

Our Ref: AF/EM

Your Ref:

9th June 2017

Mr James Dornan MSP
T3.40
The Scottish Parliament
Edinburgh
EH99 1SP

By email

Dear Mr Dornan

I refer to your letter of 15 May 2017 regarding the enquiry on school buildings across Scotland and enclose Inverclyde's response as requested.

Yours sincerely

Aubrey Fawcett
Chief Executive

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Inverclyde Council Response

1. Inspection and remedial work of the current estate since January 2016

To what extent

- has the school estate been inspected;

Refer to attached summary (Appendix 1).

- have faults been identified;

Summary included in appendix 1. Minor remedial works were required to 4 schools to address insertion of remedial wall ties in small localised areas.

- has remedial work been undertaken and the impact of this?

Remedial works were undertaken in October 2016 utilising the school holiday period without disruption to the operation of the facilities. The works were undertaken in a single day at one school (Inverclyde Academy) and across 6 days (circa 2 days per facility) for the other 3 schools (Clydeview Academy / Notre Dame HS / All Saints PS).

2. Quality Assurance Practices

- How quality assurance is undertaken on current capital projects on the school estate;

The Council's School Estate projects are monitored / managed through the Council's Client Services (former School Estate) Team within Legal & Property Services. This team takes forward the briefing and consultation for all education projects with the manager of this team also responsible for Council wide property maintenance. Projects are either:

- procured traditionally through the Council's Technical Services section (Architectural / Engineering / Surveying) with design teams augmented by external consultant appointment where no in-house expertise is available or due to resourcing / workload.
- procured through OJEU / hub model and managed by the Council's Client Services Team augmented by external consultant appointment as required.

The two approaches above involve much the same assurance processes with the only difference being in respect of the hub model structure and hub side project delivery staff. Prior to use of the hub, major new build school projects were procured via OJEU and Design & Build contracts utilising novated Council appointed external design team. See summary in table below:

Traditional		Hub DBDA	Project Stage		
Council Project Management			Pre-contract (RIBA 0-4)	Post-contract (RIBA 5-6)	Use (RIBA 7)
Client Services Team: Property Services Manager (Chartered Quantity Surveyor) Senior Architect – Client Services Quality Improvement Officer (Educationalist) Maintenance Officer	Client Services Team: Property Services Manager (Chartered Quantity Surveyor) Senior Architect – Client Services Quality Improvement Officer (Educationalist) Maintenance Officer		X	X	X
Technical Services Manager (Senior Architect)			X	X	X
Design Team (predominantly in-house supplemented by external consultant appointment as required)			X	X	X
External Consultants			Pre-contract (RIBA 0-4)	Post-contract (RIBA 5-6)	Use (RIBA 7)
Part design team as required	Design Team (hub - disciplines vary depending on type and size of project)		X	X	X
	Project Development Manager (hub)		X	X	X
	Technical Manager (hub)			X	X
Clerk of Works (Council appointed – agency)	Clerk of Works (Council appointed – agency)			X	X
Independent Testing & Commissioning Engineer (Council appointed on larger scale projects)	Independent Testing & Commissioning Engineer (Council appointed on larger scale projects)			X	X
As referred to in Appendix 2 the Council has also trialled the use of photo documentation services on a recent Education Capital project and this is being utilised on a further 3 current capital projects.					

- whether the quality assurance of school capital projects has been reassessed since 2016;

The quality assurance procedures currently in place have been reviewed. No changes are proposed to current procedures.

- whether there are, or were, particular issues depending on the funding model and the lessons to be learned?

The Edinburgh School Enquiry concluded that whilst the financing method was not responsible for the defective construction, aspects of the way in which the PPP methodology was implemented on the projects did increase the risk of poor quality design and construction.

The Council formed the School Estate Team in 2005 to manage all aspects of the School Estate Management Plan including the Council's PPP project. The team at that time consisted of:

- Head of Service – Planning & Resources (Educationalist)
- School Estate Manager (Chartered Quantity Surveyor)
- Assistant School Estate Manager (Chartered Quantity Surveyor)
- School Estate Development Officer – Secondary (Educationalist)
- School Estate Development Officer – Primary (Educationalist)
- Finance Officer (Chartered Accountant)
- Maintenance Officer

The Inverclyde experience of PPP procurement involved a competitive dialogue procedure which involved developing the designs for 3 bidders through the RIBA stages from inception to stage D/E. The Council invested in external advisors (legal / financial / technical) throughout this stage and had in place a Council team to manage the process (outlined above).

The process involved extensive consultation with all stakeholders and a number of key statutory consultees including Planning, Roads, Police, Fire Service etc. The Council had also secured assistance via the Carbon Trust to provide guidance and design advice in terms of sustainable / low carbon design. This management of this process assisted in delivering / maintaining design quality through the pre-contract stages to financial close. The post-contract construction phase was monitored by the externally or jointly appointed advisors (SPV Employers Agent & Independent Certifier). Internally the Council's School Estate Team managed the Reviewable Design Data (RDD) process and monitored quality through the Senior Architect on the team with a Council appointed Independent Testing & Commissioning Engineer (external consultant) providing specialist Mechanical & Electrical (M&E) support on the RDD process and an M&E Clerk of Works role which also assisted in areas such as fire stopping. The Council did not employ a more traditional 'Clerk of Works' on its PPP project.

The Council has no plans to procure any future projects under the current hub model equivalent (DBFM) route however, should that procurement route be adopted in the future, use of a traditional Clerk of Works would be considered as part of the overall project resourcing.

Please also refer to the Appendix 2 which includes a summary of the key recommendations from the Edinburgh Schools Enquiry report with Inverclyde's notes / comments.

School / Centre Information				Project Information			Survey Information / General Comments	
School / Centre Name	School / Centre Type	Year Original Construction Completed	No. of Storeys	Year Major Works Completed	Type of Contract	Description of new construction / extension works	Intrusive Surveys Completed	Notes / Comments
Aileymill Primary School	Primary	2010	2	n/a	PPP Design & Build	New Build PPP School completed Feb 2010. Steel framed construction with predominately structural framing system and external brick / render with areas of cladding / curtain walling.	Y	Intrusive surveys carried out during Easter 2016 - no safety concerns. Follow-up assurance survey undertaken summer 2016 - no safety concerns.
All Saints Primary School	Primary	2010	2	n/a	PPP Design & Build	New Build PPP School completed Feb 2010. Steel framed construction with predominately structural framing system and external brick / render with areas of cladding / curtain walling.	Y	Intrusive surveys carried out during Easter 2016 - no safety concerns. Follow-up assurance survey undertaken summer 2016 - no safety concerns. Minor remedial works recommended to single small area (remedial ties) - works completed in October 2016 holiday period.
Ardgowan Primary School	Primary	1900	3	2015	Traditional	Extension completed 2015. Main structure of existing building is traditional ashlar sandstone construction (no cavity). Hall extension steel framed with blockwork cavity low level and cladding system at higher level.	N	In house design team supplemented by external consultants. Council appointed clerk of works.
Gourock Primary School	Primary	2000	1	n/a	Traditional	New Build completed Aug 2000. Steel frame construction with blockwork cavity wall construction and cladding externally at higher level (central hall section).	N	In house design team supplemented by external consultants. Council appointed clerk of works.
Inverkip Primary School	Primary	1836	1	1963 1999 2006	Traditional	Original building is of ashlar sandstone construction (no cavity). Extensions completed in phases are single storey in traditional cavity wall construction with hall extensions diaphragm construction.	N	In house design team supplemented by external consultants. Council appointed clerk of works.
Kilmacollm Primary School	Primary	1974	1	2016	hub DBDA Design & Build	Minor infill extensions 2016. Original building is concrete frame with brickwork cavity wall construction and external concrete cladding panels.	N	External Design Team and support services via hub. Client Services Team Project Management. Council appointed clerk of works.
King's Oak Primary School	Primary	1970	2	2006	Traditional	Extension completed Aug 2008 - steel framed with brick/block cavity wall construction (2 storey) with 2 sections of Kalwall cladding. Main building is concrete frame with brickwork cavity wall construction.	Y	In house design team supplemented by external consultants, site inspection via design team. Intrusive surveys carried out in September 2016 - no safety concerns. Follow-up assurance survey undertaken Easter 2017 - no safety concerns.
Lady Alice Primary School	Primary	1930	2	n/a	Traditional	Extension proposed (single storey) as part of major refurbishment works. Existing building is traditional brick cavity construction.	N	Vacant - major refurbishment project will commence on site June 2017 to complete May 2018.
Moorfoot Primary School	Primary	1969	2	TBC	hub DBDA Design & Build	Minor infill extension proposed only. Original building is concrete frame with brickwork cavity wall construction and significant areas of cladding panel / curtain walling.	N	Vacant - major refurbishment project commenced on site April 2017 to complete March 2018. External Design Team and support services via hub. Client Services Team Project Management. Council appointed clerk of works.
Newark Primary School	Primary	2008	2	n/a	Design & Build	New Build completed 2008. Steel framed construction with rendered cavity wall construction and significant areas of metal cladding / curtain walling.	Y	Design and Build with Client appointed Design Team pre-contract novated to Contractor post-contract. School Estate Team Project Management. Council appointed external Employers Agent + Clerk of Works. Intrusive surveys carried out in September 2016 - no safety concerns.
St Andrew's Primary School	Primary	1972	2	2011	Traditional	Extension completed Oct 2011. Original building is concrete frame with rendered cavity wall construction and cladding at high level.	N	In house design team supplemented by external consultants. Council appointed clerk of works.

School / Centre Information				Project Information			Survey Information / General Comments	
School / Centre Name	School / Centre Type	Year Original Construction Completed	No. of Storeys	Year Major Works Completed	Type of Contract	Description of new construction / extension works	Intrusive Surveys Completed	Notes / Comments
St Francis' Primary School	Primary	1972	1	2004	Traditional	Original building is concrete frame with brickwork cavity wall construction and external concrete cladding panels. 2004 work did not involve extension.	N	In house design team supplemented by external consultants. Council appointed clerk of works.
St John's Primary School	Primary	1931	2	2015	Traditional	Extension completed Oct 2015 (single storey -rendered brickwork on timber frame). Original building is concrete frame with rendered cavity wall construction and externally applied insulation render system.	N	In house design team supplemented by external consultants. Council appointed clerk of works.
St Joseph's Primary School	Primary	1953	2	2006	Traditional	Extension completed Aug 2006 (steel frame with block cavity wall construction and Kalwall cladding system). Original building is concrete frame with brick / block cavity wall construction and external concrete blockwork	Y	In house design team supplemented by external consultants, site inspection via design team. Intrusive surveys carried out in September 2016 - no safety concerns.
St Mary's Primary School	Primary	1909	4	n/a	-	Main structure of existing building is traditional ashlar sandstone construction (no cavity).	N	Major refurbishment and extension proposed - summer 2018 to summer 2019.
St Michael's Primary School	Primary	1960	4	2006	Traditional	Original building is steel/concrete frame with brickwork cavity wall construction and externally applied insulation render system. Only new construction during refurbishment involved forming extension for lift shaft.	N	In house design team supplemented by external consultants, site inspection via design team.
St Ninian's Primary School	Primary	1960	2	c1997	-	Original building is steel/concrete frame with brickwork cavity wall construction (part rendered).	N	Replacement proposed via new build hub DBDA project to commence June 2017 and complete June 2018.
St Patrick's Primary School	Primary	2016	2	n/a	hub DBDA Design & Build	New Build completed October 2016. Steel framed construction with predominately structural framing system and external brick / curtain walling.	Y	Inspection report via hub West Scotland and main contractor during construction. External Design Team and support services via hub. Client Services Team Project Management. Council appointed clerk of works.
Wemyss Bay Primary School	Primary	1980	2	1991 2012	Traditional	Recent extension completed Aug 2012 (steel frame and cavity brick / block construction). Existing building is steel frame with brickwork cavity construction and render finish.	N	In house design team, site inspection via design team.
Whinhill Primary School	Primary	1973	1	2012	Traditional	Extension completed Aug 2012 (timber frame and glu-lamintaed beams / steel frame brick / block construction). Original building is concrete frame with brickwork cavity wall construction and external concrete cladding panels.	Y	In house design team supplemented by external consultants. Council appointed clerk of works. Intrusive surveys carried out during Easter 2016 - no safety concerns.
Clydeview Academy	Secondary	2011	3	n/a	PPP Design & Build	New Build PPP School completed May 2011. Structural concrete / steel frame with predominantly structural framing system and external brick / render with areas of cladding / curtain walling.	Y	Intrusive surveys carried out during Easter 2016 - no safety concerns. Follow-up assurance survey undertaken summer 2016 - no safety concerns. Minor remedial works recommended to small areas (remedial ties) - works completed in October 2016 holiday period.
Inverclyde Academy	Secondary	2008	2	n/a	Design & Build	New Build completed Dec 2008. Structural steel frame with low level brick / render and areas of cladding / curtain walling.	Y	Design and Build with School Estate Team PM and external Employers Agent + External Clerk of Works. Intrusive surveys carried out in September 2016 - no safety concerns. Minor remedial works recommended to small areas (remedial ties) - works completed in October 2016 holiday period.

School / Centre Information				Project Information			Survey Information / General Comments	
School / Centre Name	School / Centre Type	Year Original Construction Completed	No. of Storeys	Year Major Works Completed	Type of Contract	Description of new construction / extension works	Intrusive Surveys Completed	Notes / Comments
Notre Dame High School	Secondary	2011	3	n/a	PPP Design & Build	New Build PPP School completed May 2011. Structural concrete / steel frame with predominantly structural framing system and external brick / render with areas of cladding / curtain walling.	Y	Intrusive surveys carried out during Easter 2016 - no safety concerns. Follow-up assurance survey undertaken summer 2016 - no safety concerns. Minor remedial works recommended to small areas (remedial ties) - works completed in October 2016 holiday period.
Port Glasgow Community Campus	Secondary	2013	3	n/a	Design & Build	New Build Community Campus completed Dec 2013. Construction varies from structural timber frame at single storey element , concrete and part steel frame elsewhere. Predominantly structural framing system and external brick with areas of cladding / curtain walling.	N	Recent build. Design and Build with School Estate Team PM and external Employers Agent + External Clerk of Works.
St Columba's High School	Secondary	c1960	3	2012	Traditional	New Extension completed Aug 2012 (steel frame and cavity brick / block construction). Original building is concrete frame which was re-elevated and now brickwork cavity wall construction at lower level with structural framing system and cladding at higher level.	N	In house design team supplemented by external consultants. Council appointed clerk of works.
Former Sacred Heart Primary School	Decant	c1950	2	n/a	-	Structural concrete frame with brickwork cavity wall construction and dry dash render finish at higher levels.	N	Demolition planned following completion of SEMP - autumn 2019.
Former St Stephen's High School	Decant	c1950	3	n/a	-	Structural concrete frame with brickwork cavity wall construction and painted concrete render at higher levels.	N	Demolition planned following completion of current SEMP project - summer 2018.
Lomond View Academy	Special	c1970	2	2012	Traditional	Original structural is steel / concrete frame with brickwork cavity wall construction. Comprehensive refurbishment involved partial demolition of the building and over-cladding (including insertion of remedial wall ties).	N	In house design team supplemented by external consultants. Council appointed clerk of works.
Binnie Street Children's Centre	Early Years	1876	2	2012	Traditional	Main structure of existing building is traditional ashlar sandstone construction (no cavity).	N	In house design team supplemented by external consultants. Council appointed clerk of works.
Gibhill Children's Centre	Early Years	c1960	1	2002	Traditional	Structural concrete/steel frame with blockwork cavity wall construction and externally applied insulation render system.	N	In house design team supplemented by external consultants, site inspection via design team.
Glenbrae Children's Centre	Early Years	1970	1	n/a	-	Structural concrete frame with blockwork cavity wall construction and external rendered finish.	N	Replacement planned via conversion of Abefoyle Road offices with transfer circa 1st Quarter 2018.
Hillend Children's Centre	Early Years	1958	1	n/a	-	Structural concrete frame with brick/blockwork cavity wall construction and external rendered finish.	N	Comprehensive refurbishment planned 2018.
Kelly Street Children's Centre	Early Years	c1930	2	n/a	-	Structural concrete frame with brickwork cavity wall construction.	N	Replacement planned via new build - Greenock West Early Years Facility with transfer summer 2018.
Rainbow Family Centre	Early Years	2008	1	n/a	Traditional	New build completed 2008. Timber glu-lamintaed beams and steel frame structure with brick / block cavity wall construction and Kalwall cladding system.	N	Facility was subject of structural investigation post construction in connection with roof fixings (resolved in 2011). In house design team, site inspection via design team.
Wellpark Children's Centre	Early Years	2001	1	n/a	Traditional	New build completed 2001. Structural steel frame with blockwork cavity construction.	N	In house design team supplemented by external consultants, site inspection via design team.

Enquiry Recommendations		Inverclyde Response / Comments
1.	Procurement	
a.	A public sector body engaged in the procurement of public buildings should maintain, or have access to, a level of expertise and resources that allows that body to act as an 'intelligent customer'.	Inverclyde currently has access to construction professionals through the Council's Legal & Property Service. Major capital projects involving new buildings or comprehensive refurbishment and/or extension are procured through the Client Services (former School Estate) Team and/or the Council's Technical Services Team (Architectural / Engineering / Surveying). The Council formed the School Estate Team in 2005 to manage all aspects of the School Estate Management Plan (SEMP) with the current Client Services Team formed from the remaining members of that team. This team consists of fully qualified construction professionals, including a senior architect, senior quantity surveyor, maintenance officer and educationalist, all with extensive construction project / project management experience. This team manages the Council's larger scale projects and acts as 'intelligent client' i.e. projects currently procured through hub West Scotland, and large scale Design & Build OJEU level projects (including the Council's PPP Schools project) prior to hub involvement. The above internal resource is supplemented by the appointment of external consultants as appropriate for each individual project. The Council has access to the hub framework, recruitment agencies and a number of consultant frameworks in addition to the ability to tender ad-hoc for specific services.
b.	The public body should ensure that due diligence is undertaken to confirm that requirements of the contract are actually delivered in accordance with its terms.	The teams outlined above ensure the delivery of projects in accordance with the agreed terms and conditions. This is supported as required via external consultants e.g. on the Council's PPP project this involved Financial, Legal and Technical advisor assistance in addition to the core Council project team. The Client and Technical Services Teams have a combination of commercial / contract / design / educational expertise to facilitate robust interrogation and compliance checking, with regular engagement at design and construction meetings from inception to completion.

Enquiry Recommendations		Inverclyde Response / Comments
c.	Public bodies should understand that they cannot delegate the duty to ensure the provision of a safe environment for the delivery of services.	Inverclyde recognises this duty and has in place a structure and procedures that address project / service delivery in accordance with all relevant legislation.
d.	Procurement strategies should include appropriate investment in the provision of informed independent scrutiny of projects when they are being designed and constructed so that they are built right first time.	Scrutiny of projects is achieved through the Teams and consultants outlined above and as follows: <ul style="list-style-type: none"> • Client & Technical Services Teams involvement from inception to completion with input from relevant services/users co-ordinated at the correct stages of design and construction. • Council appointed Clerk of Works on major projects. • Independent Testing & Commissioning Engineer on large scale / major projects (includes a Mechanical & Electrical Clerk of Works role). • Design team involvement in site inspection / quality monitoring.
e.	There should be a more informed approach as to how best practice methodologies aimed at optimising the quality of design and the quality of construction can be incorporated into current models of procurement.	The inquiry noted the importance of clear and considered articulation in a comprehensive brief by the client of the quality objectives for a project. The Client Services Team briefing process has been refined through multiple project experience and draws upon the construction professional's knowledge and experience providing a solid platform for the development of the design. The inquiry also noted the importance of the methodology to be used for ensuring the achievement of quality. The contract documents for major design and build projects have also been refined through experience to incorporate a robust Reviewable Design Data process that allows key client input into the developing design at the correct stages of construction and ensure that the Contractors Proposals are aligning with the original design brief and Employers Requirements.

Enquiry Recommendations		Inverclyde Response / Comments
2.	Independent Certifier	
a.	The level of service provided by independent certifiers needs to be changed to reflect what clients actually require of the role.	Inverclyde has no current plans to procure further buildings/services via PPP or the current hub model equivalent DBFM (Design, Build, Finance and Maintain) route. The role of independent certifier (or independent tester under DBFM) is defined by the original scope of services agreed between the parties. It is understood that some hub territories are reviewing the scope of independent tester appointments to offer an additional clerk of works role. Individual procuring authorities should ensure that they are aware of the scope of services being provided and consider this in terms of their overall project delivery strategy / resourcing.
b.	The level of professional indemnity insurance sought and the liability period for independent certifiers needs to reflect the significance of their certification processes and the degree of reliance that is to be placed on it.	No specific Inverclyde comment - Industry review and guidance / recommendations required as to the appropriate professional indemnity level and liability period.
c.	The appointment of independent certifiers should be made following properly advertised and conducted public procurement processes.	Note recommendation with implication that the appointment would be led, tendered and evaluated by the Local Authority which may not align with the current hub model. Inverclyde has no experience of the current hub DBFM procurement route but understands that there is a competitive process followed involving hub framework suppliers based on (but not restricted by) hub fee caps and a tendered schedule of services with a price / quality evaluation (typically 30/70) carried out jointly by the hub territory and Authority.
d.	The fees for undertaking the independent certifier role should reflect the level of service required, rather than being restricted to fit a predetermined budget.	Fee level should reflect the agreed / proposed scope of services and subject to procurement process as noted in c. above with an appropriate weighted set of evaluation criteria.
e.	Clients should engage qualified individuals or organisations to undertake an appropriate level of ongoing inspection of the construction of their buildings (clerk of works, resident engineers, and/or resident architect for example).	Agree and note that the approach will vary across Authorities / Clients depending on available internal resource / internal project management procedures. Inverclyde approach outlined in 1. d. above.

Enquiry Recommendations	Inverclyde Response / Comments
3. Client's Relationship with the Design Team	
<p>a. Current procurement arrangements should be reviewed to ensure they are providing the optimum level of communication between clients and key members of the design team.</p>	<p>Effective communication between client and design team is also affected by the way Authorities approach procurement of major projects. The Inverclyde approach involves co-ordination of stakeholder input via an experienced in-house multi-disciplinary team (Client & Technical Services) which enables focus / direction throughout the key stages of the project. The Inverclyde experience is that this works well in the pre-contract phases of projects either where engagement is:</p> <ul style="list-style-type: none"> • direct with in-house or Authority appointed design teams on more traditional contracts; • via Authority or hub/Authority procured design teams for OJEU / hub projects; • via competitive dialogue (the Authorities only PPP contract was procured in this manner involving dialogue with 3 bidders / design teams) <p>Inverclyde's experience is mixed in terms of the post contract communication with greater design team engagement generally possible via traditionally procured projects and a general reluctance of main contractors to allow unrestricted client access to design teams post novation / post financial close on D&B/DBDA contracts. The Authority has sought to address this in its own D&B contracts via contract clauses / amendments e.g. Contractor progress reporting to including separate designer progress reports and site observations and this is also part of the original design team schedule of services. The reviewable design data process is also used in both D&B/DBDA contracts to maintain / encourage open lines of communication throughout the construction phase.</p>

Enquiry Recommendations		Inverclyde Response / Comments
b.	Public sector clients should at least require that submitted tenders include a full description of the proposed scope of design team services, including any proposed role in the inspection of works on site.	The procuring Authority has control of the scope of design team services via traditionally procured projects either via in-house technical staff or externally procured consultants. Authorities also have the opportunity to review the scope of design team services on hub projects (DBDA / DBFM) and there are currently clauses in the standard schedules covering inspection of works on site. When procuring large Design & Build projects (non-hub) Inverclyde has drafted the original scope of services documents for all design team members for both the pre and post novation stages and these include a requirement to visit the sites to inspect and verify the progress and quality of work.
c.	Where possible, there should be a mandatory provision built into contracts that where, to the knowledge of a professional design team member, a contractor has failed to take appropriate action on issues that could impact on the subsequent safety of building users or functionality of the building, the consultant in question should be required to inform the public sector client of the advice provided to the contractor.	In terms of safety of building users Inverclyde would expect design team members to adopt this approach under their professional duty of care regardless of contractual position. Within Inverclyde drafted schedules of services for major Design & Build projects there are clauses that require design team members to advise both Contractor and Employers Agent of any special inspections, investigations or tests (including opening up where necessary) necessary to ensure that the correct and adequate standards of construction are maintained and works are constructed in accordance with the contract. The schedules also require novated consultants to provide a signed statement at each progress meeting confirming that all works are being progressed in accordance with the Employers Requirements.
4.	Project Information Sharing	
a.	Public bodies should establish a mandatory protocol for insisting on the production, retention and updating of accurate construction and operational information and related documentation on projects.	Agree. This is also essentially the aim of the current Building Information and Modelling (BIM) initiative.

Enquiry Recommendations	Inverclyde Response / Comments
<p>b. Contractors should be required to record any on-site changes to final 'construction issue' drawings, certify that they are an accurate record of what has been built and arrange for these to be issued to the client for retention.</p>	<p>Agree, and this should be the current position. Inverclyde's experience of this issue indicates that the process can be affected, particularly on Design & Build projects, where the original design has been altered / alternative design proposals have been brought by the Contractor and agreed through the contract change procedures, but for which no allowance / agreement has been made for updating / revising the original designer's drawings.</p>
<p>c. 'As built' drawings should also be submitted to buildings standards as a definitive record of what was built.</p>	<p>Agree, and should be current practice. As built drawings are a vital record and Inverclyde Council require that these are included within the O&M manual submitted by the Contractor. Drawings that differ from the approved Building Warrant set should be revised to reflect what has been built and included in an Amendment to Warrant.</p>
<p>d. The design and construction profession should consider the need for the development of a better approach to the integration of documentation to reflect the practical needs to provide such information in a building site environment.</p>	<p>BIM as noted in 1. a. will address improved integration of building design and construction information. The requirements and benefits of projects utilising BIM should be further developed. Inverclyde's approach to major projects has included use of construction "collaboration tools" which are set up at the start of any major project to ensure the correct integration of project documentation. This is also the standard approach across the current hub projects.</p>
<p>e. Structural engineers should be required to describe in their documentation and drawings the approach and design philosophy adopted in their designs and the relative inter-dependence of these various components.</p>	<p>Agree. This would aid understanding of design and component inter-dependence. There remains a fundamental requirement to carry out and complete the works in accordance with the contract drawings and specification. Contractors site quality processes can assist in this area e.g. 'technical workshops' or 'toolbox talks' ahead of key operations / tasks to ensure the philosophies are shared at site level with site operatives suitably informed of the intricacies or complexities of the designs, particularly at the interface of responsibilities between sub-contractors.</p>

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f.	Contractors should ensure that any changes to structural design should only be implemented after having undertaken any necessary checks by the structural engineer.	Agree. This should be current practice and a fundamental process / area of compliance in respect of the Contractors co-ordination / development of the design regardless of the form of contract. Any Contractor led design change, particularly where contractor design portions affect or alter the design team's construction drawings must be highlighted. Consultants should revise the construction drawings accordingly to reflect the change and again fees must be allocated for this service to ensure drawings are fully co-ordinated.
g.	PPP contract arrangements should incorporate the right for public sector clients to be provided with copies of all design and technical information in relation to their projects.	This should already be the case. Authorities can stipulate the level / extent of reviewable design data as part of a normal D&B or hub DBDA project. The Health and Safety File and Operation & Maintenance manuals should also provide this information upon completion. In addition to this the Employers Requirements or ACR's should identify this requirement and for those documents to be made available not just at the end of a project but throughout the design and construction phases.
5.	Construction Recommendations	
a.	The construction industry should review the practice of building the outer and inner leaves of cavity walls at different times, and where this must be carried out alternative approved wall ties or structural framing systems should be used.	Industry review required. Can also be addressed in contract documentation either via specification clauses / method statements / Employer's Requirements / ACR's. Note use of structural framing systems offers more flexibility to stagger outer and inner leaf construction.
b.	Improved identification on wall ties should be introduced so that the level of embedment is more clearly visible.	No specific Inverclyde comment – industry / manufacturer action point re product development. Does not detract from duty of care responsibilities from the site operative, brick laying sub-contractor, main contractor and others observing and inspecting the works.
c.	There may be benefit in designers, contractors and manufacturers reviewing the practical complexity of installing different forms of head restraints to reduce the time required to fit them and potential reluctance from bricklayers to install them.	Designers have a duty to understand the methods of construction and consider ease of installation. There is also a fundamental requirement for main contractors to provide appropriate and effective site supervision. Contractors should operate a system of work that involves appropriate hold points to allow inspection prior to covering up / building in key structural elements.

Enquiry Recommendations	Inverclyde Response / Comments
d. It would be beneficial if head restraints were also designed to incorporate some visible indicator to prove in subsequent inspections that they had been fitted.	Comments as b. above.
e. The construction industry should seek to review how bricklayers are paid to remove any perverse incentive which speeds up construction but as a consequence encourages the omission of elements providing structural integrity.	Agree. Does not detract from fundamental requirement for the main contractor to provide appropriate and effective site supervision in addition to design team and client appointed independent inspection via Clerk of Works or similar.
f. The construction industry should seek to introduce standardised best practice methods in relation to quality assurance processes and consider the potential greater use of digital recording.	Agree. Many Contractors have established methods in place and standardisation would assist to aid sub-contractors understanding of processes. Inverclyde has recently trialled digital recording on one of its recent hub projects with feedback from the main contractor positive indicating a raised awareness of the digital recording process with a resultant improvement in quality. This is now being implemented on a further 3 projects.
g. Quality assurance processes on site should prevent the closure of walls before proper inspection and sign-off has been facilitated to confirm the quality and completeness of work.	Agree. Inverclyde experience through evaluation of Contractor pre - qualification questionnaires indicates that these processes are being considered with experience of these processes on a number of past and current projects. The effectiveness of these processes is reliant on rigid adherence regardless of programme pressures and the quality & experience of key site personnel.
h. The construction industry should re-examine its approach to recruitment, training, selection and appointment of bricklaying sub-contractors, means of remuneration, vetting of qualifications and competence, supervision and quality assurance of bricklayers.	No specific Inverclyde comment. Industry action with impact varying depending on type of Contractor i.e. Management Contractor or Contractor with core retained skilled operatives. Supply chain procedures as operated by most medium to large contractors should address the management of key sub-contractors including bricklaying.
i. An independent in-depth inspection and certification of fire stopping by a suitably qualified person should be required to provide evidence to building standards of a fully compliant installation.	Agree. Inverclyde use of independent testing and commissioning engineer with M&E clerk of works role on major projects has aided compliance in this area. Clerk of works and design team members can also be utilised. Formal changes in this area requiring certification to building standards would be welcomed.

Enquiry Recommendations		Inverclyde Response / Comments
6. Training and Recruitment		
a.	The appropriate authorities should undertake a review of the current level of provision of training in bricklaying, clerks of works and building standards inspectors to ensure the construction industry has access to and adequate properly trained and qualified resource in each of these areas.	No specific Inverclyde comment – Industry led action in this area addressing improvements in the quality of the available resource is welcomed.
b.	The Construction Industry Training Board (CITB) should review the effectiveness of current apprenticeship arrangements in meeting the objective of developing a highly skilled bricklaying workforce.	No specific Inverclyde comment – Industry led action in this area addressing improvements in the quality of the workforce is welcomed.
7. Building Standards Recommendations		
a.	It is recommended that consideration be given to the practicality of extending the concept of mandatory inspection and certification of construction by approved certifiers to elements of the building that could potentially pose significant risk to users if not constructed properly and which level of inspection cannot practically be undertaken by building inspectors themselves.	The practicalities of how local authorities are to respond to non-notified mandatory inspection work is crucial, as it is Inverclyde Council's experience that the greatest obstacle to inspection is the applicant's failure to notify. Inverclyde Council supports the concept of mandatory inspections on the basis that the applicant has a mandatory responsibility to notify the building standards authority at the appropriate stages and with appropriate time scales specified for inspection following notification. Inverclyde Council has no objection to Certification of Construction provided the certification scheme adequately considers the need for independence of the certifier and the audit process applied to them.

Enquiry Recommendations	Inverclyde Response / Comments
<p>b. Appropriate arrangements should be developed and implemented to identify, pursue and sanction those who fail to “secure the health, safety, welfare and convenience of persons in or about buildings” as required by the Building (Scotland) Act.</p>	<p>Any arrangements should fully recognise the individual roles in the process. The building standards process sets out the essential standards to be met when the building is constructed, and only to the extent necessary to meet the building regulations. The system is pre-emptive, designed to check that the proposed building meets the standards. Once approved it is the responsibility of the developer to construct in accordance with the plans and to issue a completion certificate to confirm that the building accords with the approved plans. The building standards authority is responsible for accepting the completion certificate after a risk assessed reasonable inquiry. This reasonable inquiry does not provide a system to control work on site; this is a matter for the contracts and arrangements put in place between client and builder and where the ultimate responsibility for securing “the health, safety, welfare and convenience of persons in or about buildings” lies. It would be a concern that legal prosecution is a clumsy and expensive tool to use to drive up reliability of construction.</p>
<p>c. In PPP contracts where a certificate of completion cannot be issued, and the issue of an availability certificate is permitted on the basis of a temporary occupation certificate, the independent certifier issuing such an availability certificate should formally advise the public sector client of this fact and qualify the documentation to reflect this position.</p>	<p>As PPP contracts relate to public buildings, alternatives to the acceptance of a completion certificate are not considered desirable. A public building should ideally not be occupied until such time as a completion certificate is issued by the appropriate person and accepted by the local building standards authority. Temporary occupation certificates should only be issued where minor non-safety critical aspects of the works remain incomplete. The associated contractual certification is a matter for the client and builder to consider.</p>

Enquiry Recommendations		Inverclyde Response / Comments
d.	A review should be undertaken as to the overall objective of site visits undertaken by building inspectors to ensure that the planning of these properly reflects a prioritisation of the identification and inspection of areas of highest risk.	Inverclyde Council, as a member of Local Authority Building Standards Scotland (LABSS) issues a Construction Compliance Notification Plan (CCNP) with each building warrant issued. The level of inspection required is in accordance with the nationally agreed risk protocol. This places an obligation on developers to notify the Council at appropriate stages of construction so that inspections can be undertaken efficiently. The CCNP identifies the minimum level of inspection and case officers, based on what is seen on site, may undertake additional inspections as deemed necessary. No change to objectives of the CCNP is considered necessary.
e.	A review should be undertaken of the staffing and funding of the Building Standards Department in Edinburgh Council.	No Inverclyde comment.
8.	Public Body Information Sharing	
a.	There should be a formal requirement on public bodies to make automatic disclosure to a central source of information on building failures, particularly in relation to those that pose potential risks to the safety of building users.	Inverclyde supports the sharing of information and has assisted the enquiry by providing all available reports.
9.	Recommendations for the City of Edinburgh Council	
a.	The Council may wish to investigate whether implementation arising from requests for minor changes within PPP schools can be simplified.	Inverclyde's PPP School s contract has operated to date with minimal requirement for changes and any changes that have been implemented have been minor with no overall lifecycle impact. This particular recommendation appears to be related to the requirement to formally record and consider the whole life costs of proposed minor changes (alterations / improvements generally that are school or parent council funded) and the relatively lengthy process compared to that of non-PPP schools. The process for this is set out in the accepted project agreement documents for the contract. It should be noted that the overall process should not differ significantly between PPP and non-PPP, as any maintenance or lifecycle impact on Council budgets should always be considered. Instances of School / Parent Council funded works requests have been relatively rare most likely due to the significant investment in the Inverclyde School estate over the last 12 years.

Enquiry Recommendations		Inverclyde Response / Comments
b.	The Council should facilitate a joint meeting with representatives of the parent councils and heads of schools to review all issues relevant to the management of the closure of schools as a result of the wall collapse.	No Inverclyde comment.
c.	Appropriate frequent on-going inspections should be undertaken by those responsible for the management of buildings to ensure that these are properly maintained over time.	<p>Building inspection and maintenance is co-ordinated through the Council's Legal & Property Services section with input / support from a number of other Council Services e.g. Corporate Health & Safety, Facilities Management (Janitorial/Cleaning/Grounds Maintenance). The following contribute to the proper maintenance of the Council's Assets:</p> <ul style="list-style-type: none"> • 5 yearly externally procured building surveys (Building Surveyor led including Mechanical & Electrical Engineering input). • Annual internal review of building surveys (Property Services). • Annual prioritisation and targeting of available lifecycle funding (Property / Technical Services). • Day to day inspection / reporting by Janitors/Caretakers (FM) • Statutory Duty related testing and maintenance (asbestos / water safety & hygiene / electrical safety / emergency lighting / lightning conductor / lift maintenance etc. – Property Services) • Annual Fire Risk Assessments review and procedures (Property Services / Corporate Health & Safety) • PPP schools contract monitoring and audit via Client Services Team (Property Services)
10.	Further Investigations	
a.	Other clients of recently constructed buildings of a similar scale and form of construction may wish to adopt a risk-based approach to investigating their estate especially in regards to the issues identified within this inquiry.	Inverclyde Council's approach to assurance surveys of its existing estate is as outlined in Appendix 1. This has considered a number of factors including the age and form of construction, scope and timing of recent comprehensive refurbishment works, and arrangements for contract / project management.