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# Internal Memorandum

From **DRS Housing & Regeneration Services**  
  
**(Daveed Barceló, Joanne Forbes & Graham Keir)**

To **Jackie McIntosh (CC Patrick Flynn)**  
Title **Housing and Regeneration Services – Group Manager**

Subject **DRS Condition Report on Sir John Maxwell School**

Our ref **SJMS/STRA/01**

Your ref

Phone Direct

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Date **07 November 2013**



## **1. Introduction**

A group of officers from DRS Housing & Regeneration Services (surveyors) and Project Management and Design (Structural Engineer) carried out an inspection of the above property on the Tuesday 24th September 2013.

The purpose of the survey was to examine the building condition. Structural input was to provide preliminary comments on significant structural defects. Structural issues have been highlighted on a separate Structural Report.

The inspection covered the external elevations and the interior of the building, and was carried out from outside ground level and upper floor levels as appropriate.

All observations were visual and non-disruptive in nature.

## **2. Description of property**

The property is a three storey building, built in 1907, and served as a primary school until its closure in 2011. It has since remained empty and boarded up.

The elevations are a classic example of Victorian schools constructed at this time.

Externally the walls are of red ashlar sandstone, generally laid in parallel courses but uncoursed in other areas. The outer walls will be of solid construction with no cavity.

Internally, the load bearing walls will likely be of brickwork although it is possible that there will be local walls of stone.

The ground floor slab is of concrete and is generally constructed off the solid.

At the upper levels the floor structure is of two types.

Classroom floors tend to be of timber floor joists spanning between steel beams, while the upper hall, landings and cloakrooms are of filler joist construction.

The first floor cantilevered balcony, which runs around the perimeter over the lower hall, is also likely to be of filler joist construction.

The roof structure is constructed from traditional timber trusses in a multi-pitched profile comprised of local dual pitch areas, some of which have hipped ends. Rooflights exist over the upper hall and the stairwells.

It should be noted that some of the above information has been lifted from archive drawings and therefore no guarantee can be made of its accuracy.

## **3. Defects to external elevations**

The external elevations are of sandstone and the stonework is generally of good quality and shows little in the way of erosion. Some areas show previously re-pointing of mortar joints.

External cracking was observed, especially to the SW, SE and NE elevations. The Structural report provides further information on external structural defects.

The NE elevation shows substantial signs of dampness and is covered almost in its entirety by white staining that is likely to be efflorescence. It is also possible that the white staining present a degree of fungal infestation on this elevation. However, this will need to be confirmed by a rot specialist who would carry out a full disruptive rot survey. There are also numerous areas of vegetation growth on this elevation which is a symptom of blocked drainage outlets and an overall lack of maintenance.

The remaining elevations are in considerably better condition and show only small localised areas of efflorescence. Again, a rot specialist should confirm the existence of any fungal infestation in all parts of the building, including the external elevations.



*NE elevation showing widespread efflorescences and vegetation growth*

#### **4. Internal Defects**

Internally, all areas of the property have been badly affected by water penetration due to the failure of the roof and gutters. Most of the walls, floors and ceilings are in a state of constant water saturation and moisture levels of materials were recorded as maximum in most areas. In fact, moisture levels could not be recorded as they were too high for the damp meter 'Protimeter' device as it was showing levels above the maximum limit.

This has resulted in localised ceiling collapses, floors becoming badly warped and wall finishes deteriorating.



*Interior view of one of the classrooms*

There is a real concern that rot might exist within the majority of the building elements including structural members (walls, floors, ceilings, joists, beams, windows etc.). It is therefore essential that an intrusive rot survey is carried out to determine the extent and type of any rot affecting the building.

Pigeons have also accessed the building resulting in many surfaces being badly covered in pigeon guano.

The current condition of the building restricted the ability to carry out a full structural inspection of the second floor as it was considered too dangerous due to the possibility of rot having severely affected the second floor and roof. Also there is a risk that asbestos might still be present as well as high risk of airborne respiratory disease caused by the large amount of pigeon guano.

However, a group of surveyors accessed the upper levels with appropriate masks and confirmed a similar condition to the lower areas of the building with more obvious signs of water penetration on areas of close proximity to the roof.

It can be assumed that many structural timbers are badly affected by rot, especially within the upper part of the building. We would, again, consider essential that a full rot survey is undertaken to establish the extent of rot infestation. A detailed intrusive structural report should also be carried out to determine how the structural timber has been affected by rot as well as the extent of corrosion within the structural steelwork.

## 5. Roof

A visual inspection of the roof was carried out internally. It should be noted that the structural engineer did not access this level, therefore, we can not comment on the stability or condition of the roof structure. However, it can be assumed that areas of the roof have sustained damage and that extensive rot will be present.

It is likely that the whole roof will need to be replaced as this is causing the majority of the water ingress and appear to be in a very poor condition. It is thought that majority of damage has occurred due to failures of gutters (lead theft was reported) and general lack of maintenance of the roof drainage system. Lower areas of the roof seem to be in poorer condition than the top parts.



*Ceiling collapsed above one of the stairwells*

## 7. Summary of Condition

Externally the outer walls are considered in an acceptable condition in the short term, although require remedial works to areas of cracking (refer to Structural report).

Dampness is evident externally on the NE elevation as efflorescence's and vegetation growth are widespread. This elevation is especially on a constant estate of dampness well beyond the acceptable levels.

Internally the property has suffered from sever water penetration and therefore much rot is likely to be present.

A full (disruptive) rot survey and an intrusive structural report are required to discover the extent of the rot and damage to the structure of the building. This will assist with preparing proposals for repair and/or retention of the building.

The Rot Specialist should provide a method statement for carrying out the works whilst accessing the building in a safe manner.

An asbestos survey is also required to determine if there are any elements of asbestos left within the building.



*Ceiling collapsed on a bathroom area*

## 8. Design Proposal Options

There have been other schools around the city that have been re-utilised for different use.

Maryhill Primary School was successfully converted into flats for Maryhill HA. These were successfully sold as NSSE units and were part of an attractive development that achieved some architectural awards.

The success of this development was mainly due to the relation between the costs of the conversion and the funding generated by the sell of the properties. Areas of the building that cannot be converted into flats pose a financial penalty to the development as they are unable to generate funding to pay for the construction works of that specific area.

The Sir John Maxwell School presents a bigger footprint with a deeper plan that will make it more difficult to convert into flats. Around 145m<sup>2</sup> of footprint will be difficult to develop as this covers the internal atrium space that would be required as circulation to access flats but will not be able to generate an income for the project. This will pose a very high financial penalty to the project.

In other areas of the school, a similar approach than the Maryhill Primary School could be taken. Flats could feature at mezzanine level that allowed for an additional bedroom. This can generate additional funding for the project. The classroom sizes and heights are similar at the Sir John Maxwell School; therefore a similar approach is likely to work.

In overall terms, 48 bed spaces could be achieved if mezzanines were incorporated into the design with the majority of flats being 2 bedroom flats.

There would be a small proportion of flats that could be 1 bedroom flats. This could be joined to the adjacent flat to create a 3 bedroom unit, if required. However, the main decisive factor, in financial terms, would be how the internal atrium space is utilised.



*Internal atrium space*

## **9. Recommendations**

In order to study further the feasibility of any proposal for the Sir John Maxwell School a full disruptive rot survey, an asbestos survey and a disruptive structural report are required.

Rot is expected to be widespread throughout the building. It is anticipated that a full strip out of the interiors will be needed including floors, ceilings and wall finishes.

At this moment in time, it is unclear if refurbishing or reuse of the building will be an option financially feasible, or if otherwise a façade retention project will be more realistic.

It is acknowledged that conversion into flats is not the best option for this building due to the deep plan. Other uses such as community or public use (including school) might be more appropriate but there could not be the necessary demand for these other typologies.



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**Date: 7 November 2013**