

From: [REDACTED]
Sent: 23 March 2026 21:25
To: Michael Miller
Cc: Sandy Rintoul
Subject: E20955 - St Cuthberts RC PS - M Miller.pdf
Attachments: E20955 - St Cuthberts RC PS - M Miller.pdf

Michael, Sandy

As discussed earlier today please find attached our report with written specification for proposed propping sequences for St Cuthberts RC Primary. Note I will follow this up with a sketch first thing in the morning but I hope this allows matters to progress in the meantime.

On the propping, I've not been able to sensibly get a timber design to work hance falling back to using steel beams here. The steel quoted is a minimum size therefore if something larger is able to be sourced then I'd be happy to utilise this on the basis that it can be handled simply enough. The important thing is that the ceiling and ply is to be removed to the underside of the floor to allow the beams to be installed tight beneath the 1st floor slab.

I'll be in touch once I've formatted a suitable sketch.

Many thanks



Director
for Will Rudd

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AL/SC/E20955

23rd March 2026

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For the attention of Mr Michael Miller

Dear Michael,

St Cuthberts RC Primary School, Edinburgh Inspection of 1st Floor Structure

Further to your request of 16th March 2026, [REDACTED] of Will Rudd's attended the above building on the afternoon of Friday 20th March following reports of a noticeable dip within the floors of the 1st floor classrooms. The visit was made following out of service hours. We were accompanied by Michael Miller of The City of Edinburgh Council.

Our report is based on a visual basis only and no intrusive works have been carried out at this stage. We are unable to comment on the condition of areas or structural elements which are not visible. We comment as follows;

St Cuthberts RC Primary School is a purpose built education facility constructed in the 1960's. The school is generally single storey with exception of a of a two storey building located to the south of the school grounds. The two storey block is of framed construction with precast 'beam & block' 1st floor construction spanning between beams and walls located to the north-west and south-east elevations. The maximum span of the floors is approximately 7.5 metres. Access was provided to all relevant rooms internally and externally during our walkround. Ladders were used to access above ceiling grid tiles where appropriate.

The two storey building consists of 3No. classrooms on the ground floor level, and 2No. classrooms and the teachers staff lounge on the first floor. The building is generally in good condition commensurate with its age with no visible signs of settlement cracking or other forms of cracking within the supporting walls save for minor hairline and fine cracking normally expected in a building of this age.

The first floor rooms are accessed from a central landing directly from the stairwell. The landing and stairwell were generally free from any visual defects and the floor construction appeared to be level and generally in good condition. Each of the rooms at first floor, numbered 50; 53 and 54, were all found to have significant dips within the floor plate that fall towards the middle of each of the rooms. Room 53 was noted as having the most significant slope out of the three rooms noted.

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St Cuthberts RC Primary School, Edinburgh

Inspection of 1st Floor Structure

A spirit level was used to define the deflected shape of each of the rooms. The deflected shape of the floors shallowed out within the middle third of the rooms and rose swiftly upwards towards their supports. It should be highlighted that the fall is not consistent across the entire floor plate in that the vertical deflection was less towards the return walls parallel to the floor span. The rooms were occupied by light furniture only, which is vastly less than expected imposed loading for educational buildings. There were no signs of vibrations when walking on the floors however longer vibrations were observed when jumping.

Using spirit levels the deflection within rooms 50 and 54 were measured to be 20mm over a metre length; and 30mm over a metre length in room 53. This results in a likely total deflection of approximately 60-75mm between the support points and centre of the room. For context, normal design limits for a concrete floor structure would expect a total deflection of 15-20mm over the entire floor span, and a deflection of 2-3mm over a metre length, considerably less than what was observed here.

Observations within the ground floor classrooms noted that the ceiling grids had a noticeable dip that mirrored the deflected shape of the floor plate measured at 1st floor level. It was confirmed that the ceilings had been replaced in 2021/2022 as part of a City wide ceiling replacement programme. The ceiling installed to the underside of the 1st floor slab is a hanging ceiling grid supported by plywood fixed into timber battens to the underside of the beam and block floor. Unfortunately the installed plywood obstructed the beam and block flooring from view and so it was not possible to assess the condition of the structure from underneath. Nevertheless the weight of the ceiling is very light and wouldn't result in such high deflections as observed.

Observations on the plywood above the ceiling noted that the ply was badly warped across the entire area with fixings which had pulled out from its substrate. On the basis that the plywood was originally installed level, this could indicate movement of the floor since the ceilings were installed, or moisture in the ply, or both.

As the underside of the floor structure is obscured from view, the source of the excessive deflection is unknown and it is not known if movement has ceased or is continuing. Further investigations are recommended to ascertain the root cause of this movement.

Recommendations

In order to ascertain the cause of movement the following measures are recommended in the immediate term;

1. We would recommend that the underside of floors to rooms 50; 53 and 43 are propped as a precautionary measure in case movement is ongoing. Propping recommendations are as follows;
 - Propping Beams: 178x102x19UB; Max span of 3m
 - Props: Type 3 props @ 2.5 metre centres
 - Prop locations: Maximum 2.7 metre spacing along span (min 2 lines of props)

Propping must be applied directly to the underside of the beam and block floor and therefore the ceiling grid and ply substrate require to be removed locally to facilitate this.

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Inspection of 1st Floor Structure

Note that the ceiling grids and plywood should be carefully removed in order not to damage the beam and block floor system above, and to not exacerbate any possible damage that may already exist within the beam and block. Propping will allow the classrooms to remain functioning until intrusive works can begin however consideration should be given to the functionality of the ground floor classrooms during this time.

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2. Following the installation of propping we recommend that the entire ceilings and ply substrate is fully removed within rooms 34, 37 and 38 at ground floor level to allow the beam and block floor to be fully assessed for the presence of tension cracks and any other defects that might explain the level of deflection measured. This will allow further assessment to confirm if a safety risk is present or not; and to complete remedial designs should this be deemed necessary. We would request this is carried out during the easter holidays at the latest to allow this assessment to be quickly mobilised.
3. Propping to remain insitu until remedial action is fully implemented, or that the floor structure is assessed as stable without remedial action.

We trust the above is satisfactory at this stage however should you require further information or discussions, please do not hesitate to contact us.

Yours sincerely,



Director
for Will Rudd Davidson Ltd

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St Cuthberts RC Primary School, Edinburgh Inspection of 1st Floor Structure

Photographs



Photo 1 : View on Teachers Desk With Visible Slope

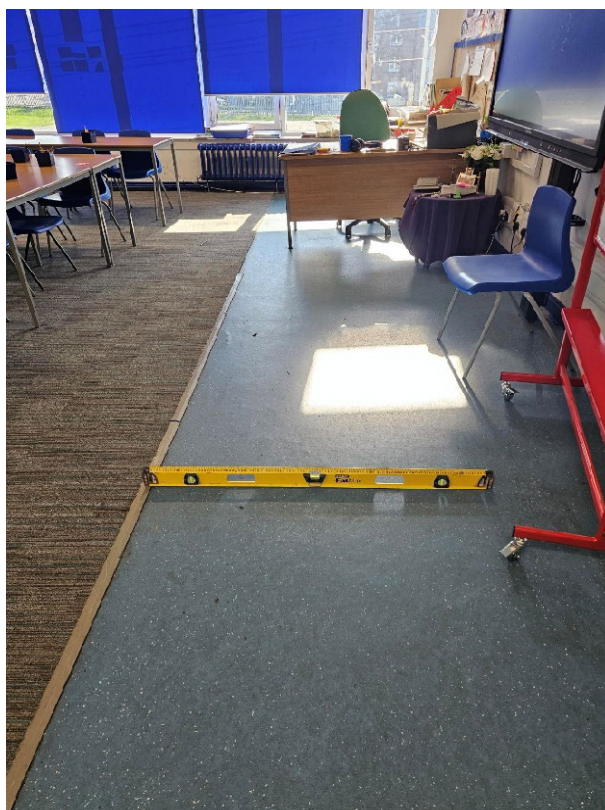


Photo 2 : Spirit Level to South-East Span End

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Inspection of 1st Floor Structure



Photo 3 : View on Spirit Level Bubble at South-East Span End Noting Slope Towards Middle of Room



Photo 4 : View on Spirit Level at North-West Span End

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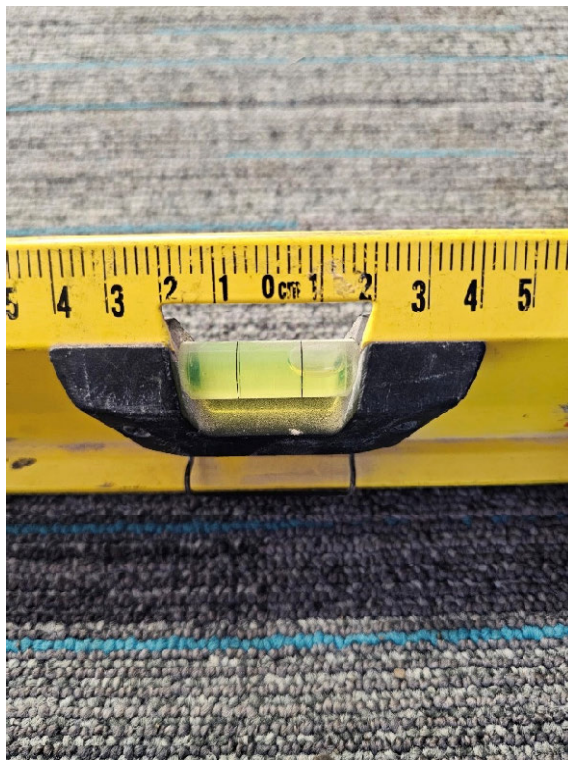


Photo 5 : View on Spirit Level Bubble at North-West Span End Noting Slope Towards Middle of Room



Photo 6 : View on Spirit Level at Centre of Room

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Photo 7 : View on Spirit Level Bubble at Centre Span. Floor is Flat

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Photo 8 : View on Spirit Level Measuring Flat at South-East Span

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Photo 9 : 30mm Measurement of Packing Beneath Flat Spirit Level