

**ANGUS COUNCIL**

**COMMUNITIES COMMITTEE**

**6 JUNE 2017**

**PPP SCHOOL ESTATE INSPECTIONS**

**1. BACKGROUND**

- 1.1 Members will be aware of the Edinburgh School Inquiry following the collapse of an external wall at Oxgang school in 2016 which resulted in the closure of 17 schools requiring decant of school pupils and remedial works to schools in Edinburgh. The schools were constructed under the Private Public Partnership (PPP) contractual and funding arrangements.
- 1.2 The inquiry identified failure by the contractor to adequately tie the external cladding of brickwork into the main structure with a lack of suitable wall ties, either or both, at the top of the wall (head restraint); or in the main sections of the walls with insufficient wall tie embedment or missing wall ties.
- 1.3 The provision of wall ties is part of the design undertaken by the private contractor, who is also responsible for constructing the building in accordance with that design and arranging for an independent certification of the project by a third party. The Edinburgh School Inquiry found fault with the construction and certification process.
- 1.4 The defects found in the remaining Edinburgh schools following the Oxgang collapse, indicated that there were little or no external signs of distress in the buildings; and defects were only subsequently found following intrusive surveys necessitating removal of part of the wall and inspection by borescope.
- 1.5 Latterly there was also an issue identified in regard to appropriate Fire Stopping within the Edinburgh schools. Fire Stopping restricts the spread of fire in areas such as ceiling voids.

**2. IMPACT IN ANGUS**

- 2.1 Following the collapse at Oxgangs, all Scottish public sector bodies were asked to give consideration of buildings constructed under PPP arrangements. In Angus there are seven existing schools procured through Children and Learning in partnership with Elgin Education (Forfar & Carnoustie) Limited and constructed by Robertson Construction. The contractors involved in the PPP schools in Edinburgh are not the same as used in Angus.

The schools involved are:

- |  |                                |
|--|--------------------------------|
| • Burnside Primary School, Carnoustie  | - New school construction      |
| • Carlogie Primary School, Carnoustie  | - Small extension construction |
| • Carnoustie High School, Carnoustie   | - Large extension construction |
| • Langlands Primary School, Forfar     | - New school construction      |
| • Strathmore Primary School, Forfar    | - Large extension construction |
| • Whitehills Primary School, Forfar    | - New school construction      |
| • Woodlands Primary School, Carnoustie | - New school construction      |

- 2.2 The investigation into the schools in Angus was undertaken by Technical and Property Services and involved.

- Visual Inspection – inspection of a structure/building;
- Intrusive investigations – removal of sections of the external walls (masonry blocks) needed to be removed to allow inspection of the existing wall ties and head restraints.

- 2.3 These intrusive investigations highlighted some similar construction issues, on a smaller scale, to those found in the Edinburgh Council schools. A summary of the issues are noted below:

- **Burnside Primary School (PS)** - Missing or inadequate Head Restraints

- **Carlogie Primary School** - Due the size of the extension and construction type, the inspection was limited to a visual inspection - no issues found
  - **Carnoustie High School** - No issues found
  - **Langlands Primary School** - An initial investigation found that some wall ties to have an embedment 5mm less than the 50mm required. On further investigation it was found that the majority of ties embedment were greater than the required 50mm.
  - **Strathmore Primary School** - Missing or inadequate head restraints; an initial investigation found some ties were to have an embedment less than required. On further investigation it was found that the majority of ties embedment were greater than the required 50mm. One tie was found to be missing from the outer leaf of the external wall. Difference in coursing levels of the inner and outer leafs of the external walls resulting in ties not being horizontal.
  - **Whitehills Primary School** - Missing or inadequate head restraints
  - **Woodlands Primary School** - Missing or inadequate head restraints wall ties embedment less than the minimum requirement.
- 2.4 In summary one school (Woodlands PS) required remedial tie replacement in three wall panels and remedial header tie works were required at four schools (Burnside PS, Strathmore PS, Whitehills PS and Woodlands PS).
- 2.5 Consulting engineers, Fairhurst, were employed by the PPP contractor to provide the remedial works design/details and Robertsons organised the onsite construction. Fairhurst also confirmed that coursing levels, not being horizontal, at Strathmore PS was not of concern to the integrity of the structure.
- 2.6 The following works were undertaken by Robertsons
- **Burnside PS:** Head restraint straps were installed at agreed locations in the plant room area, along with some being installed to the rear gable end of the games hall.
  - **Strathmore PS:** Head restraint straps were installed at agreed locations in the plant room area.
  - **Whitehills PS:** Head restraint straps were installed at agreed locations in the plant room area, along with some remedial wall ties along a single elevation of the games hall.
  - **Woodlands PS:** Additional wall ties were inserted in all three panels
- 2.7 Angus Council structures team within Technical & Property Services reviewed and accepted the proposed remedial works for all the schools which were carried out between September and October 2016.
- 2.8 Elgin Education (Forfar & Carnoustie) Limited appointed an accredited Fire Consultants to verify overall fire compliance in the schools, following a previous survey by Robertsons in 2015. The consultants have completed their own survey of the facilities in February 2017, and Elgin Education (Forfar & Carnoustie) Limited have not raised any concerns following receipt of the consultant's report.
- 3. FINANCIAL IMPLICATIONS**
- 3.1 All surveys, including intrusive works and any subsequent consultant costs and remedial works have been met by Elgin Education (Forfar & Carnoustie) Limited and/or their contractor. The council has borne its own costs associated with the staff involvement, with was contained within the Technical & Property Services revenue staff budget in 2016/17.

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