**APPENDIX Form** to **SPAG BDaC - Construction Quality Matters Report v2-0  
Recommendations** from Prof. Cole’s **Independent Inquiry into Construction** of the **DG One Complex, Dumfries** in a **Form v2.0** -update of 29 Jan 2019 form by NHS GGC Capital Projects Team (Risk /RAG status scores: e.g. 1-6 low; 7-19 med 20-25 high)

|  | DG One Report Recommendation | NHS Board or Client Risk i.e. current project’s potential of similar failure | Lik’d 1-5 | Imp 1-5 | RAG 1-25 | Potential Mitigation (and/or  Action to address recommendation ) |
| --- | --- | --- | --- | --- | --- | --- |
| topic/ code |  | - add your description | **Likelihood** | **Impact** | **Risk Status** (Lik~d x Imp) | - add your mitigation and/or action |
| 1. Internal structures and resources for the development of capital projects by the Council | | | | | | |
| 1.1 | The Council should maintain, or have assured access to, a level of expertise and resources that allows it to act as an ‘intelligent customer’ in relation to both the strategic development of projects and the procurement and management of contracts with Private Sector Construction Companies.  **It is recommended** that before commencing a programme of work or an individual project, the Council should first assess this requirement and ensure that it has in place or access to the requisite and appropriate resources in terms of governance and project management arrangements, relevant professional expertise, support staff and funding to enable it to act effectively as an ‘Intelligent Customer’. |  |  |  |  |  |
| 1.2 | **It is recommended** that the Council should review how it establishes the membership of Project Management Boards and how it selects and appoints individual project managers in terms of ensuring the relevant knowledge, expertise, experience and availability of those making key strategic and executive decisions on Council projects. |  |  |  |  |  |
| 1.3 | **It is recommended** that the approach to the allocation of responsibility for the delivery of major building projects and the organisational structure of Dumfries and Galloway Council should be reviewed in terms of ensuring that those charged with delivering projects have the appropriate skill- sets and are supported with the necessary professional resources that such tasks demand.  Such a review should consider whether the capital programme of Dumfries and Galloway Council is sufficiently large to enable Council to afford, attract and maintain the necessary level of expertise required for major projects or whether the Council should consider entering into arrangements with or share resources with other organisations that can help maintain or provide that expertise due to the regularity of major projects they may be  engaged with.  There will still be a need for the Council to retain at a strategic level the ability to  undertake its core role as a client, to articulate project needs and to provide informed oversight of the management of Council projects and of the roles undertaken by any external agencies supporting the Council in the delivery of their projects. |  |  |  |  |  |
| 2. The protection of the quality of design of Council projects | | | | | | |
| 2.1 | If the Council is committed to ensuring that their future projects enhance the quality of  the built environments in which they sit and, more importantly, enhance the quality of the lives of the communities they are intended to serve, it should recognise the need for the protection of longer-term quality-based objectives and the need for the Council to act as a design champion in this regard. |  |  |  |  |  |
| 2.2 | **It is recommended** that in so doing the Council needs to better ensure that best practice methodologies aimed at optimising the quality of design and the quality of construction are properly incorporated into all stages of the development of projects by the Council and into all forms of procurement models that may be used by the Council. |  |  |  |  |  |
| 2.3 | **It is recommended** that the Council should ensure that it has access to appropriate expertise in relation to setting wider strategic objectives for the Council in terms of protecting and enhancing the quality of the built environment, in relation to the conceptualisation and articulation of quality objectives for projects and in relation to the assessment of the quality of proposed design solutions for Council projects. |  |  |  |  |  |
| 3 The production of comprehensive business cases for projects | | | | | | |
| 3.1 | **It is recommended** that the Council adopt the practice of requiring the production of structured business cases in accordance with standard practice and guidance for use by public sector bodies. The production of properly considered business cases of this type for both the original project and the remedial works project may have helped obviate problems encountered in the delivery of both projects and may even have avoided the need for a second project. |  |  |  |  |  |
| 3.2 | It is recommended that a key element of all business cases should be informed consideration of the procurement routes and contract forms available to establish the preferred option. This process should focus on which procurement model best supports the achievement of the key objectives set for a project and the risks attached to their use in achieving them. This decision can be key to the success or failure of projects and must be approp-riately informed by professional advice.  The use of a different procurement approach to the original construction of DG One would have provided a more appropriate approach to the protection of the quality of the project.  The use of a different approach to the procurement of the remedial works project may have resulted in better financial and time outcomes for the Council. |  |  |  |  |  |
| 3.3 | **It is further recommended** that the business case should also examine the level and type of professional expertise and resources required in relation both the development planning of the project and its implementation using the chosen procure-ment model and should demonstrate how it is intended that these will be provided. |  |  |  |  |  |
| 4. Clarification of the level of decisions in relation to the development of projects that should be referred to committees of Council | | | | | | |
| 4.1 | **It is recommended** that clear protocols are established setting the nature and level of decisions in relation to the executive delivery of capital projects that are expected to be referred to Committees of Council and those that should normally be delegated to officers of the Council acting in an executive role. |  |  |  |  |  |
| 4.2 | **It is recommended** that the regularity, nature, content and format of progress reports produced for Committees to enable them to provide appropriate levels of oversight and scrutiny of capital projects should be reviewed to ensure that there is a greater focus on conveying timely information and analysis on the key issues impacting on the success of the project.  Repeated presentations to Boards and Committees of similar very long registers of project risks can tend to reduce their effectiveness in providing the necessary focus on the actions necessary to actively addressing the key risks. |  |  |  |  |  |
| 4.3 | **It is recommended** that the use of risks registers is reviewed to make their use more meaningful by ensuring that the highest priority risks are properly assessed and identified and that the proposals to address them are realistic and fully implemented with active reporting on their application and impact. |  |  |  |  |  |
| 5. The administration of contracts during the execution of capital projects | | | | | | |
| 5.1 | **It is recommended** that the Council ensures that due diligence is undertaken at an appropriate level in all construction contracts to confirm that the requirements of that contract are actually delivered. This responsibility cannot be taken lightly and requires the allocation by the Council of appropriately resourced and experienced professional expertise relevant to the nature of the specific project and form of procurement. |  |  |  |  |  |
| 5.2 | **It is recommended** that the Council should not rely on the effectiveness of the quality assurance systems of those contractors delivering design and build projects but should arrange for appropriate independent scrutiny of their work, both in relation to the development of detailed design and specifications and the examination of on-site construction.  The focus of the Council should be on ensuring that projects are designed and constructed so that they are built right first time, rather than relying on the ability to seek compensation when proven not to be. |  |  |  |  |  |
| 5.3 | **It is recommended** that the Council ensures that it has access to an appropriate complement of experienced specialist Clerks of Works, covering each of the key construction disciplines, to allow for the necessary regular and detailed inspection of the work of contractors on site. |  |  |  |  |  |
| 5.4 | It is essential in order to protect the quality of the construction of projects that there is appropriate enforcement of contractual rights as to the removal and making good of any sub-standard work on site. |  |  |  |  |  |
| 5.5 | **It is recommended** that the Council introduces procedures to ensure that those appointed to the role of contract administrator have the relevant experience and the requisite knowledge, skills, and resources to allow them to effectively administer the full provisions of the contract and that inspections of work are sufficient in regularity and detail to identify sub-standard work prior to it being enclosed as part of the construction. |  |  |  |  |  |
| 5.6 | **It is recommended** that without the prior undertaking of informed independent comprehensive inspections of projects and written confirmation of the completion of the work to a satisfactory standard that statements of practical completion should not be issued by the Council, even in situations where political pressures may be brought to bear. |  |  |  |  |  |
| 5.7 | **It is recommended** that the Council establish a strict protocol for project managers in relation to the required content and timing of submissions by contractors of as-built documentation, the checking of this information and the subsequent retention of it by the Council. Certificates of practical completion should not be issued prior to the provision of this information to an acceptable standard by contractors. |  |  |  |  |  |
| 6. The Council’s relationship with design teams | | | | | | |
| 6.1 | Under the design and build model of procurement used for DG One, there was little if any contact or relationship between the Council and the key members of the design team who were responsible for designing the building they were procuring.  In addition to the absence of the potential benefit that can be afforded by valuable dialogue between designers and client, the Council were unable to confirm that the building was being constructed by the contractor fully in accordance with the designer’s intent or that the members of the design team had undertaken inspections of the work to confirm the standard of construction.  The scope of design team appointments and the level of involvement of design team members in inspection of the works was delegated to the contractor to determine and manage.  Whereas the tender proposals from the contractor had described the appointments of the architect and structural engineers as requiring both to undertake on-site inspections, the Council was not advised by the contractor that these had not in fact happened as prescribed. Any comfort that the Council may have gained from the inclusion of the proposed inspections of the work of the contractor by qualified design team professionals was misplaced.  **It is recommended** that the Council reviews current procurement arrangements to ensure that they provide for the optimum level of communication between the Council and the key members of the design team responsible for the design of their projects, and that they are able to benefit to the fullest extent from their creativity, design skills, professional knowledge and expertise. |  |  |  |  |  |
| 6.2 | **It is also recommended** that under design and build arrangements, the Council should require that contractors provide as part of their tender, confirmation of the range of services, including inspection services, that are to be provided by the design team and that the Council should require to be provided with certified confirmation of the satisfactory execution of these by the design team members . |  |  |  |  |  |
| 6.3 | **It is recommended** that the Council review its approach to the establishment of fee levels so that, while it should continue to ensure that it is getting value-for-money, it should also ensure that the design team are adequately resourced to provide the level and quantum of service expected by the Council and that the project requires . |  |  |  |  |  |
| 7. The role of building standards | | | | | | |
| 7.1 | It is clear that there were a significant number of failures to comply with statutory standards both in relation to the processing of DG One warrant approvals and completion certification and in relation to failure to identify defective construction in the building. One of the most serious failures was in relation to the major inadequacies and omissions in the installation of fire-stopping throughout the building.  **It is recommended** that a review is undertaken as to the nature, number and level of detail of inspections carried out by building standards inspectors to ensure that there is an appropriate focus on issues such as fire-stopping and other aspects of construction that may impact on the safety of building users . The Council should review its current procedures to ensure the appropriate involvement of the fire officer in these processes. |  |  |  |  |  |
| 7.2 | It is also recommended that a review be undertaken of the capacity and level of available expertise in the Building Standards Department so as to ensure its capability of delivering the required quality of service consistent with the procedural requirements of the legislation and the level of demand for these services. |  |  |  |  |  |
| 7.3 | It is further recommended that consideration be given by the Council to seeking the provision of Building Standards verification services from adjacent authorities for projects which are being developed by the Council so as to avoid any potential conflict of interest in dealing with the Council’s own applications. |  |  |  |  |  |
| 8. Ensuring the appropriate funding and quality of the maintenance of Council projects | | | | | | |
| 8.1 | In light of the failure of the Council to provide adequate funding for and adequate provision of the level of maintenance required for the DG One project, **it is recommended** that a review be undertaken of the processes used by the Council for establishing and allocating the funding levels required to address routine, planned and preventative maintenance of its new buildings. This requirement should be a standard part of the business case process. |  |  |  |  |  |
| 8.2 | **It is recommended** that the Council review its standard approach to establishing maintenance regimes for all its buildings based on best practice models and including regular inspections of all aspects of fire protection and public safety measures. |  |  |  |  |  |
| 8.3 | **It is recommended** that there is a renewed focus on ensuring the proper commissioning of buildings and of the thorough training of general and technical maintenance staff undertaken as part of the pre-handover procedures and protocols. The Council should introduce the requirement for a sign-off process to confirm that all such steps have been properly executed. |  |  |  |  |  |
| 8.4 | **It is finally recommended** that the application of appropriate maintenance procedures should be inspected on an unannounced basis by appropriate senior managers within the Council to ensure that the required standards are being maintained. |  |  |  |  |  |
| 9. Compliance with European regulations and the preparation of pre-tender estimates | | | | | | |
| 9.1 | In the case of both the original tender process for the construction of DG One and the first subsequently aborted tender process undertaken for the remedial works contract, there was a failure by the Council and its adviser s to produce pre-tender estimates.  This is an essential process in relati9n to ensuring that the Council is kept adequately advised of the funding requirement for projects and that, as a public sector project, the projected cost does not exceed the threshold requiring advertising in the Official Journal of the European Union.  In both cases the latest budget that had been advised to the Council was more that £3 million below the lowest tenders received. In the case of the remedial works project the contract had to be re-advertised to comply with EU Procurement Regulations.  **It is recommended** that appropriate cost-planning is undertaken on all projects, including the preparation of pre-tender estimates, and that there is a formal protocol established to confirm whether there is a requirement to advertise individual projects in the European Journal. |  |  |  |  |  |
| 10. Learning from problems experienced with the construction of the DG One building | | | | | | |
| 10.1 | It is clear that there are significant problems associated with the consistent delivery of the appropriate quality of construction within the industry in Scotland and that public bodies should take appropriate steps to mitigate the impact of this situation on their new development projects.  **It is recommended** that Local Authorities and other interested public sector organisations cooperate in the production and sharing of a list of those aspects of the construction of the new buildings in which defects are seen to frequently occur, such as is the case with external masonry wall construction and fire-stopping.  This list should be used in the briefing of all designers, contractors and site inspectors. Method statements should be required from each to demonstrate how the recurrence of these regular defects will be prevented through revised approaches to design, supervision and inspection process. |  |  |  |  |  |
| 10.2 | **It is also recommended** that the Council initiate the development of Key Performance Indicators in relation to the level of defects identified following planned rigorous inspections at key stages of construction and in the snagging of new buildings prior to handover.  A tolerance by clients in continuing to accept sub-standard construction will lead to that standard becoming the norm. Refusal to accept sub-standard construction will force contractors to review their approaches to quality assurance, supervision and training of staff. |  |  |  |  |  |
| 10.3 | Finally, in light of risk associated with the inadequate installation of fire-stopping, **it is recommended** that public authorities should undertake appropriately informed inspections of existing buildings and new buildings nearing completion to ensure the adequacy of the fire-stopping installed. |  |  |  |  |  |
| 11. The Accounts Commission Report on Major Capital Investment in Councils | | | | | | |
| 11.1 | **The Inquiry recommends** that in under-taking its future capital development programme the Council takes full account of the principles set out in the 2013 Good Practice Guide prepared by Audit Scotland |  |  |  |  |  |