

Mr James Dornan MSP  
Convener  
Education and Skills Committee  
Scottish Parliament  
Edinburgh  
EH99 1SP

5<sup>th</sup> June 2017

### **Schools infrastructure inquiry**

Dear Mr Dornan

Thank you for your letter dated 15<sup>th</sup> May 2017 requesting input from NHBC to the Education and Skills Committee's inquiry into school infrastructure.

Before offering comments on the specific issue in question I believe it would be helpful if NHBC's purpose and role is clarified. NHBC's primary purpose is to work with the new home building industry to raise the standards of construction of new homes and to provide consumer protection to purchasers of new homes.

It does this by implementing structured risk assessments of the design and build processes which include comprehensive inspection of work under construction, maintaining and managing a register of builders, and providing consumer protection to homeowners through its warranty and insurance products.

NHBC was established in 1936 with Government support; it is structured to be non-profit distributing and is an insurance company regulated by the Financial Conduct Authority and authorised by the Prudential Regulation Authority. It is the leading provider of warranty and insurance protection in the new homes sector.

Since 1985 NHBC has been providing a Building Control service in England and Wales and it is the largest single provider of this service in the UK. Since devolution NHBC has lobbied successive Scottish Governments requesting it be allowed to deliver a Building Control service in Scotland but successive Scottish Ministers have declined to license NHBC to undertake this activity even though the current legislation was enacted to facilitate this.

Where NHBC undertake Building Control we carry out more risk based checks than when we carry out on warranty only projects and we provide additional insurance protection to homeowners to protect them if we fail in our delivery of our Building Control service. Although the majority of our Building Control activity focuses on the new homes market we also offer this service to commercial and retail organisations as the license granted to NHBC for this purpose in England and Wales places no restriction on the scale or type of building that NHBC can deliver a Building Control service on.

The technical failures of the Edinburgh schools has been well publicised and the form of construction used is relatively common i.e. a steel framed structure with masonry infill panels. Latter form can be and is used in constructing flatted dwellings and general masonry construction is very common in the home building industry and as a consequence this form and type of construction is known to NHBC. However I must stress that NHBC operates in the new home building sector and has no direct experience of operating in a PPI commercial environment.

My proposal is to offer comment on some of the points raised in Professor Cole’s Report of the Independent Inquiry into the Construction of Edinburgh Schools.

### Cole Report Section 5

The technical reasons for the wall collapse are well documented in this section of the Cole Report which also identifies good practise in the construction of masonry walls.

NHBC has developed its own Building Standards and Chapter 6.1 of these standards refer to External Masonry Walls. For information I have copied an extract taken Chapter 6.1 and as can be seen, it reflects the good masonry practises referred to in the Cole Report.

Table 10: Spacing of wall ties

	Maximum horizontal spacing (mm)	Maximum vertical spacing (mm)
General wall area	900	450
Jamb openings, movement joints, etc.	Within 225 of opening	Not more than 300 <sup>(1)</sup>
Top of gable walls	225 (parallel to the top of the wall)	Not more than 300

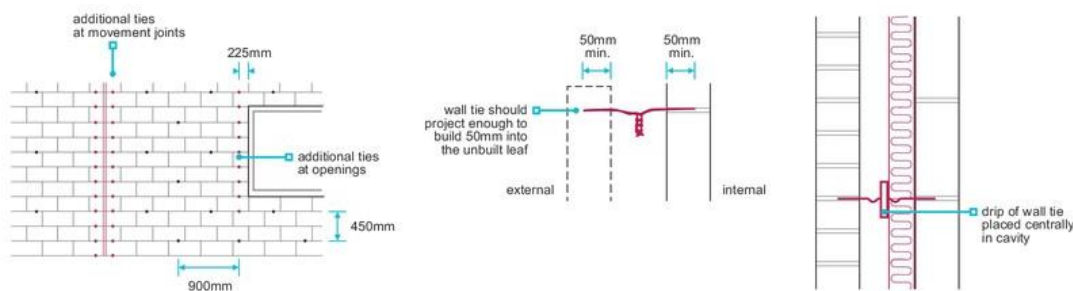
Notes

1 The cavity insulation may need cutting to insert the tie.

Water should be prevented from crossing the cavity. Care should be taken to avoid:

- ties sloping down to the inner leaf
- drips being off-centre
- ties having mortar droppings on them.

Cavity walls should be coursed so that the wall tie is level or slopes outwards.



Wall ties should be:

- built in and not pushed into joints
- bedded into the built leaf (by a minimum of 50mm) so that they can have a minimum 50mm bed into the unbuilt leaf
- positioned so that the drip faces downwards.

#### Ties for partial fill insulation

Where partial cavity fill insulation is being used, it should be held against the inner leaf by retaining devices, which may be clipped to the wall ties. Retaining devices should be:

- compatible with the wall ties
- used in accordance with Technical Requirement R3.

Where 1,200mm boards are used with partial fill cavities, the wall ties should:

- be spaced closer to provide adequate support and restraint
- be spaced at 600mm centres in rows, i.e. not staggered.

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### Cole Report Section 10.6 Administration of Statutory Building Standards

Although after the construction of the schools in question, the Scottish Government undertook a consultation in 2009 – Improving Compliance with Building Regulations. 96% of the stakeholders who responded identified that there was a gap between compliance and design highlighting that what was being constructed on site did not comply with the approved Building Warrant plans. Consequently it was recognised that reliance on the current Building Standards system would not in all cases deliver buildings that complied with the approved design drawings. As stated in the report

the current Building Standards system heavily focuses on the checking of plans for approval whereas it is common knowledge that a greater focus should be placed on the construction as this is where it can - and has - gone seriously wrong.

The administrative structure of the current Scottish Building Control system is not in my view helpful in addressing the point made in the previous paragraph for the following reasons.

- It is not a mandatory public service and requires to be licensed by the Scottish Government – the current licenses were renewed in April of this year and the Minister recognised the poor performance of a number of local authorities by appointing them for this service for one year as opposed to the historical 5 year term.
- Building warrant fees are paid on application and consequently the focus tends to be on processing the building warrant application and checking the design with a lesser focus on visiting site during the construction phase.
- The Consultation on Building Warrant fees carried out earlier this year identified that the current fee structure does not support the cost of providing the building control service
- The Building Scotland Act “wooly” when it comes to checking construction quality on site with local authority building control departments having to make “reasonable enquiry” as stated in the Act. This phrase is not defined and is therefore left at the discretion of local authorities to interpret.
- Construction Compliance Notification Plans were introduced by local authorities in an attempt to manage risk during the construction process however it is not clear how these are developed and the most recent data suggests that although these are being set they are not being achieved.

Although in practise the extent of inspection of construction activity by local authority building control departments is generally known to be very limited, especially by those involved in the construction and home building industries, the public at large perceive this not to be the case and this is reflected in the Cole Report. The Cole Report also recognises the importance of “ensuring that contractors actually comply with what is on the approved drawings...” but the current system of Scottish building control is weak in this area.

The Cole Report highlights that in a number of cases work commenced on site before approval of the building warrant and unfortunately this is not uncommon. I have informed the Scottish Government that there are significant delays in some local authorities granting building warrants – in one example it took 98 weeks to obtain a stage 2 warrant. I have currently been advised of a builder who is unable to obtain a building warrant from his own local authority as they had passed the application to another local authority to process and neither of the local authorities can now agree how to process despite the builder being advised he has provided all the necessary information.

Against this background organisations are unfortunately taking risks by commencing works without the appropriate consents being in place. The most recent research undertaken by the Scottish Government (2016) identifies that resources within the local government building control departments are below capacity and that this situation is unlikely to improve. The same research identified poor service delivery across a range of areas so although lack of resources might have some part to play in encouraging work to commence without consent it remains a clear breach of legislation. The reality is that the system is not working in practise and is placing commercial pressures on organisations that are not fully understood by the public sector.

The legislation places an obligation on the building owner to apply for a completion certificate but this cannot be submitted without a building warrant being in place and given the delays in granting a warrant I have recently been advised of circumstances where a building warrant for a large block of flats was granted followed some 3 days later by the completion. As stated in the Cole Report the lack of legal sanctions in this area is well known and whilst this continues it will encourage the breaking of these rules.

I referred to the introduction of the Construction Compliance Notification Plans and when these were introduced by local authority building control departments it was with the intent to focus on areas of risk during the construction stages and inspect these areas when being built.

In 2014 I carried out some research into these inspections and the following paragraph is extracted from my summary comments of that research at the time.

#### **Average Number of Inspections by Type per Site**

- Highest number of inspection by volume is an inspection at completion i.e. on average there were 20 completion inspections carried out per site surveyed.
- Second highest joint highest inspections are for open and closed drain inspections where on average about 17 inspections each for open and closed drain inspections per site were undertaken.
- Third highest is for foundations where on average there were 13 foundation inspections per site carried out
- Fourth is a list of varied inspections which in total average about 4 inspections per site”

It is not therefore surprising to me that the Cole Report identifies the disproportionate attention paid to inspecting drainage on site during the construction of the schools as this to an extent mirrors my findings. In essence and as stated above the Construction Compliance Notification Plans might not be focusing correctly on identifying areas of construction risk.

Through our experience of working with the home building industry, through research and through our experience in the management of insurance claims we know that the construction of external masonry wall is an area of risk and as a consequence it is one of the key stage inspections we carry out on every home we cover to ensure that the walls and especially the wall ties are correctly constructed.

Some of the statements in the Cole Report about local authority building control not checking masonry wall construction are disturbing and they even acknowledge that it is not perceived as an area of risk to them.

I hope this letter is helpful to the Committee as it begins its inquiry.

Yours sincerely

Malcolm MacLeod  
NHBC Scotland Director