
NORTH AYRSHIRE COUNCIL

30 May 2024

Audit and Scrutiny

Title: Construction Contract Quality Monitoring

Purpose: To update the Audit and Scrutiny Committee on the Council's approach to Construction Contract delivery.

Recommendation: It is proposed that the committee note the contract administration processes in place and the key risk and mitigation measures noted in the report

1. Executive Summary

- 1.1 The Audit and Scrutiny Committee have requested information be provided regarding the Council's construction contract management procedures following on-going water ingress to a sheltered housing unit which had previously undergone a refurbishment project.
- 1.2 The cause of the particular issue highlighted has been found to be as a result of the interface with a section of the building which was not refurbished and a requirement to clear leaf-debris from the area, rather than a specific flaw in the contract administration process.
- 1.3 A suite of procurement, contract administration and governance measures are in place to ensure the Council's construction contracts and associated risk are managed appropriately; a summary is provided in the report.

2. Background

- 2.1 The Audit and Scrutiny Committee have requested information be provided regarding the Council's construction contract management procedures, in particular in relation to construction quality and the sign-off / acceptance of completed works.
- 2.2 The question was posed following on-going water ingress to the roof of Connel Court Sheltered Housing Unit in Kilbirnie. This property underwent a significant refurbishment between 2018 and 2020. The works were designed, and project managed by the Council's Property Management and Investment (PMI) team. The construction contract was carried out by McLaughlin Construction limited.
- 2.3 Investigation of the water ingress highlighted that blocked rain-water outlets in a flat roof cause the inlets to become overwhelmed and let-in water.

- 2.4 The work carried out at the time of the refurbishment included the application of a liquid applied roofing membrane to the area of flat roof and the installation of brush gutter-guard system to prevent leaves blocking outlets. The roof-deck and outlets were not replaced.
- 2.5 The extent of the works was governed by the need to maintain a habitable environment for residents during the course of the project. It was also believed the liquid applied coating and outlet guards would be sufficient to ensure the roof remained serviceable moving forward.
- 2.6 Following completion of the works, the contract administrator was not made aware of any water ingress during the one-year Defect Liability Period. It is assumed therefore that the subsequent water ingress issues have arisen as a result of an excess of leaf debris blocking the outlets. The underlying roof-deck also appears to have been compromised by the water ingress. As a result:
- Building Services have agreed to undertake regular clearance of the roof and outlets.
 - A project to undertake a replacement of the roof is being progressed by PMI.
- 2.7 A summary of the Council's construction contract management procedures is set out below.
- 2.8 The majority of the Council's construction contracts are managed by Property Management and Investment. This includes Housing and non-housing (General Services) projects, all non-housing maintenance and all Housing capital lifecycle investment programmes.
- 2.9 This encompasses a huge array of projects and works undertaken which vary greatly in scope, from small repair works at almost de-minimis values, to educational community campuses costing tens of millions of pounds.
- 2.10 Quality processes associated with construction work therefore also varies accordingly, relevant to the scale and complexity of the project and works undertaken.
- 2.11 All contractors however are subject to procurement processes designed to ensure people undertaking work have the sufficient knowledge, qualifications, experience and financial capacity.
- 2.12 In order to submit a compliant tender for any construction work, bidders must demonstrate relevant and recent technical experience for the proposed construction activities.
- 2.13 Tenders are evaluated against the set criteria, which will also vary according to the nature of the works prescribed in the contract. Often, detailed operational information must be provided, for example, lists of proposed sub-contractors, traffic management plans, plant and equipment operating plans etc.
- 2.14 When awarded, contracts will be administered by PMI (or appointed external consultants, depending on the chosen procurement route for the project).
- 2.15 Construction works can be extremely complex and carry risk, both operationally and commercially. Construction contracts are also complex and can give rise to disagreement and dispute over the reasons for issues such as delays, inappropriate

material use, incorrect installation methods etc. PMI have an experienced team of in-house Architects, Surveyors, Project Managers to manage these risks; also utilising a range of external consultants and advisors to ensure contracts are delivered using best practice methodologies.

- 2.16 To assist in the process also PMI have a central database of contract administration documents outlining key processes such as, standard meeting agendas, change control / variation instructions, risk registers, inspection record pro-formas, hand-over procedures. These documents are used by both Housing and non-housing teams as appropriate to the contract in-hand.
- 2.17 Prior to commencing works, a pre-start meeting will be held, chaired by PMI. The purpose of the pre-start meeting is to ensure contractors are aware of requirements such as the quality expectations of the Council in relation to works undertaken, contract administration and health and safety requirements.
- 2.18 In most capital projects, a Clerk of Works will be assigned to the project. The clerk of works role is to inspect, record and report on the operational delivery of the works to the contract administrator. Relevant site observations, issues with performance, adherence to design / specification, health and safety and other matters arising can then be addressed by the contract administrator.
- 2.19 During the course of a contract, regular progress meetings take place (generally on monthly basis) chaired by the contract administrator. The purpose of these meetings is to monitor the progress of work against the contractor's programme and to ensure that the work being carried out is in accordance with the design and specification.
- 2.20 As work progresses on-site, interim payments for work carried out are made, usually on a monthly basis. The value to be paid is measured by the project Quantity Surveyor and reflects the progress of works on-site. A monetary retention (normally 5%) is held on each of these payments. This sum is partially released when works are complete, the remainder being released after the end of the defects liability period.
- 2.21 As a project approaches completion, it is common for sections of the works to be offered by the contractor for inspection by the Council's Clerk of Works and / or contract administrator. Before offering works for inspection, it is incumbent on the contractor to ensure all works have been carried out in accordance with the contract documents.
- 2.22 Where works are complex or of a specialist nature, specific design consultants such as Mechanical and Electrical Engineers and Structural Engineers will be required to carry-out their own inspections and confirm work have been completed to their satisfaction.
- 2.23 In some circumstances, specialist reports will be commissioned into specific building elements, particularly where quality issues have been identified during the construction phase.
- 2.24 In the very largest of projects an Independent Tester is also appointed. This is a relatively new role within the construction project environment. The independent tester verifies the various testing and commissioning certificates required are received and they will certify completion of the project in accordance with defined project completion criteria.

- 2.25 Separate Quality Meetings will be held on larger projects, this allows specific areas of focus to be identified and tracked throughout the construction period and ensure input by the relevant parties to monitor compliance with specification and desired standards.
- 2.26 The majority of projects also require Building Warrant approval to ensure works are designed and constructed in accordance with the prevailing Building Standards. This is separate from the contractual process. Upon completion of works, a Building Standards Completion Certificate will be accepted, following inspection and other such reasonable enquiry by Building Standards during construction. In larger projects, this can be carried out on a staged basis, with relevant approvals relating to specific aspects of the work.
- 2.27 When inspected, it is also common for a list of items which are not to the required standard to be identified by the Council's Clerk of Works, the Contract Administrator, or their representative.
- 2.28 Significant issues identified prior to hand-over have the potential to preclude the Council accepting the works as complete. Less critical items (generally referred to as "snagging" items) will be reasonably assessed on their merits to determine if the building can be accepted while the contractor continues to address them.
- 2.29 There have been several examples where non-compliance with completion criteria requirements has resulted in a delay to hand-over, often in the face of significant pressure from contractors to accept the works. This includes a current high-profile major capital project and previous campus projects.
- 2.30 When the Contract Administrator is satisfied that works have been completed to an appropriate standard, this is confirmed by the issue of the Certificate of Practical Completion (PC). As noted above, achieving Practical Completion also triggers the release of 50% of the retention. Upon Practical Completion, the Council then take possession of the works and are fully responsible for all operational elements, such as utility costs, insurance, statutory compliance checks, health and safety of occupants, etc.
- 2.31 Following Practical Completion, projects enter a Defect Liability Period (DLP), this is generally for a one-year. During this time, the principal contractor is responsible for remedying all defects which arise in the contracted works. PMI have dedicated Contract Quality Officers to oversee this period. Their main responsibility is to manage defects which arise during the DLP and ensure they are rectified by the contractor.
- 2.32 Once the DLP has expired, a final inspection of the works is carried out and, subject to any outstanding contractual works or defects being resolved, a Certificate of Making Good Defects (MGD) is issued. This also triggers the release of the remaining retention.
- 2.33 Following the resolution of all known defects and the issue of the MGD certificate, latent defects which arise, where these are not covered by specific guarantees, require to be pursued as a claim outwith the construction contract. There is a maximum 12 year period, dependant on contract type, where defects which arise can be considered in this way. Any claim for against a latent defect must be raised within 5 years of it becoming apparent.

- 2.34 In addition to the contract administration processes noted above, relevant projects and capital investment programmes are subject to the Council's internal governance procedures. Projects are reported to the relevant Service / Directorate Project Board, chaired by a Head of Service or Director. Major projects are also subject to a further level of scrutiny through regular ELT reporting.
- 2.35 Although the contract procurement, administration and governance process noted above aim to mitigate against the risks of undertaking construction work, contract disputes and construction quality issues can occur; leading to issues such as cost and programme over-run and service impacts.
- 2.36 Common risks, issues and mitigations in the construction contract environment are noted below:

Common issues / examples	Mitigations
<p><u>Health and Safety during construction</u></p> <p>Construction operations can present risks to the Health and Safety to site operatives or others in close proximity to construction activities.</p>	<p>Designers, specifiers, contractors, and clients must carry out their responsibilities in accordance with the Construction Design Management Regulations 2015.</p> <p>Risks in relation to the tasks to be undertaken must be identified and managed accordingly.</p> <p>Works must be carried out in accordance with appropriate method statements and safe working practices.</p>
<p><u>Ground conditions / site location</u></p> <p>Ground conditions and site location can impact on the design and cost of key elements such as building structure, services infrastructure, traffic and pedestrian access, etc.</p>	<p>Undertaking feasibility reports, based on the high-level project brief as soon as practical in the development process.</p> <p>Undertaking: site investigations to determine ground conditions, potential contamination etc; utility investigations to determine if services can be delivered to a site; other environmental studies such as ecology, traffic management etc.</p>
<p><u>Work in existing buildings.</u></p> <p>Undertaking work within existing buildings can result in previously unknown defects in structure / construction requiring to be added to the scope of works. This can increase programme and cost.</p>	<p>Review of information held on record, for example existing drawings, condition surveys, asbestos registers etc.</p> <p>Surveys of existing building elements carried out prior to finalisation of contract documents.</p>

<p>The interface of existing building elements with new installations can also give rise to technical challenges and potential disputes over liability.</p>	
<p><u>Work in occupied buildings.</u></p> <p>Working within an occupied building can result in operational difficulty for services, or significant disruption for residents including utility disruptions, noise, access restrictions etc.</p>	<p>Careful project planning to ensure the interface between the contractor, their work and building users.</p> <p>On-site communication between the design team, contractor, client and building occupants.</p>
<p><u>Changes to brief and scope of project.</u></p> <p>Due to the evolving needs of services, and the time required to properly scope, design, procure and undertake a construction project, the project brief can change between inception and works being carried out-site. Changes to a design, particularly during the construction phase can extend project timescales and increase costs.</p>	<p>Robust project briefing and client sign-off of projects at relevant gateway review points.</p> <p>Use of change control process to ensure good project governance and appropriate level sign off of changes.</p> <p>Contract monitoring and reporting throughout the project lifecycle.</p>
<p><u>Insufficient budget to deliver preferred scope</u></p> <p>The ability to deliver all intended outcomes of any investment will be limited by the value of the available budget.</p>	<p>During the design process, the project scope and specification will be developed to ensure the maximum benefit is achieved and the priorities can be delivered; cost checks are undertaken during the project development phase.</p> <p>Contracts cannot be accepted unless there is sufficient budget to deliver the project.</p> <p>Project reporting and governance procedures are in place.</p>
<p><u>Contractor Performance</u></p> <p>Contractor performance may not meet our expectations, for example: inadequate supervision of works on-site; using inexperienced / underqualified staff /sub-contractors; substituting specified materials, etc.</p>	<p>Robust procurement process to ensure appropriate contractors are appointed.</p> <p>Appropriately qualified design and contact administration team, including inspection / sign-off process.</p>

The contractual risk and high values involved can result in a combative approach by some contractors, seeking to maximise their financial gain.	Appropriate contract management procedures.
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3. Proposals

3.1 It is proposed that the committee note the contract administration processes in place and the key risk and mitigation measures noted in the report.

4. Implications/Socio-economic Duty

Financial

4.1 There are no financial implications arising from this report.

Human Resources

4.2 There are no human resources implications arising from the report.

Legal

4.3 There are no Legal implications arising from this report.

Equality/Socio-economic

4.4 There are no equality implications arising from this report.

Climate Change and Carbon

4.5 There are no implications in relation to climate change and carbon arising from this report.

Key Priorities

4.6 The processes set out in the report support the Council's Key Priorities of:

- Places and public spaces across North Ayrshire are well maintained and accessible.
- Our places encourage strong inclusive communities and respect the local environment and cultural heritage.

Community Wealth Building

4.7 There are no Community Wealth Building implications arising from the report.

5. Consultation

- 5.1 The Corporate Procurement Unit, Legal Services and Building Standards have been consulted on the content of this report.

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For further information please contact **Laurence Cree, Senior Manager, Property Management and Investment**, on **01294 324463**.

Background Papers

N/A