

JOHN FULTON PLUMBERS LIMITED

SPECIALIST LEAD WORKING CONTRACTORS

(Regd. Office)

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Keith Vallance
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7 Seaward Street
Glasgow
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26th January 2024

Dear Sir,

North Rotunda, Glasgow

Further to your recent enquiry and our subsequent site visits please find enclosed our roof report for your consideration.

Survey Date: 18/12/23

Weather : Light winds and Light Rain interspersed with periods of dry weather

The survey was carried out from a Truck Mounted Cherry picker located in the car park of the building. The survey was a visual inspection combined with a 'hands – on' approach with the slate roofing work opened in several isolated areas over the roof area. This allowed for the inspection of the slate themselves, the roof build up, nailing sequence and membrane. There were 20 individual slates removed at different locations which can be tested to assess the quality and expected lifespan of the existing slate roof covering.

The existing slate roof covering is a Scottish Ballachulish slate which is slated onto a non-breathable under slate felt. The slating work has been installed with a single nail head fixing sequence. This was evident in each location with the slating work opened over 5 slate courses.

The existing slate work is fixed to the timber substrate with 40mm clouted nail. Due to the pitch of the roof slope, the exposure and the detail a 50mm fixing should be utilised. The existing slate work is showing signs of nail sickness which was evident with the missing slates on the roof covering. It was also noted when the slate work was opened that the existing slates are showing signs of delamination and due to the shape of the roof structure and the slates hanging on head nails, the slates are fracturing at the head.

There has been historic work been carried out on the building i.e. roof lights introduced to the roof area where the slating has been reinstated incorrectly. There has also been historic repairs carried out on the roof covering where Welsh and Spanish slate types have been utilised.

The top 2 metres of the slate roof covering has coated with bitumen tar to prevent water ingress into the slate work due to the low pitch of the roof structure. All the slate from this area can not be reused due the tar coating and damaged caused to the slate during the stripping process.

The existing gutter is the original lead gutter which has been overlaid with a bitumen torch on felt. The overlay felt was opened at 1 location at the eave course of the slating work to expose the original lead gutter below.

Figure 1 – the ducting is to be removed which will necessitate the stripping of the existing slate around the duct.

Figure 2 – the ducting is to be removed which will necessitate the stripping of the existing slate around the duct.

Figure 3 - the ducting is to be removed which will necessitate the stripping of the existing slate around the duct.



Fig 1.



Fig 2.



Fig 3.

Figure 4 (below) – The roof slope showing the slates turning on the nail. This highlights that the nail heads are failing. Photo also shows plumb bonds on the slate coursing.



Fig 4.



Fig 5.



Fig 6.

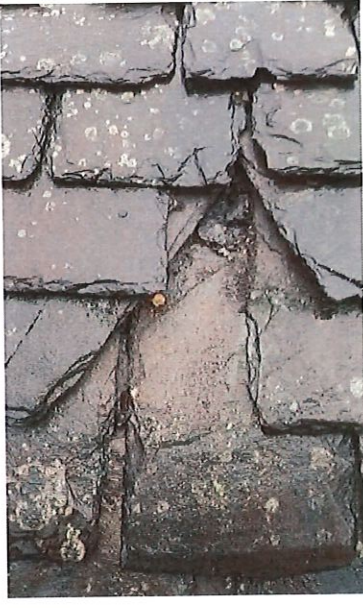


Fig 7.

Figure 5 – The slate is on to a non-breathable felt
Figure 6 – The slate is on to a non-breathable felt
Figure 7 – The heads of the slate are showing signs of failure.



Fig 8.

Figure 8 - The head of the slate is showing signs of failure



Fig 9.

Figure 9 - This shows the size of the existing undersized nails being used.

Figure 10 – Highlights the poor quality of historic repairs carried out by others.

Figure 11 - Highlights the poor quality of historic repairs carried out by others.

Figure 12 – Shows that the previous works have been carried out incorrectly and to a poor standard. There was previously a window in this section and it has been infilled and slated incorrectly which has resulted in areas of plumb bond and courses not matching.



Fig 10.



Fig 11.



Fig 12.



Fig 13.

Figure 13 - Shows that the previous works have been carried out incorrectly and to a poor standard. There was previously a window in this section and it has been infilled and slated incorrectly which has resulted in areas of plumb bond and courses not matching.



Fig 14.

Figure 14 – shows the gutters full of rainwater & the flashings at the rooflights have failed.

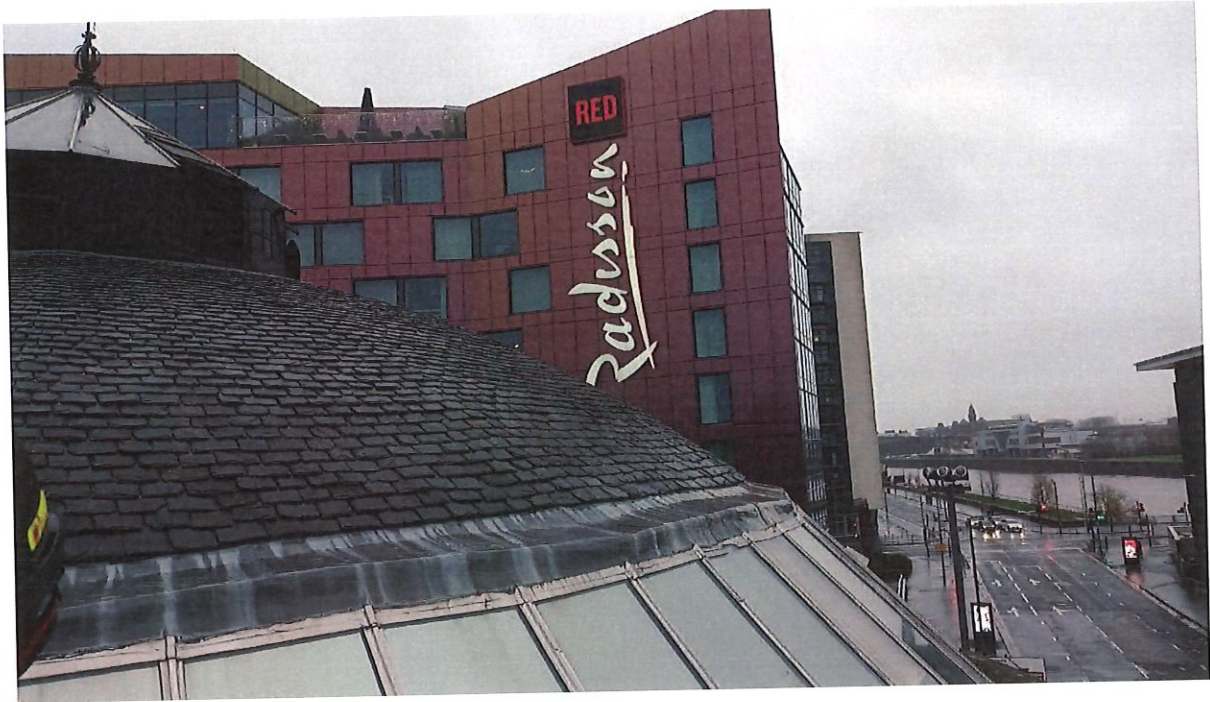


Fig 15.

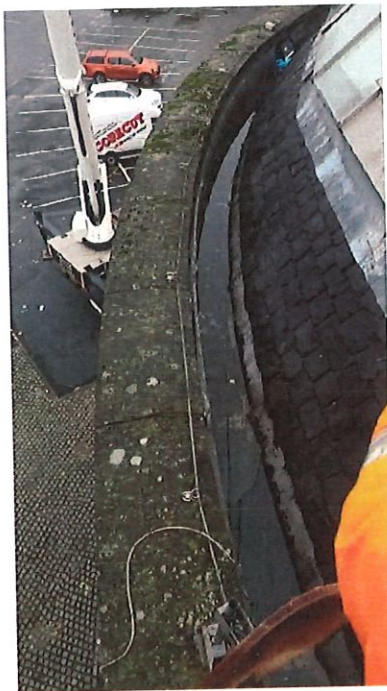


Fig 16.



Fig 17.



Fig 18.

Figure 15 – Shows that the previous works have been carried out incorrectly and to a poor standard. There was previously a window in this section and it has been infilled and slated incorrectly which has resulted in areas of plumb bond and courses not matching

Figure 16 – Shows that the gutters are failing. The outlets are failing and in some locations have been covered over. Temporary repairs are evident and a long term solution required.

Figure 17 – Bitumen felt has been installed to eaves which is not a breather membrane

Figure 18 – Roof slated with plumb joints throughout resulting in premature failure of roof.



Fig 19.

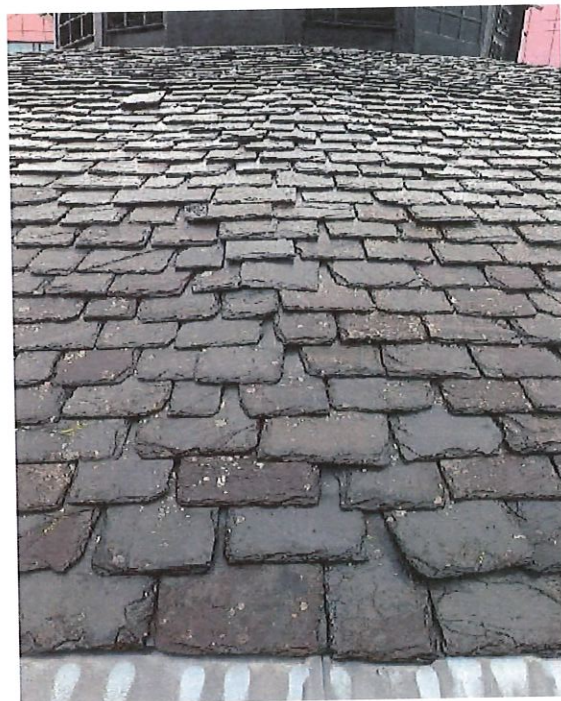


Fig 20.

Figure 19 – highlights that a number of different slate types have been used for previous repairs resulting in foreign body slate being installed into existing Scotch slate works.

Figure 20 – shows slates dislodged highlighting nail sickness and delamination.

Overall the existing slate is in a poor condition. The roof is nail sick, the slates are failing at the heads and are delaminating, and the incorrect fixings have been used. There is no breather membrane under the slate. At the ead of the roof a large area of the roof is covered in bitumen paint meaning that the slate are now rotten. It is our opinion that the roof should be stripped and reslated. Locating & sourcing this number of salvaged Scotch slate to relstae the entire roof will be extremely difficult. It is unlikely that many, if any, slate would be salvaged during the stripping of the existing roof.

We trust that the above clarifies the condition of the existing roof.

Yours sincerely

Alasdair White