reduced the scope as several contract variations led to increased project costs.

For the North Queensland Stadium project, the variation total includes the cost of implementing the best practice principles part way through construction (\$37.5 million). The Queensland Government’s *Best practice principles: Quality, safe workplaces* provides a set of criteria that tender respondents must address in responding to tenders for building projects to which this policy applies. According to this policy, it must be applied by agencies to a major project that is valued at \$100 million or more and to other projects below that threshold as declared by the Queensland Government.

The implementation of this policy on projects that were in progress (when the Queensland Government introduced this policy in May 2018) was discretionary, subject to ministerial approval. The policy states that it can be applied to existing projects where the procurement of subcontracting is still to occur. The North Queensland Stadium project was in progress when this policy was introduced and part way through its subcontracting process. A ministerial decision was made to apply this policy to this project.

For this project, apart from the \$48.4 million in contract variations (as shown in the table above), the project team further varied the stadium contract to include the Townsville City Council works (\$39 million). After the state government awarded the stadium contract, the Townsville City Council requested that the contractor undertake other key infrastructure works through the existing contract. The contractor then tendered for all the work packages, and Townsville City Council paid for the council-related works.

For the Southern Queensland Correctional Precinct – Stage 2 project, the contract value has not yet been finalised.

Source: Assembled by the Queensland Audit Office from project documents.

Oversight of project scope changes and contract variations

A lack of clearly defined and documented processes for contract variations is leading to inconsistent and sometimes inadequate practices across different project teams. The project teams do not use standardised procedures and processes, such as contract variations registers, templates, and approval processes. In some cases, limited oversight by entities is affecting how project teams manage scope changes and contract variations.

Department of Education

As the Department of Education uses externally appointed project managers to manage its projects, the project managers use their own internal processes, registers, and templates to manage contract variations. This means there is no consistent way to categorise and report on variations across different projects.



For the projects we reviewed, the project teams had not effectively tracked and reported on variations, such as whether they were consistent with the original project intent and/or scope, or whether they were outside the original project intent and/or scope – for example, client scope changes.

In addition, the Department of Education had not appropriately defined and documented its processes for managing variations. It had limited processes and guidance for approving contract variations and had not clearly communicated its financial delegations policy to its project teams. As a result, the department's internal controls over its approval processes were not fully effective, and its practices did not always align with its financial delegations policy.

Consequently, we found some examples of work commencing prior to variations being appropriately approved by departmental delegates, poor documentation of approvals for some variations, and approvals that were open to differing interpretations of the financial delegations policy. In some of these cases, evidence of the approvals indicated that departmental approval was provided after the external project managers had signed-off contract variations orders and sent them to the building contractors.

We selected a sample of contract variations for all the projects we reviewed and assessed whether they were adequately evaluated and approved. We found that key project stakeholders (such as the department's internal project teams and external project managers) generally discussed and evaluated contract variation requests. However, external project managers had not always obtained formal approval from the department's internal project teams before proceeding with contract variations.

For example, as shown in Figure 4D, on the Brisbane South State Secondary College project:

- of the 10 contract variations we reviewed, 8 were not clearly approved by an authorised departmental delegate
- only 2 contract variations were approved by the department's internal project team (project coordinator). However, the approvals were not in line with the department's financial delegations policy, because the internal employee approved the variations valued at \$568,783 and \$590,696 but only had an approval limit of up to \$25,000.

Figure 4D
Contract variations – Brisbane South State Secondary College

Variation order date	Variation relates to	Amount	Clearly approved by an authorised delegate?
30 January 2020	Soil contamination issues	\$635,470	X
25 February 2020	Fit out of the Performing Arts Centre	\$742,300	X
27 March 2020	Use of precast concrete	\$403,408	X
18 June 2020	Latent condition— asbestos removal	\$567,484	X
22 July 2020	Additional generator costs	\$590,696	✓*
10 August 2020	Change of construction materials	\$484,376	X
2 December 2020	Kitchen design and layout changes	\$568,783	✓*
3 February 2021	Civil functional layout amendments	\$2,106,826	X
17 February 2021	Setup amenities for construction phase	\$303,290	X
31 March 2021	Covid mitigation measures	\$544,489	X

Note: * The department provided approval, but it was not in line with its financial delegations policy.

Source: Assembled by the Queensland Audit Office from the Brisbane South State Secondary College project documents.

For the Fortitude Valley State Secondary School project, we found that the department's internal project team had approved all 5 contract variations we reviewed (50 per cent of the contract variations on this project). However, approvals for 3 of the 5 variations were not in line with the department's financial delegations policy, because an internal employee (project coordinator) approved the variations but only had an approval limit of up to \$10,000. The contract variations amounted to:

- \$727,200 – for audio-visual upgrades
- \$442,113 – for various building design and layout changes
- \$206,673 – for various building design and layout changes.

However, the department advised that its practice was for project coordinators to approve contract variations in accordance with the project manager delegations (approval limit of \$2.5 million). This creates discrepancies between the defined roles in its policies, project documents, and practices. The department has since updated its approval process for contract variations. Project teams are now required to obtain approval from the Deputy Director-General, Infrastructure Services for all contract variations.

We also found that for the Department of Education projects we reviewed, the project teams consulted with some stakeholders in the design stage to inform the project design – including teachers from the department. However, school principals subsequently initiated some of the project design changes, including internal building layout modifications. School principals are usually appointed after the department finalises the project contracts. The Department of Education allows the school principals to initiate project design changes, including after construction commences.

Prior to March 2021, the Department of Education did not have any set limits (thresholds) for contract variations initiated by school principals. In March 2021, it began defining and documenting its approval process for this. It has now established some approval thresholds for contract variations, including that the following project changes will require the approval of the Department of Education's Building Future Schools Program Board:

- all variations requested by the school principal that are greater than \$100,000
- all variations requested by the school principal where the cumulative total of principal-requested variations exceeds \$0.5 million
- any major discretionary changes that would result in a departure from the project brief (for example, changes in school capacity)
- variations that have the potential to set an unwarranted precedent for future projects.

Department of Energy and Public Works

For the Department of Energy and Public Works projects we reviewed, there were appropriately defined and documented processes for contract variations. However, while most of the project teams had adequately assessed and documented the contract variation decisions and approvals, some teams had not followed the approval requirements.

For example, 2 of the 10 variations we selected for the North Queensland Stadium project required approval from the project owner. However, the project team was not able to provide appropriate evidence of approval for these 2 variations. They were:

- \$585,384 contract variation – for providing signage screens around the ground for advertising purposes
- \$309,407 contract variation – for including secure lines to main stadium entrances for improved validating and checking of people and items before they enter the gates.



For this project, while the project team and project owner discussed most of the contract variations in meetings and agreed in principle, the project team did not always obtain formal approval from the project owner before varying the contract.

Recommendation 7

We recommend that the Department of Energy and Public Works and the Department of Education apply standardised processes and procedures for recording, evaluating, approving, and reporting on contract variations.

Engaging with key stakeholders in the project design stage

The Capital Works Management Framework provides limited information on engaging with key stakeholders (such as end users) in the project design stage. We also found neither of the departments had clearly defined and documented guidelines and processes for engaging with stakeholders. This means their project teams were not always clear on the level of stakeholder engagement needed when determining what the contract and project are expected to deliver. Some of the departments' project teams even advised that it is not always clear who the key project stakeholders are in the early design stage or how much engagement is required.

We found that inadequate stakeholder engagement in the initial project design stage sometimes resulted in significant scope changes, contract variations, and delays. For example, on the Brisbane South State Secondary College project, the project team had to initiate a significant contract variation to change road intersection layouts for bicycle and pedestrian safety near the school. During the project design stage, the project team consulted with multiple stakeholders in designing the road intersection upgrade. These consultations involved several meetings and engagements with local government and other state government entities, including the Department of Transport and Main Roads. However, after construction started, a key stakeholder group raised concerns with the slip lanes for bike and pedestrian access. No consultation had been undertaken with the stakeholder group in the project design stage.

The Department of Transport and Main Roads informed us (although was unable to provide supporting evidence) that during consultation it raised some (although not all) of the same issues that were later raised by the stakeholder group. It advised the Department of Education had not acted on its advice until the stakeholder group later raised its concerns. The project team had to make major changes to the road intersection layouts, resulting in a contract variation of approximately \$2 million and a project works delay of around 4 months.

While some project teams identified and consulted with the appropriate stakeholders, they were unclear on the level of engagement and inputs needed to effectively inform the project designs. This also resulted in substantial contract variations.

For example, the Fortitude Valley State Secondary College's project team had to initiate contract variations to meet fire safety standards in the project construction stage. In the project design stage, the project team had briefly consulted with stakeholders regarding fire safety standards. However, because it had not conducted detailed fire modelling, stakeholders did not have enough information to assess the risks appropriately. Once the project team provided the stakeholders with the fire modelling during construction, they identified significant issues with the school's design. The cost of the contract variations was approximately \$3.7 million, and it took around a month to rectify.

Despite the Department of Energy and Public Works having limited standardised processes for engaging with stakeholders in the project design stage, we generally found an adequate level of stakeholder consultation on most of its projects we reviewed. For example, on the Capricornia Correctional Centre Expansion and the Southern Queensland Correctional Precinct – Stage 2 projects, the project teams recorded detailed evidence of stakeholder discussions to inform contract and project deliverables.

However, on projects such as the Military Vehicle Centre of Excellence, some of the contract deliverables changed as the construction progressed and the requirements of the end users were better understood. The most significant contract variation on this project was to extend one of the main buildings to increase staffing capacity (costing \$3.6 million).

Defining contract deliverables in the project design stage

The Capital Works Management Framework does not provide appropriate guidance for defining contract deliverables in the project design stage. We also found neither of the 2 departments provides clear guidelines and processes for managing this aspect.

Time pressures sometimes see projects starting before project teams have performed robust stakeholder consultations and appropriately defined and finalised what the contract is expected to deliver. This sometimes leads to significant scope changes, and project time and cost overruns.

For example, on the Fortitude Valley State Secondary College project, timeline pressures (a pre-announced and committed school opening date) contributed to gaps in stakeholder engagement and defining of contract deliverables. The project team did not adequately develop detailed designs of the functions and layouts of each area before awarding the contract. The value of total contract variations on this project was \$14.5 million (21.5 per cent of the original contract value). This project met its original completion time frame with only some minor works that were completed shortly after practical completion date.

While some contract variations are unavoidable or may even be desirable (where they result in more effective project outcomes and better value for money), entities can promote effective project delivery by appropriately defining contract deliverables before awarding contracts.

Some of the projects we reviewed had several avoidable scope changes during construction, including changes to internal building design layouts. In most cases, the resulting contract variations affected both the project costs and time frames. For example, the Brisbane South State Secondary College project had a budget increase of \$9.8 million, mainly to cover contract variation costs.

Due to several contract variations that affected the budget for this project, the Department of Education had to later remove some of the key elements from the original project scope for the school. For example, it excluded internal fit-out works in the seniors' building, stating that this building would be needed at a future stage. Excluding this project element reduced the net value of total contract variations by \$5.2 million (to \$8.6 million as of September 2021). The internal fit-out works are expected to be undertaken later, subject to future project budget increases.

Due to limited guidance materials, some project teams have not been clear on the level of work required to effectively develop project design and deliverables. This resulted in significant issues on some of the projects we reviewed.

For example, one of the most significant variations on the Fortitude Valley State Secondary College project was to mitigate flood risk (costing \$3.6 million). In the design stage, the Department of Education developed some flood modelling, which showed acceptable flood levels. After the contract was awarded, the building contractor undertook more detailed flood modelling and identified increased flood risk. The difference in results was because the building contractor identified an issue with the initial flood modelling performed by the Department of Education. The project team advised that it could have identified this issue earlier if it had performed a more detailed analysis in the design stage.

The project team stated that the costs for meeting the flood standards (and the fire safety standards discussed earlier) would still have been required even if the detailed flood and fire modelling results had been determined at an earlier project stage. However, the actual costs may have been lower, based on being included within a competitive tender process. It is not possible to accurately quantify what the cost savings would have been, but both contract variations resulted in delays to the project.

Recommendation 8

We recommend that the Department of Energy and Public Works and the Department of Education implement clearly defined processes and procedures for developing project design briefs (including specifying what the contract is expected to deliver) and for undertaking stakeholder consultations during the project design stage.



Are contractor performance and contract complaints and disputes effectively managed?

The complexity of projects can vary and require appropriate management of contractor performance to achieve effective project outcomes. However, despite the significance of the infrastructure contracts, project teams have not always adequately managed the performance of contractors. Project teams have, however, generally managed contract complaints and disputes effectively.

Managing contractor performance

According to the Capital Works Management Framework, government entities should complete a performance report for each contractor at 50 per cent construction stage and between one and 3 months after practical completion of a project. Government entities can also undertake performance reporting at other times, for example, if it becomes apparent that the contractor is not performing to expectations.

Neither the Department of Energy and Public Works nor the Department of Education has adequately developed procedures and processes for managing contractor performance that comply with the Capital Works Management Framework. These entities' project teams have not effectively monitored and reported on contractor performance.

Effective monitoring and management of contractor performance throughout the life of a contract can:

- improve contractor performance
- enhance relationships with contractors
- assist in developing contractor capability
- contribute to effective risk management.

Five of the 6 projects we reviewed have progressed past the 50 per cent completion stage. At that stage, none of the project teams had undertaken contractor performance reviews for any of these projects.

Figure 4E shows the contractor performance reporting undertaken on the reviewed projects.

Figure 4E
Contractor performance reporting

Project delivery team	Project	Performance reporting at 50% completion	Performance reporting at practical completion	Total number of performance reports
Department of Energy and Public Works – Project Delivery Unit	North Queensland Stadium	X	X	One – at 80% completion
	Military Vehicle Centre of Excellence	X	✓	One – at practical completion
Department of Energy and Public Works – Capital Delivery Unit	Capricornia Correctional Centre Expansion	X	n/a	None
	Southern Queensland Correctional Precinct – Stage 2	n/a	n/a	n/a
Department of Education	Brisbane South State Secondary College	X	n/a	One – at 80% completion
	Fortitude Valley State Secondary College	X	X	One – 12 months after practical completion*

Notes:

n/a means the project has not reached the relevant completion stage.

* The project team had completed the contractor's performance report 12 months after practical completion, which is 9 months later than required. The requirement for performance reporting is between one and 3 months after practical completion.

Source: Assembled by the Queensland Audit Office from project documents.

The Capital Works Management Framework states that, where contractor performance issues are identified, a performance review should be undertaken as soon as possible to facilitate timely discussion between the public sector entity and the contractor. On one of the projects, there were recurrent contractor performance issues during the construction stage, particularly with meeting contractual time frames and quality standards. While the project team had discussed these issues with the contractor, the project team had not completed the required contractor performance reviews.

This project was expected to achieve final completion in mid-July 2021 (12 months after practical completion). However, this is now expected to occur in April 2023, primarily due to several outstanding works and identified defects. One of the identified issues will require rectification works estimated at \$3.2 million and is likely to take 6 to 8 months to complete.

Recommendation 9

We recommend that the Department of Energy and Public Works and the Department of Education assess, report, and where necessary act on contractor performance.

Managing contract complaints and disputes

While the Capital Works Management Framework does not cover management of contract complaints and disputes, the 2 departments have both developed procedures and processes for managing these. Their project teams have detailed information on the processes for recording, escalating, and resolving complaints and disputes.

Project teams have generally managed complaints and disputes effectively by recording and resolving them appropriately. There have been some minor differences of opinion between the project teams and contractors on certain contract variation and claim costs. While most of these were resolved in a timely manner, some are taking excessive time. One project team had been managing a contractor's claim for additional costs of over \$1 million related to COVID-19 safety rules. The claim had been under negotiation for more than 15 months.

Are lessons learned from contract management activities effectively shared?

The Capital Works Management Framework does not cover the recording and sharing of lessons learned from contract management activities. However, several better practice guides and the frameworks for other expenditure categories have identified this as a critical element for effectively managing contracts.

Neither of the 2 departments has clearly documented procedures and processes for recording and sharing lessons learned from contract management activities. This hinders their ability to facilitate continuous learning and improve contract management activities. Their project teams do not consistently or systematically record and apply lessons learned in their contract planning and delivery activities. This can result in avoidable rework, delays, or duplication.

The project teams from the Department of Energy and Public Works' Capital Delivery Unit created templates for developing contract management plans and legislative compliance strategies. However, the project teams from the Department of Energy and Public Works' Project Delivery Unit were unaware that the relevant templates existed within the entity and did not develop these plans and strategies for their projects.

For 3 of the 6 projects we reviewed, the project teams had developed some processes for recording lessons learned. For these, the project teams created lessons learned registers and appropriately maintained them during project delivery. The teams for the other projects we reviewed did not have processes for identifying and documenting lessons learned.

Recommendation 10

We recommend that the Department of Energy and Public Works and the Department of Education implement appropriate processes and procedures for sharing lessons learned and better practices from contract management activities.



Appendices

A.	Entity responses	23
B.	Audit scope and methods	37



A. Entity responses

As mandated in s. 64 of the *Auditor-General Act 2009*, the Queensland Audit Office gave a copy of this report with a request for comments to the:

- Director-General, Department of Energy and Public Works
- Director-General, Department of Education
- Commissioner, Queensland Corrective Services.

We also provided a copy of the report, with the option of providing a response, to the:

- Premier and Minister for the Olympics
- Director-General, Department of the Premier and Cabinet
- Under Treasurer, Queensland Treasury
- Minister for Energy, Renewables and Hydrogen and Minister for Public Works and Procurement
- Minister for Education, Minister for Industrial Relations and Minister for Racing
- Minister for Police and Corrective Services and Minister for Fire and Emergency Services.

This appendix contains the detailed responses we received.

The heads of these entities are responsible for the accuracy, fairness, and balance of their comments.



Comments received from Minister for Energy, Renewables and Hydrogen and Minister for Public Works and Procurement



Minister for Energy, Renewables and Hydrogen
Minister for Public Works and Procurement

Our Ref: MN03698-2022
Your Ref: PRJ02720

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12 MAY 2022

Mr Brendan Worrall
Auditor-General
Queensland Audit Office
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By email: qao@qao.qld.gov.au

Dear Mr Worrall

Brendan

Thank you for providing the Queensland Audit Office (QAO) report on Contract Management for New Infrastructure.

I acknowledge Mr Paul Martyn, Director-General, Department of Energy and Public Works (DEPW) has provided a response to the report recommendations and understand the Director-General has also outlined the work DEPW has advanced to build a more robust foundation for infrastructure contract management.

This report further confirms the approach DEPW has taken to date and I provide the following commentary on DEPW's commitment to successful project outcomes through stronger management frameworks.

In 2020, DEPW commenced a revision of the key governing frameworks for Queensland's infrastructure asset management. The Building Policy Framework initiative is focused on providing a fit for purpose policy that provides a holistic and strategic approach to asset management lifecycles. This work continues to progress and includes the development of supporting guidelines that will address the report's recommendations by providing further clarity and detail in the application of the policy for public sector entities.

Additionally, the Project Management Centre of Excellence, initiated in 2021, is developing stronger rigor around project initiation, planning, delivery and risk management practices for Public Works' project teams and its client agencies. This initiative also includes stronger integration with contract management teams and will position DEPW as a high quality and professional service provider for integrated project and contract management.

Further to this, DEPW has commenced the Reinforced Infrastructure Contract Management Initiative, which is developing a targeted Contract Management Framework for the infrastructure contracts utilised by the Queensland Government to deliver its capital projects. It will bridge the gap between the Building Policy Framework's principles and the application of these principles to the operating environments for public sector entities.

Based on the current approach, DEPW is progressing on a sound trajectory towards addressing the report's recommendations and delivering improved project outcomes through stronger management frameworks and practices.

I hope this information answers your enquiry. If you need more information or help with this matter,

Yours sincerely



Mick de Brenni MP
Minister for Energy, Renewables and Hydrogen
Minister for Public Works and Procurement

Comments received from Director-General, Department of Energy and Public Works



Queensland
Government

Department of
Energy and Public Works

Our Ref: MN03559-2022
Your Ref: PRJ02720

12 MAY 2022

Mr Brendan Worrall
Auditor-General
Queensland Audit Office
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By email: qao@qao.qld.gov.au

Dear Mr Worrall

Department of Energy and Public Works' (DEPW) Response to Proposed Report – Contract Management for New Infrastructure

Thank you for providing the Queensland Audit Office (QAO) report on Contract Management for New Infrastructure and associated recommendations for DEPW's review and response.

The Queensland Government is committed to providing productivity-enhancing economic infrastructure through a broad range of capital works projects that help create jobs, support Queensland businesses and grow the economy.

DEPW has a strong and pro-active agenda in relation to improving delivery of capital works.

Organisational Alignment: In 2020-21, DEPW's Public Works division underwent organisational change and realignment, which included the amalgamation of significant capital delivery projects, contract support services and policy ownership into a newly established division, Major Projects. This change aligns key functional infrastructure management services into a stronger core business unit.

Policy Development: As the Minister observes in his letter to you, DEPW has worked to update the governing frameworks for infrastructure asset management. This is a significant agenda and further guidance is being prepared. DEPW has also commenced the Reinforced Infrastructure Contract Management Initiative, which will develop a targeted Contract Management Framework for infrastructure contracts and bridge the gap between policy principles and the application of these to operational environments for public sector entities.

Best Practice: Through the Project Management Centre of Excellence, DEPW is documenting best practice in infrastructure contract management, and developing tools and capability building to lift the quality of contract management across government. During its final implementation process throughout 2022, DEPW will be reinforcing integrated management practices with project delivery and contract management teams.

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Strong Partnerships: DEPW is working closely with agencies across government to improve contract management. Our partnership with the Department of Education is strong and we are working with them in enhancing approaches to contract management.

This agenda predates your audit.

I thank your staff for identifying that those contracts managed by DEPW's core project delivery team from commencement through to handing over to the client agency met all requirements for better practice. It is exactly this approach that we are building out through our Project Management Centre of Excellence and associated reforms.

It is understood that the QAO's report provides a snapshot of project and organisational circumstances at a point in time against a fixed scope and does not fully reflect the status of initiatives that DEPW has progressed to enhance its service offerings in these areas as outlined above. You may wish to revisit this matter in the future to capture the full benefits of these changes.

If you require any further information about this matter, [REDACTED]
[REDACTED]
[REDACTED]

Yours sincerely



Paul Martyn PSM
Director-General

Encl.



Response to recommendations



Department of Energy and Public Works

Contract management for new infrastructure

Recommendation	Agree/ Disagree	Timeframe for implementation (Quarter and financial year)	Additional comments
We recommend that the Department of Energy and Public Works:			
1. strengthens its whole-of-government framework to ensure it clearly states the minimum requirements for managing infrastructure contracts and provides supporting guidelines to public sector entities in applying the framework	Agree	Commenced	<p>The Department of Energy and Public Works will address the recommendation(s) across government through the newly released Building Policy Framework (BPF).</p> <p>Part of the BPF implementation is through the Building Reinforced Infrastructure Contract Management (RICMAN) Initiative which unites the approach to infrastructure contract management by introducing greater rigor between policy, framework and the application of these to the operating environment.</p> <p>The initiative includes the following:</p> <ul style="list-style-type: none"> • Expansion of the BPF Guidelines to enhance the relationship between Contract Management and better practice building policy for infrastructure management. • Development and implementation of a fit for purpose Infrastructure Contract Management Framework (ICMF), relevant and targeted to the Queensland Government infrastructure contracts. • The establishment of a Contract Management Centre of Excellence (CMCOE) that will develop and maintain consistent toolkits for the application of Infrastructure Contract Management practices within the operating environment.



Recommendation	Agree/ Disagree	Timeframe for implementation (Quarter and financial year)	Additional comments
2. reviews and where necessary updates its whole-of-government framework at least every 3 years to ensure it reflects contemporary better practices and lessons learned from contract management activities.	Agree		The BPF will be reviewed in 2025, and every three years thereafter.
3. revise its internal policies, procedures, and guidance for managing infrastructure contracts by: <ul style="list-style-type: none"> • outlining specific contract management processes and requirements to complement the government frameworks for managing infrastructure contracts. • clearly defining and communicating the roles and responsibilities for managing contracts • providing appropriate training and support to staff managing contracts • improving contract registers to ensure a complete record of all awarded contracts 	Agree	Qtr 1 2023	<p>Through the development of the ICMF, DEPWP is providing high-level advice and guidance to public sector entities on general role and/or functional definition and divisions that agencies can adapt to their operating circumstances.</p> <p>Within the Department, the Project Management Centre of Excellence (PMCOE) is developing existing toolkits that provide greater clarity in roles and functionality definitions for project, contract management and administration teams. PMCOE will collaborate with CMCOE to align contract management requirements with the new framework.</p> <p>Following the development and finalisation of the Framework, CMCOE will develop and rollout training to relevant Public Works staff and across government agencies.</p>
4. review its internal policies, procedures, and guidance for managing infrastructure contracts at least every 3 years to ensure they reflect contemporary better practices and lessons learned.	Agree	Qtr 1 2023	The establishment of the ICMF and CMCOE includes the development and implementation of ongoing management, governance and quality control/assurance activities that assigns ownership and prompts review cycles every three years or as required.
5. strengthen its contract management by ensuring their planning is in line with the government frameworks and reflects better practice approaches	Agree	Qtr 2 2023	As part of the PMCOE initiative, a Contract Management Plan has been developed for high-risk and significant profiled project teams to complete. This will be revised to align with the new ICMF, once finalised.



Recommendation	Agree/ Disagree	Timeframe for implementation (Quarter and financial year)	Additional comments
6. implement clearly defined processes and procedures to ensure all contract risks and issues are identified and effectively managed	Agree	Qtr 1 2023	<p>As part of the PMCOE initiative, project risk identification practices and processes are being enhanced. These include potential contract and/or contract management risks, as well as the inclusion of contract management practitioners or Subject Matter Experts (SMEs) as recommended attendees to project risk workshops and review cycles.</p> <p>PMCOE will collaborate with CMCOE to refine contract-specific risk management as part of broader project management practices that ensure project risks are considered and managed holistically, rather than in isolation.</p>
7. apply standardised processes and procedures for recording, evaluating, approving, and reporting on contract variations	Agree	Underway	<p>Variation management toolkits for practitioners are being developed through CMCOE.</p> <p>Additionally, PMCOE is developing improved project governance guidelines that prompt and promote the inclusion of contract variations reporting, escalation and approvals through relevant project governance arrangements.</p>
8. implement clearly defined processes and procedures for developing project design briefs (including specifying what the contract is expected to deliver) and for undertaking stakeholder consultations during the project design stage	Agree	Qtr 2 2023	<p>PMCOE are liaising with the Office of the Queensland Government Chief Architect on best practice for identifying and capturing design requirements through project initiation and planning stages.</p> <p>Additionally, the project governance guidelines being developed by PMCOE will improve review and approval process for design development.</p> <p>PMCOE and CMCOE will collaborate to explore and enhance existing contract instruments that translate and/or clarify design brief deliverables.</p>
9. assess, report, and where necessary act on contractor performance	Agree	Underway	<p>PMCOE have included greater prompts and rigor around performance reporting requirements through the Prequalification System (PQC) for project delivery teams.</p> <p>Through the ICMF and CMCOE, the Department is reviewing, considering and consolidating all potential contract performance management options for the current suite of contracts.</p>



Recommendation	Agree/ Disagree	Timeframe for implementation (Quarter and financial year)	Additional comments
10. implement appropriate processes and procedures for sharing lessons learned and better practices from contract management activities.	Agree	Qtr 1 2023	PMCOE have implemented improved Lessons Learned practices for project delivery teams, including the capture and knowledge sharing of this information. This includes lessons pertaining to contract type, contract management and administration. Although, as with risk management, PMCOE will collaborate with CMCOE on refining the lessons learned capture and dissemination process as part of broader approach to continuous improvement through knowledge sharing.



Comments received from Director-General, Department of Education



Office of the
Director-General

Department of
Education

12 MAY 2022

Mr Brendan Worrall
Auditor-General
Queensland Audit Office
Email: gao@gao.qld.gov.au

Dear Mr Worrall

Thank you for your email dated 19 April 2022 regarding the Queensland Audit Office's (QAO) proposed report to Parliament titled, *Performance audit – Contract management for new infrastructure* (the Report).

I welcome the opportunity to provide feedback on the findings and recommendations of the Report.

The Department of Education accepts the recommendations, and I have enclosed my response to recommendations related to the department.

As recognised in the Report, while the department is compliant with its legislative and regulatory requirements, there is room for improvement in our processes.

The department's Infrastructure Investment Portfolio has seen exponential growth in recent years, from \$597 million in 2014–15 to \$1.9 billion in 2021–22. Acknowledging this significant growth, the department has undertaken a comprehensive agenda to improve the way we manage our portfolio.

Since QAO's audit in 2021, the department has completed improvement actions in three key areas: culture and leadership; governance and monitoring; and processes and standards for infrastructure projects.

The department has examined existing processes and implemented business improvements to enhance the management of its infrastructure portfolio. As a priority, the department's Executive Management Board and Audit and Risk Management Committee continue to have oversight of our progress.

The department remains committed to continuous business improvement for the infrastructure portfolio, and I assure you the department will continue to work closely with the Department of Energy and Public Works to align with whole-of-Government frameworks, best practice contract management and project management guidance.

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Should you wish to discuss this matter further, I invite you to contact [REDACTED]

Thank you again for the opportunity to provide comment on the Report.

Yours sincerely



MICHAEL DE'ATH
Director-General

Ref: 22/257335

Enc



Response to recommendations

Department of Education

Contract management for new infrastructure

Recommendation	Agree/ Disagree	Timeframe for implementation (Quarter and financial year)	Additional comments
We recommend that the Department of Education:			
1. revise its internal policies, procedures, and guidance for managing infrastructure contracts by: <ul style="list-style-type: none"> • outlining specific contract management processes and requirements to complement the government frameworks for managing infrastructure contracts. • clearly defining and communicating the roles and responsibilities for managing contracts • providing appropriate training and support to staff managing contracts • improving contract registers to ensure a complete record of all awarded contracts 	Agree	Q4 FY23	The department has undertaken considerable improvements in contract and project management, and provided additional procurement and financial training to relevant staff. The department will continue working closely with the Department of Energy and Public Works (DEPW) to ensure all contract management policies, procedures and guidance are consistent with best practice whole-of-Government advice.
2. review its internal policies, procedures, and guidance for managing infrastructure contracts at least every 3 years to ensure they reflect contemporary better practices and lessons learned.	Agree	Q4 FY23	The department will ensure all policies and procedures align with the new DEPW's whole-of-Government framework scheduled for release in mid-late 2022.
3. strengthen its contract management by ensuring their planning is in line with the government frameworks and reflects better practice approaches	Agree	Q4 FY23	The department will ensure all policies and procedures align with the new DEPW's whole-of-Government framework scheduled for release in mid-late 2022.
4. implement clearly defined processes and procedures to ensure all contract risks and issues are identified and effectively managed	Agree	Q4 FY23	The department will ensure all policies and procedures align with the new DEPW's whole-of-Government framework scheduled for release in mid-late 2022.

Recommendation	Agree/ Disagree	Timeframe for implementation (Quarter and financial year)	Additional comments
5. apply standardised processes and procedures for recording, evaluating, approving, and reporting on contract variations	Agree	Q4 FY23	<p>The department has reviewed its contract variation processes and implemented additional assurance activities.</p> <p>The department will ensure policies and procedures align with the new DEPW's whole-of-Government framework scheduled for release in mid-late 2022.</p>
6. implement clearly defined processes and procedures for developing project design briefs (including specifying what the contract is expected to deliver) and for undertaking stakeholder consultations during the project design stage	Agree	Q4 FY23	<p>The department will ensure all policies and procedures align with the new DEPW's whole-of-Government framework scheduled for release in mid-late 2022.</p>
7. assess, report, and where necessary act on contractor performance	Agree	Q1 FY23	<p>The department will ensure compliance with the DEPW's whole-of-Government requirements.</p>
8. implement appropriate processes and procedures for sharing lessons learned and better practices from contract management activities.	Agree	Q1 FY23	<p>The department will formalise lessons learned activities currently undertaken.</p>



Comments received from Assistant Commissioner, Queensland Corrective Services



Ref: QCS-01599-2022



Queensland
Corrective Services

5 May 2022

Mr Brendan Worrall
Auditor-General
Queensland Audit Office
53 Albert Street
BRISBANE QLD 4000
qao@qao.qld.gov.au

Dear Mr Worrall

PRJ02720 Proposed Report – Contract management for new infrastructure

We acknowledge receipt of the proposed audit report on 19 April 2022 under cover of an email to the Commissioner, Queensland Corrective Services. I have been asked to respond to you on his behalf.

We acknowledge your comments regarding the two Queensland Corrective Services' projects that the audit reviewed and note there are no specific findings or recommendations requiring action from Queensland Corrective Services.

Thank you, and the audit team, for your work on this matter and their consideration of our feedback during the audit process. We will continue to liaise with the Department of Energy and Public Works on these and any future projects.

If you require further information regarding this matter, please contact [REDACTED]

Yours sincerely

Richard Wittmack
Assistant Commissioner
Asset Services and Major Capital Works Command

cc: P. Brahman
Assistant Auditor General
Queensland Audit Office

OFFICIAL

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B. Audit scope and methods

Performance engagement

This audit has been performed in accordance with the *Auditor-General Auditing Standards – December 2019* and the Standard on Assurance Engagements ASAE 3500 *Performance Engagements*, issued by the Auditing and Assurance Standards Board. This standard establishes mandatory requirements and provides explanatory guidance for undertaking and reporting on performance engagements.

The conclusions in our report provide reasonable assurance that the objectives of our audit have been achieved. Our objectives and criteria are set out below.

Audit objective and scope

The objective of the audit is to assess how effectively government entities manage contracts for the delivery of new infrastructure.

The audit addressed the objective through the following sub-objectives:

- How effective are contract management frameworks, guidelines, and processes in supporting robust contract management practices?
- How effectively are government entities applying the contract management frameworks, guidelines, and processes to manage infrastructure contracts?

To assess the process of how the audited entities manage their infrastructure contracts, we selected a sample of 6 projects. We considered a range of factors in selecting the sample, including that there is appropriate coverage of:

- different project delivery teams
- types of infrastructure projects
- geographical location of the projects
- project values and risks
- projects with different status.

Our findings related to these selected projects are not necessarily indicative of the departments' performance in managing all infrastructure projects.

Entities subject to this audit

- Department of Energy and Public Works
- Department of Education
- Queensland Corrective Services

Since Queensland Corrective Services mainly uses the Department of Energy and Public Works to manage its infrastructure contracts, we only assessed the Queensland Corrective Services in terms of it overseeing and managing its projects being delivered by the Department of Energy and Public Works. It is not mentioned by name in the report itself.



While planning for this audit, we considered including the Department of Transport and Main Roads in scope. It is the lead agency for the transport and services expenditure category and uses different frameworks and systems for managing contracts to those used in the building construction and maintenance category. However, to keep the audit focused and confined, we decided to select only one expenditure category.

We assessed that the audit impact from looking at the building construction and maintenance expenditure category would be higher, since this category covers a broad range of public sector entities delivering infrastructure projects. It could not only provide specific learnings for those entities, but also broader learnings for other public sector entities.

While we did not include the Department of Transport and Main Roads as an in-scope entity, we have engaged with it as a stakeholder during the audit. This was mainly to obtain an understanding of its contract management practices and draw insights where relevant. We also discussed matters on which the in-scope entities had consulted with the Department of Transport and Main Roads, such as providing roadworks and traffic-flow advice on specific projects.

Scope exclusions

The audit focuses on infrastructure projects with a contract in place. It excludes aspects such as contract tendering and negotiation processes. If we have identified through our audit analysis that the root cause of deficiencies or poor contract management was poor contract design, we have reported this.





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