

# Roof Inspection Report

In respect of:

██████████

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████████████████

For: ██████████

Report produced by Simon Hollis MRICS

For and on Behalf of ██████████

22<sup>nd</sup> December 2022

Drone Inspection Report - Summary of Findings





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Signature:  For and on behalf of 

Date of Report: 22<sup>nd</sup> December 2022

## 1.0 About this Report

### 1.1 Address of the Property Surveyed (The Property)

[REDACTED]

### 1.2 Brief and Report

Instructions were received from [REDACTED] to attend the property and undertake a drone inspection of the chimneys, roof coverings and guttering on Roofs A - N. Following the inspection, this report has been prepared based on the imagery taken whilst on-site. This should not be considered a full building survey.

We hope that the report helps you to make a reasoned and informed decision about required repairs and maintenance. We detail the prioritisation of works in our Observations and Recommendations section (2.0). Where works are recommended, you should obtain detailed written quotations before you enter into a legal commitment. If you decide not to act on the advice in this report, you do so at your own risk.

We have not been instructed to advise on repair methodology, prepare schedules of work, prepare tender documents or provide project management advice, however, if you would like to discuss any of these services, please do contact us.

### 1.3 Date of Inspection

The property was inspected by [REDACTED] on 15<sup>th</sup> December 2022. The weather conditions at the time of the inspection were cold and icy.

### 1.4 Client

This survey report and any associated correspondence are for your personal use only and no responsibility can be or will be taken to others who may see it or wish to depend on it.

### 1.5 The Surveyor

On behalf of [REDACTED], the site inspection survey was undertaken by [REDACTED] and [REDACTED].

This inspection report was prepared by Simon Hollis based on the imagery taken on-site.

Simon holds a HND in Estate Agency, a Bachelor's with Honours degree in Urban Land Economics, a Master's Degree in Building Surveying and is a Member of the Royal Institution of Chartered Surveyors.

Simon is Dyslexic, please excuse any spelling or grammar errors in this report. Specialist software is used, unfortunately, it is not as clever as the developers would have you believe. If anything is unclear, or if you would like to discuss the report and future maintenance of the property, please do contact us.

The Surveyors declares no conflict of interest in inspecting this property.



## 2.0 Observations and Recommendations

Our observations are made as if stood at the front of the buildings with the left-hand side being towards the railway tracks.

We only see the property during the course of one day in one season, usually only in one weather condition. It, therefore, may be necessary for you to observe and monitor some items.

When we note that works are required, we will usually advise that these are required:

Straight away – works should be undertaken without delay to stop the defect from having an immediate detrimental effect on the property.

The short-term - within the next year.

The short to medium-term – end of the first year to year five.

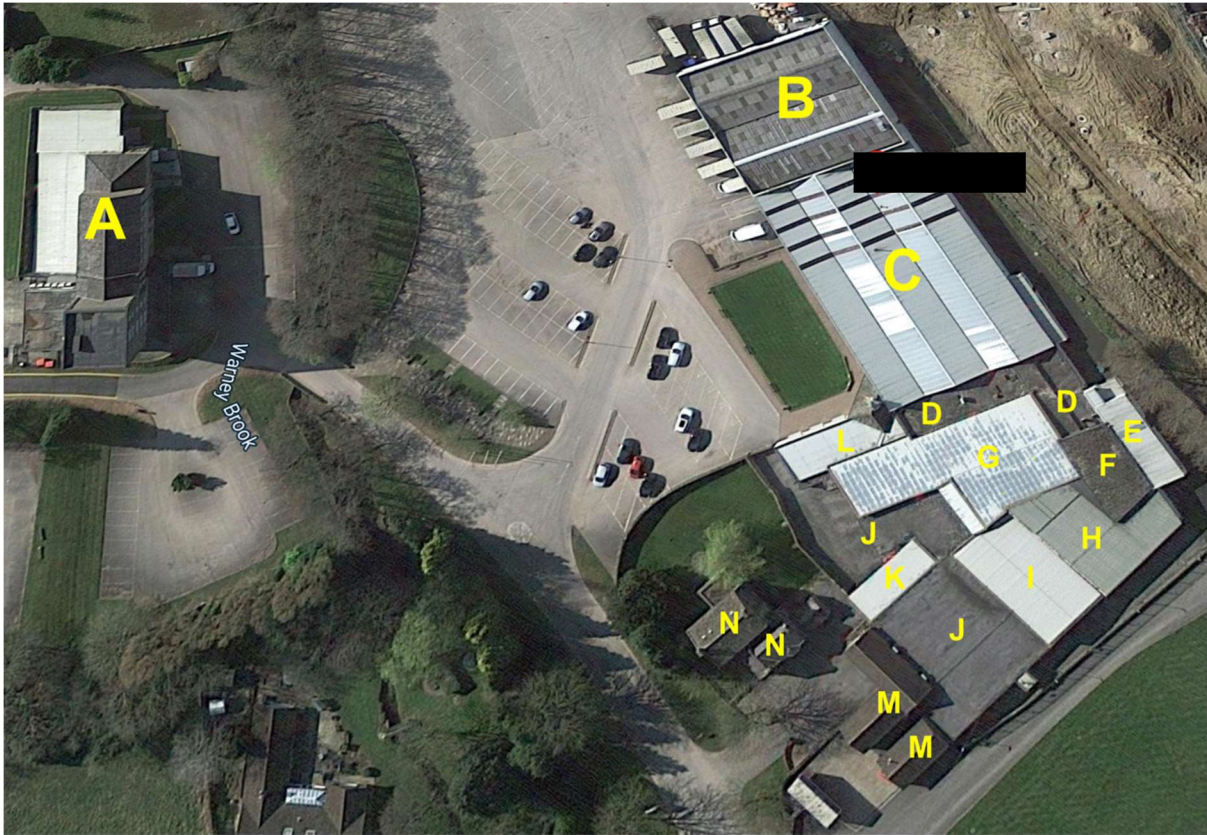
Long-term – post year five.

Record and monitor – photograph/measure the defect and check it with the change in seasons to see if it gets any worse. If it does get worse, further action may need to be taken.

### Limitations to our Inspection

The chimneys, roofs and guttering have only been inspected from ground level with the use of a drone, we have been unable to physically get close to the roof coverings etc. We have detailed our findings below, however, this should not be considered a full building survey and where there are multiples of the same defect, we have included examples.

The report has been divided up into sections based on the individual roof areas as shown on the site map overhead photo below.



Where Roofs D – M all abut, this arrangement is far from ideal. There are ten different roofs and at least nineteen pitches covering this area. This creates an excessive amount of upstands, detailing and rainwater discharge. A long-term plan should be made to consolidate this area under a single roof design.

A note on flat roofs – a plan needs to be made to replace all of the flat roofs before they fail. Unlike most pitched roof designs, by the time a flat roof shows rainwater ingress internally, the substrate is usually damaged beyond reuse and has to be replaced before the covering can be replaced. If the covering is getting to the end of its life, and the substrate is still dry, it can usually be reused as long as it is cut to the correct fall. There is a significant cost and time saving to undertaking the work in this way.

Where we have advised that moss needs to be removed from pitches, this should first be killed with a suitable product before being left for a couple of weeks before being cleared. A stiff nylon brush and scraper should be used for this work. A metal wire brush should not be used.

Where chimneys, ridges and verges need repointing, an appropriate mortar mix needs to be used. This needs to be lime-based as opposed to cementitious. Please contact us if you need any advice on the maintenance of traditionally constructed buildings.

Where any timber elements need redecorating, only a linseed oil-based paint should be used. Modern plastic-based paints will trap moisture against the timber and accelerate decay.

If you require any advice on planned or reactive maintenance of the buildings, please do contact us to arrange a meeting.

## 2.1 Roof A

Roof A is made up of five main areas:

Tower – there have been some inappropriate repairs to the parapet wall head which should be corrected. Render is dropping off the inside leaf of the parapet and this will need to be repaired in the next year or so. The roof does not shed rainwater to the outlets correctly. This needs further investigation and should be corrected.

Main roof – this requires some moss removal and minor maintenance work.

Main roof, rainwater goods – these are long overdue maintenance and likely now need completely refurbishing. Note that this is specialist work. A plan should be made to make the dangerous areas safe as soon as possible and to refurbish the system next year.

Lean-to – the areas of cut-edge corrosion need to be treated next year and a plan needs to be made to replace the upstand/flashing details too.

Off-shot – this appears to have been the subject of an ill-conceived/executed overhaul and is now holding a lot of rainwater. The roof should be tested in the spring with a view to determining the most economical way of correcting the incorrect fall.

Canopy – routine maintenance works are required in the short term.

Overhead photo of Roof A. To assist with identification, we have subdivided this roof into the sections below.

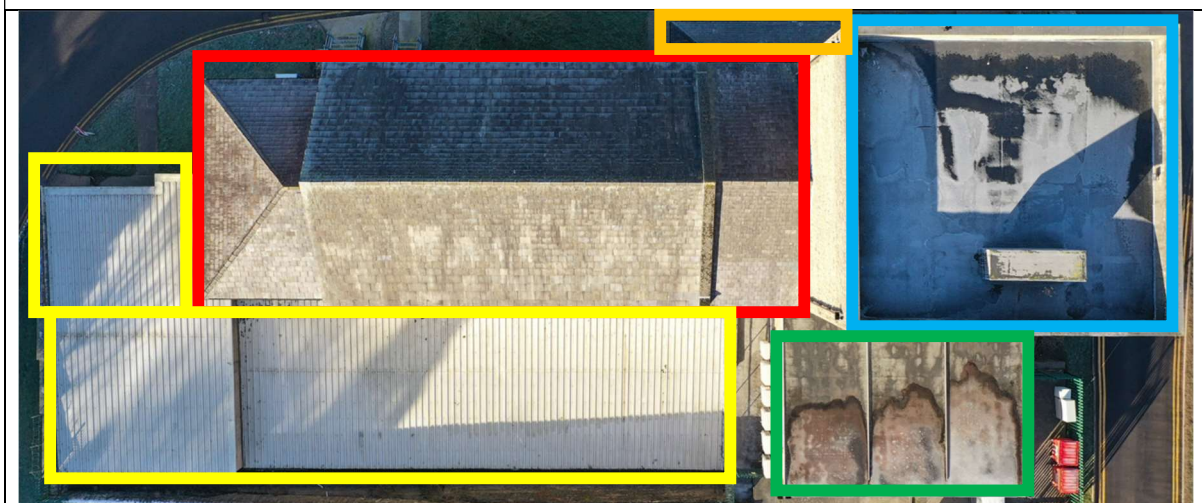
Tower – blue box – flat roof, single ply.

Main pitches red box – natural slate, a separate section for the guttering.

Front lean-to–yellow boxes – composite panel.

Off-shot green box– flat roof, overcovered.

Rear canopy – orange box - natural slate.



### 2.1.1 Tower

The frost and build-up of ice have somewhat restricted our inspection of this section. From some of the detail, this looks like a singly-ply membrane covering/over-covering.

Overhead photo of the tower roof.



The tower has a perimeter parapet wall with a capping slab. This has been inappropriately repaired in places. These repairs should be removed and correctly repaired in an appropriate repair compound (this is specialist work and appropriate advice should be taken).





The internal facing parapet wall has been rendered; this looks like a very thin coat.

This is cracking and falling off in places and there are no expansion joints in the detail.

The render should be repaired/replaced in a more appropriate mix for the location.

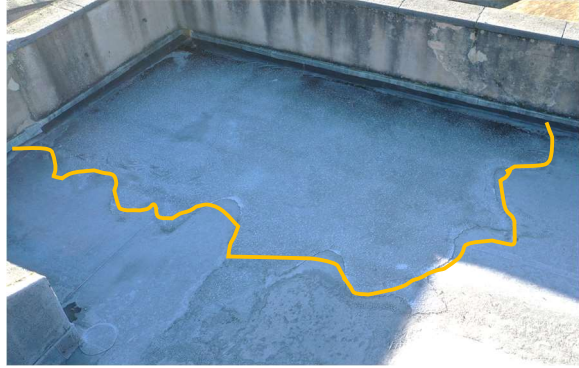
This work should be undertaken in the spring/summer.



Where the upstand meets the render, there is a lead flashing detail. The design/fitting of this is questionable in places. This should be inspected close-up in the spring and any required repairs actioned.



There are large areas of ice on the covering in front of both of the outlets. This suggests that the outlets are not set at the lowest point/the fall of the roof has been incorrectly cut. This is going to be a complicated defect to remedy.



Access way detail – the capping sheet is missing from this detail. A capping sheet should be added in the spring.



### 2.1.2 Main Roof

The main roof is covered in natural slate in diminishing courses. A parapet wall divides the sections of the main area and there is a separate hipped section to the left-hand side. The covering is in generally acceptable condition, with only some minor repairs required.

Side-on and overhead photos of the roof.

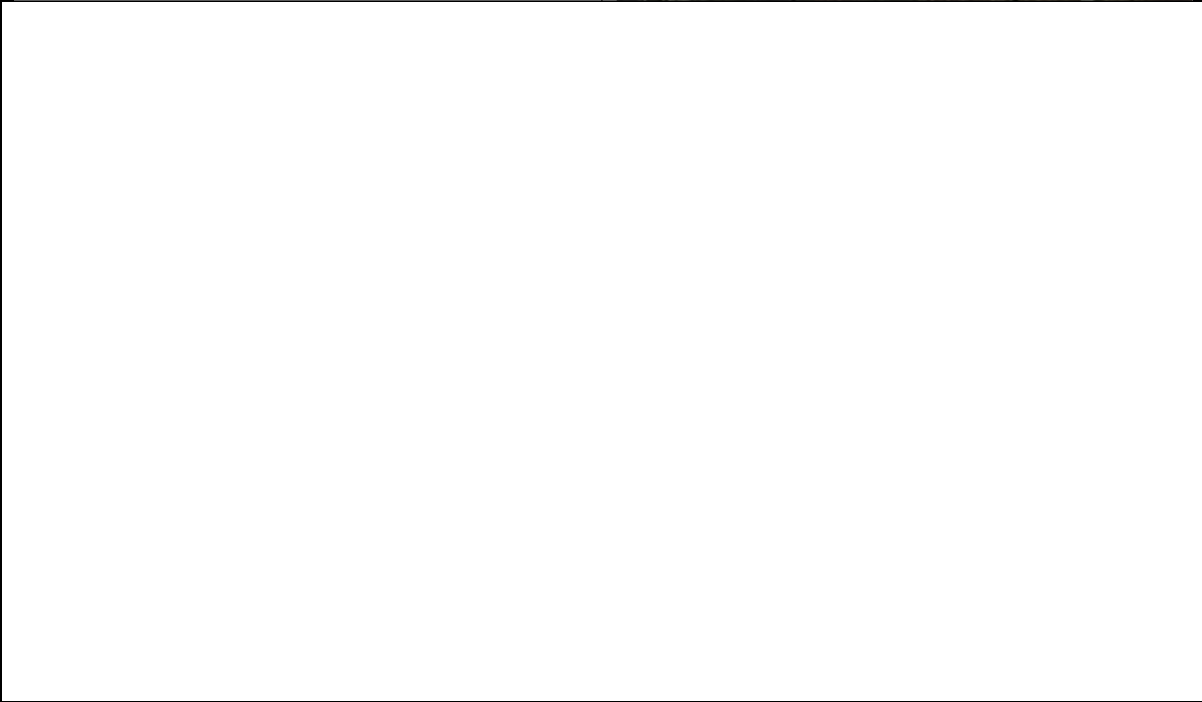




Ridge, an example photo – the ridges and hips are covered in moss and sections of pointing are missing. The moss should be killed and then removed before the ridges and hips are repointed in an appropriate mortar mix. This should be undertaken in the spring.



An example photo of where lichen is building up. This should be cleared off in the spring.



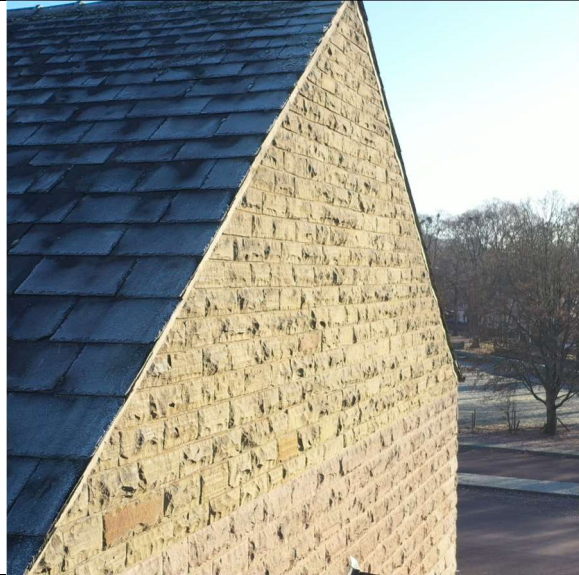


Front and rear pitches, verge detail – the verge should project at least 50 mm from the elevation so that rainwater can be shed clear of it. Where the elevation is not flat, as is the case here, the 50 mm should be taken from the furthest projection. Here, the verge does not project far enough from the elevation.

The slate detail should run slate, slate and a half, slate, slate and a half.

Here, the detail is slate, half slate, part slate etc. Problems can occur if there is only a single fixing in the smaller slates as they are subject to increased wind lift on the verge.

There is no economical way of addressing this, but it should be considered if and when the building is re-roofed.



Front and rear pitches, abutment detail – a diagonal cover flashing has been cut into the stone.

A stepped detail would have caused less damage and is a more reliable way of detailing this.



Front and rear pitches, parapet wall – the lead detail is ruckling in several places along the parapet, likely as a result of the individual sections being too long to accommodate adequate thermal expansion and contraction over the summer months.

The lead should be tamped back into place.



Front and rear pitches, parapet – moss is building up on the coping slabs. This should be killed and cleared off in the spring.

An anti-fungal wash could be considered to mitigate against this in the future.



Front and rear pitches, parapet – the abutment of the pitched and flat coping stones have been sealed with a temporary waterproofing paint-on-type product (Flexacyrl, Chromapol etc.).

This is not appropriate for this job. The paint should be removed and lead used to detail the abutment.





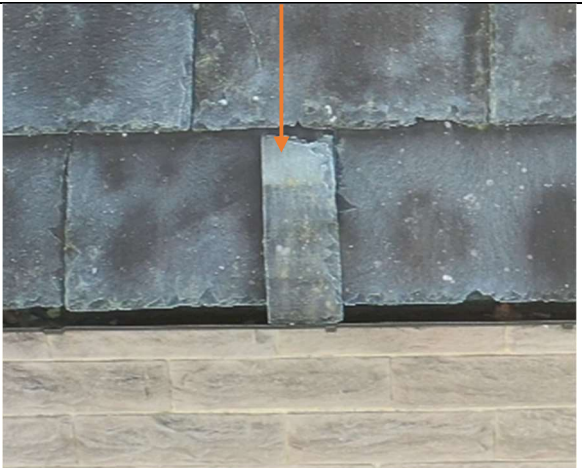
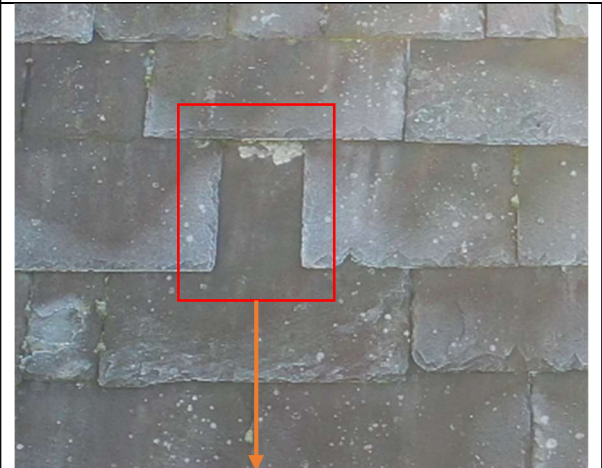
Front Pitch

Covering – it looks like part of the pitch has been covered with reclaimed slate and part new.



Rear Pitch

A small slate has snapped and slipped down the pitch. This should be replaced as soon as possible and the missing section should be removed from the guttering so that it does not fall and hurt someone.



A couple of the stepped cover flashings need tamping back down. This should be done in the spring.







This flashing detail is incorrect and should be changed to the correct detail in the spring.





### 2.1.2 Main Roof - Rainwater Goods

The cast iron rainwater goods are generally in poor condition and are in need of refurbishment. This work should be planned for next summer.

Front Elevation	
<p>The fall pipe should be taken further down to the foot of the pitch and an elbow should be added to direct rainwater straight into the hopper.</p> <p>An outlet detail could also be considered to replace the hopper.</p> <p>If you need any assistance with the design of the rainwater goods, please do let us know.</p>	
<p>Most of the joints are leaking and there are many examples of corrosion and some cracking in the guttering.</p> <p>These things all need to be addressed as soon as possible/in the spring.</p> <p>We have included some example photos below as opposed to a photo of every defect.</p>	
	



The lead detail is incorrect and the guttering does not extend quite far enough along past the edge of the pitch.

Rainwater is escaping and staining the wall and washing out the pointing mortar.

This should be redesigned when the guttering is refurbished.

The area will then need raking out and repointing in an appropriate mortar mix.



There is no stop end in the left-hand section of the guttering. One should be fitted straight away.



The guttering runs on the hipped section of the roof sit too far from the foot of the roof. It looks like an attempted resolution to this has previously been attempted in felt.

With the rise and fall brackets, it should be easy to adjust the run to a 1:60 fall and bring the guttering closer to the slates, so the slates sit halfway across the run.



Rear Elevation

Tower, left-hand side – the lead penetration detail is coming out of the chases and is ruckling.

This needs to be re-made and correctly detailed into the chases with lead wedges before the chases are pointed up in an appropriate mortar mix.

It is important not to increase the height of the outlet on the internal side.

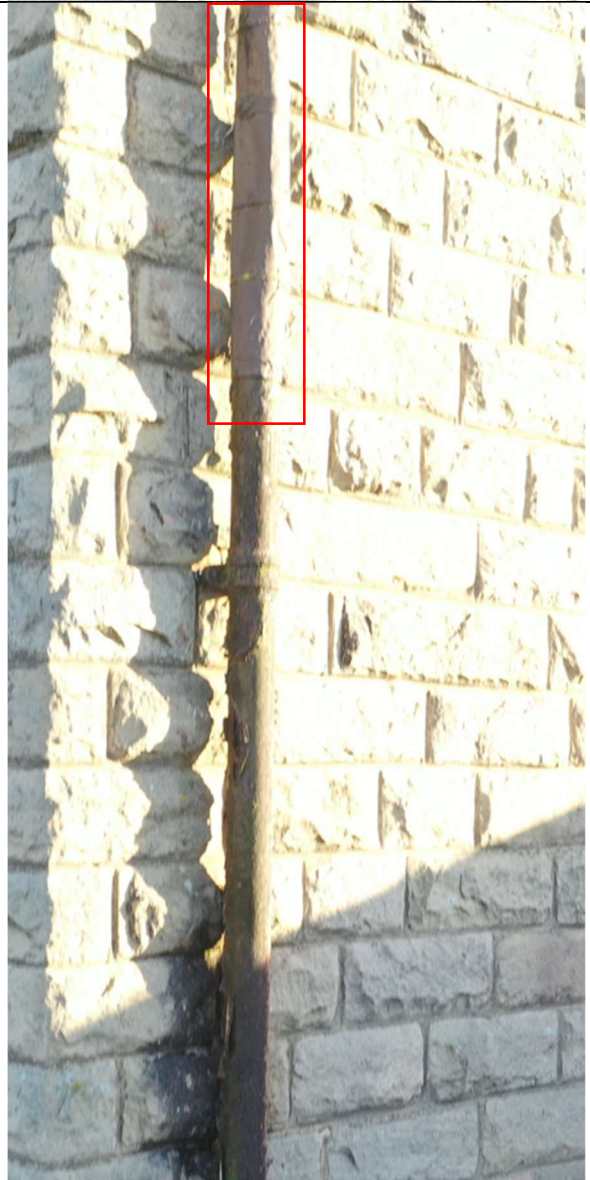


Fall pipe under the abovementioned hopper.

Red box – we are unsure what has been done here, it looks like the pipe has been wrapped in something and painted.

The lower section is leaking and the wall behind is moisture stained.

Fixings are also coming away and this needs urgent action to ensure its stability.





Fall pipe below the abovementioned hopper – it looks like the timber packers have decayed to nothing and the pipe clips are now likely rattling on their fittings.

This should be made safe now and permanently addressed when the rainwater goods are refurbished.



A boot should be added to the bottom of the fall pipe.

Preferably with another section of pipe added to take rainwater straight to the guttering run.



Rear elevation – the fall pipe is leaking under the swan neck.

This should be addressed in the short term.



Facia board – the paint is peeling off along this run.

The facia boards should be rubbed back, prepared and redecorated.

All timber should be redecorated in a linseed oil-based paint.



### 2.1.3 Lean-to

The lean-to roof is constructed from profiled sheet cladding sections, joined in the centre. The detailing is not the best around the edges and there is cut-edge corrosion across the length of the horizontal joints and at the foot of the roof.

Overhead photo of the roof.



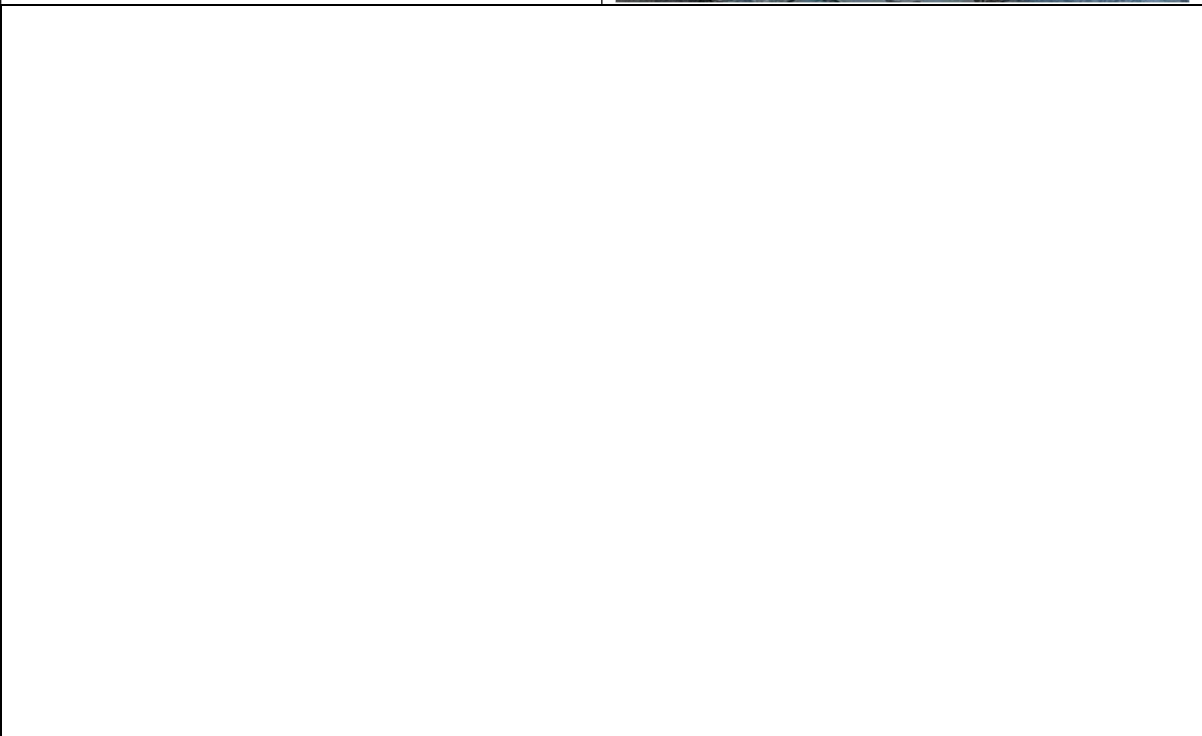
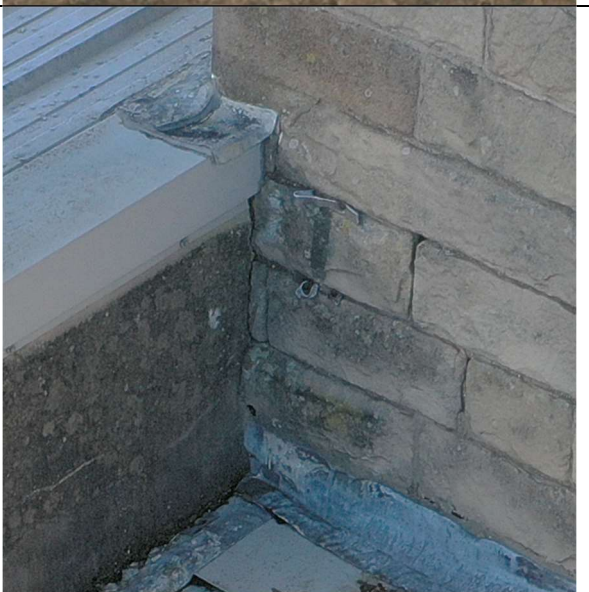
Example photos of cut-edge corrosion where the sheets join horizontally and at the foot of the roof. This is at the point of needing to be cleaned up and treated before it gets worse and this job becomes more difficult. We have included two example photos below, as opposed to photos of every area of corrosion.



Example of cut-edge corrosion along the cappings. This should be prepared and treated at the same time as the main roof sheets.



The detailing around the corner of the main building is poor.  
  
This should be addressed when the roof is being treated.





Some of the upstand details have been poorly designed and all are in poor condition and look to have been over-painted and repaired several times. We have included some example photos below. A plan should be made to replace the detail in these areas before they fail again.



Example photo of poor flashing detail around the window penetration/reveal.



Walkway abutment – this detail has been poorly formed. It should be replaced with a more appropriately designed detail.



The detail is in poorer condition further down the path abutment.

It looks like asphalt has been incorrectly detailed here. This may be complicated to repair as asphaltting roof detail is somewhat of a dying art.



Example of where the leaking guttering is staining the flashing.



Moss and debris should be cleared from the roof before it is cleaned and the cut-edge corrosion treated.



Thick ice is building up along the path.

The source of this needs to be established – is it from a leak in the pipe or ponding rainwater?

If it is from a leaking pipe, this should be repaired.

If it is from rainwater ponding, the pitch/cut needs to be altered.



Guttering detail – this is full of debris and warping along the runs. The guttering should be cleared out as soon as possible and additional brackets added to try to correct the warping.

The runs are both set far down from the foot of the pitch. Consideration should be given to fitting an additional drip detail to take water from the foot of the pitch into the guttering or raising the position of the run.



#### 2.1.4 Off-shot

The off-shot looks to have a mineral felt covering that has been over-covered. This job looks to have been ill-conceived and poorly executed.

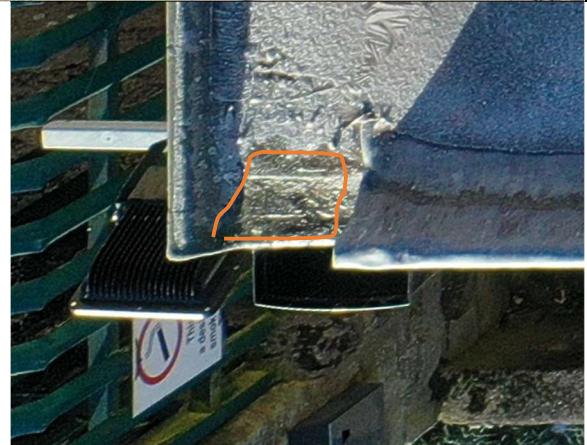
Overhead photo of the roof – it looks like the roof has been ‘re-designed’ to discharge water via just one outlet – red box, bottom left corner. This does not look to be set at the lowest point, and there are large areas of ponding water (that had turned to ice at the time of our inspection). This adds weight to these areas which causes further deflection in the substrate and compounds the problem.



Red box – this is now the only outlet for this pitch. In the second photo, note the amount of water that has built up on the roof that is not making its way to the outlet. This is going to be a complicated problem to address and a plan should be made in the short term. Please let us know if you need any further advice on this.



Close-up of the outlet overhead – note that there is no ice in the orange area suggesting that it is set higher than the surrounding covering.



It looks like the roof was originally designed to fall to this elevation as there is a full run of guttering. A capping detail looks to have been added and therefore the design of the roof has been changed – does a contractor have any design liability for this?



Poor detailing around the window reveal.



Photo of an area of the roof not covered by ice.  
  
The material looks to be ruckled up/blistering suggesting that there may be moisture building up in the substrate.



The fascia boards are in poor decorative condition. They should be rubbed back, prepared and redecorated in a linseed oil-based paint next year.



### 2.1.5 Canopy

The canopy area is covered in natural slate.

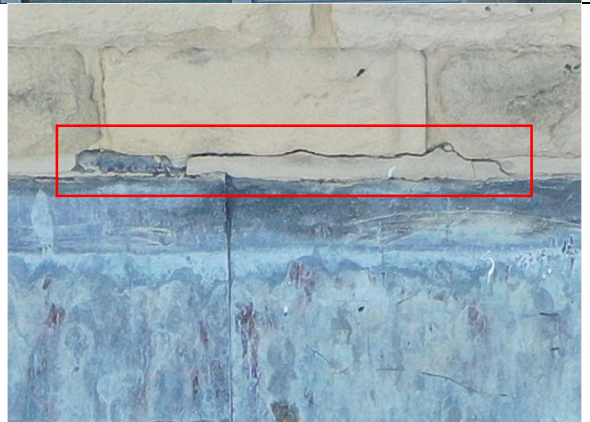
Overhead photo of the roof.



Some of the pointing is coming away where the cover flashing is detailed into the chase.

The defective pointing should be removed and the chase repointed in the spring.

There are no restraint straps under the cover flashing.



Penetration – this has been poorly detailed in a 'Flashband'-type product. This should be monitored.



The missing slate should be replaced as soon as possible.



The two damaged slates should be replaced as soon as possible.





The lesser damaged slates should be replaced in the spring.



Repairs should be undertaken in like-for-like slates. These mismatched slates should be swapped for matching ones in the spring.



It looks like the eaves course of slates is missing.



We do not know how this verge/abutment detail has been designed to function.

There should be a stepped lead flashing and soaker detail along this abutment.

Instead, it looks like a piece of timber has been used.

This area should be monitored for leaks and a plan made to replace the existing detail with the correct detail.



## 2.2 Roof B

The roof structure is covered with an asbestos-profiled sheet with polycarbonate rooflights. This roof has been repaired on numerous occasions and its condition deteriorates from left to right. All of the rooflights look to have lost their transparency some time ago and are now likely to be in a very fragile condition.

A plan should be made to remove the asbestos and recover the roof well in advance of the work needing to take place. This will allow for best planning and should result in a competitive tender for the works.

The presence of asbestos will likely increase the complexity and cost of the work.

Overhead photo of the roof, two pitches with a perimeter parapet wall.

We have divided the roof into four bays and numbered these left to right.



General comment, applicable to the whole building – the parapet capping detail is in poor condition all the way around the building. Paint is flaking off, sections appear to be affixed in an ad-hoc fashion and the render on the elevations below is cracked in all areas, and there are some sections that are missing.

There are no fall pipes for the gutters to discharge into, the outlets just stop as they clear the elevation. This is not ideal and a plan should be made to take all of the rainwater into the mains surface water drainage.

We recommend that consideration is given to undertaking repairs to the render before any more sections fall off. It should be made safe as soon as possible.

The cappings can be replaced/repainted at the same time as the roof works.

The photo below is of one of the bays.





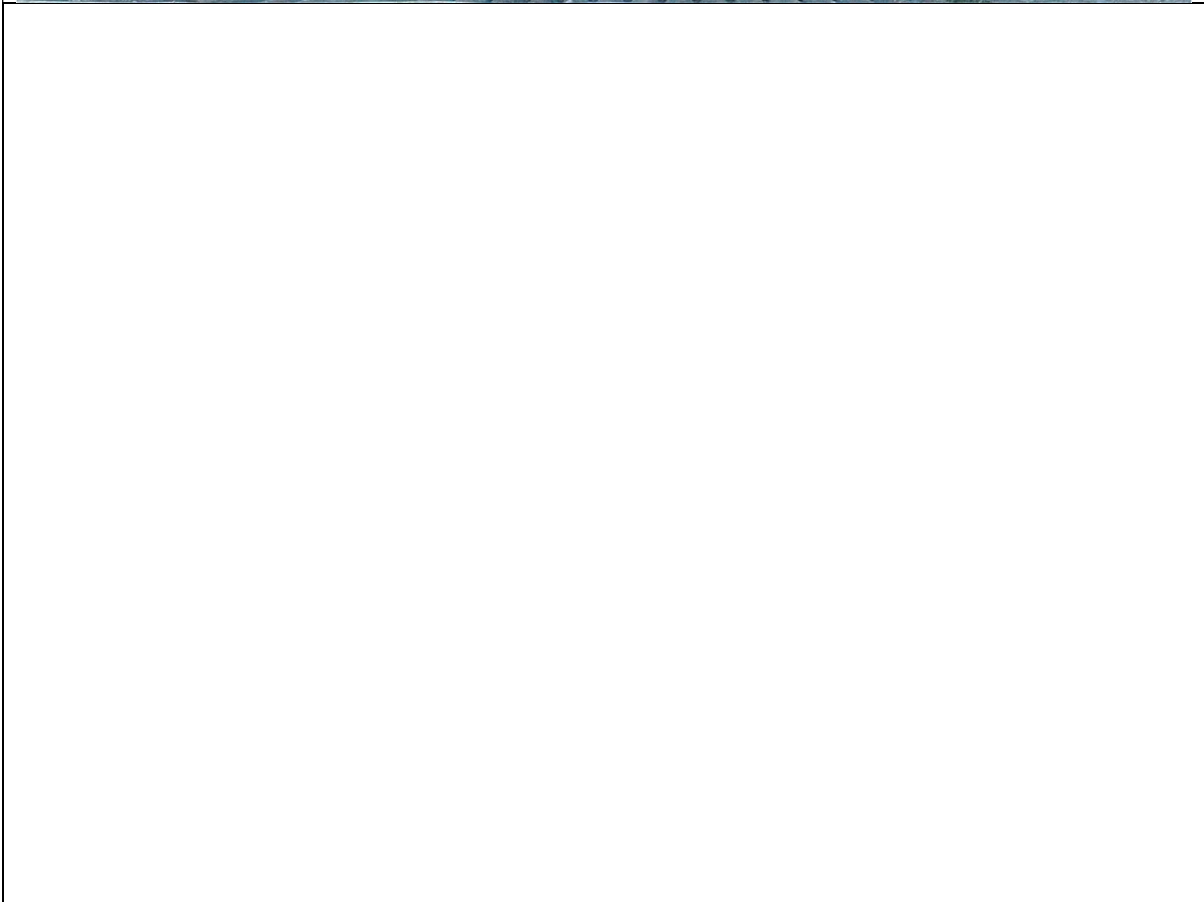
Bay 1

This is in the 'best' condition of the four pitches. Most of the sheets are damaged where it looks like the fixings are corroding/rattling through. These panels are going to be subject to wind lift so we recommend that they are secured in the short-term whilst plans are being made to re-cover the building.

The photo below shows an example of what the edges of some of the sheets are like. Where the fixings no longer have any material to grip onto, they will be subject to wind uplift.



Box gutter – the build-up of debris should be removed in the short term.



Bay 2

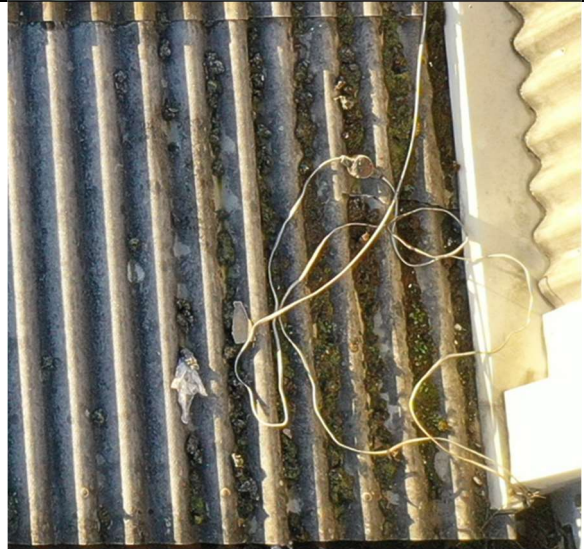
Examples of short-term repairs to the cladding around the fixing holes.



Example of a damaged section of asbestos sheet.



Example photo of the debris building up on the pitch. This should be cleared away in the short term.



We could not see how this penetration was detailed.

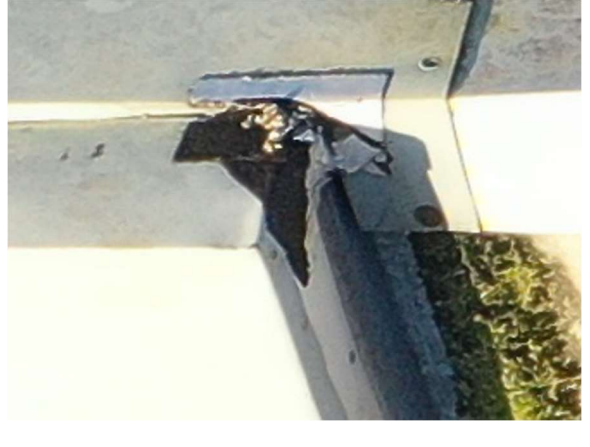
It should be inspected internally for leaks and if necessary, a modern rubber gator boot-type flashing should be used.



Parapet – the right-hand piece of capping has not been cut/affixed square and this is increasing staining on the sheeting below.



Parapet – the front upstand is corroding and the rear has been poorly repaired with a 'Flashband'-type product. These should be properly repaired in the short term.

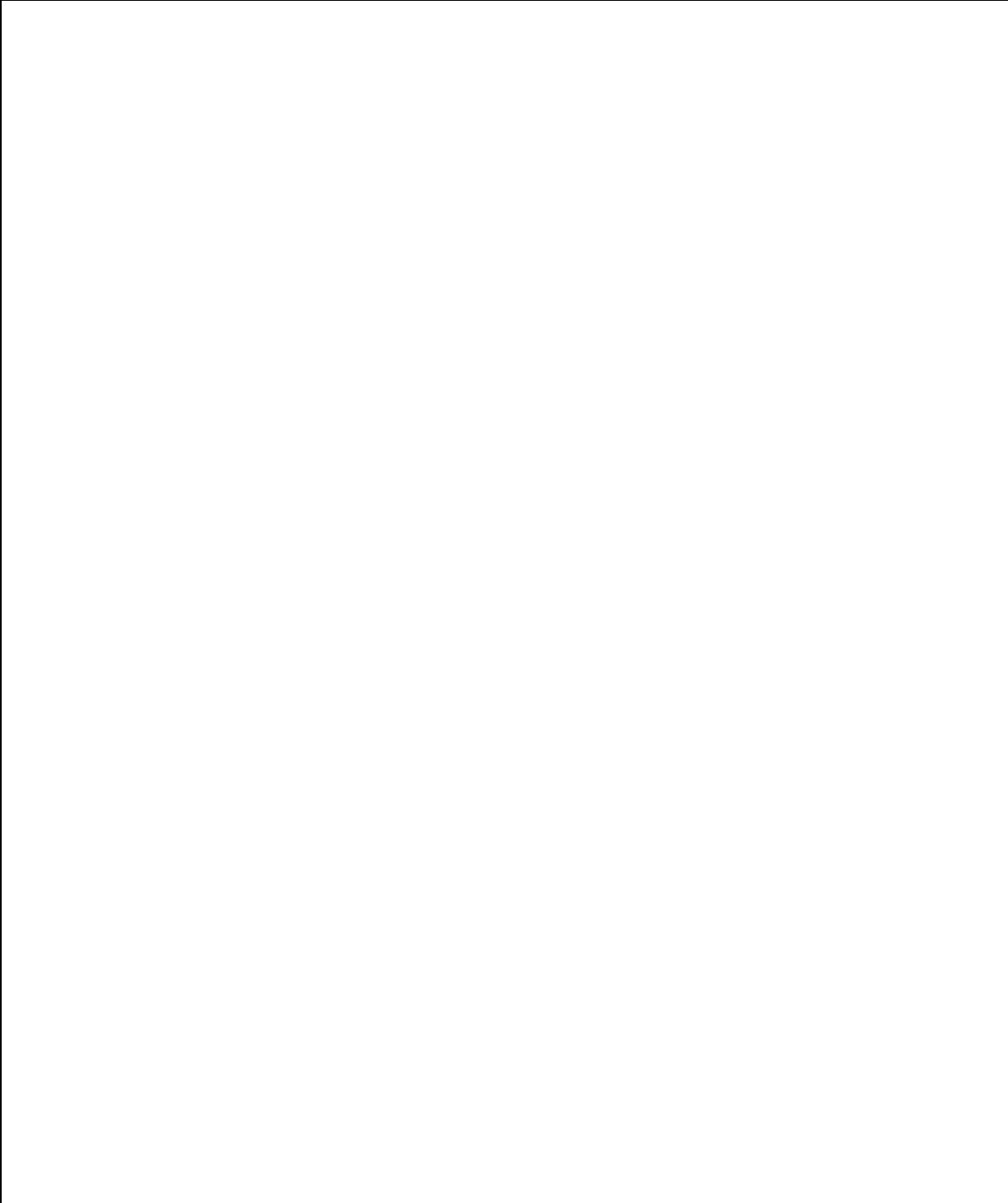


Rear elevation – this capping piece has been poorly affixed to what looks like an uneven surface.

It should be properly positioned and reaffixed.



Valley gutter between bays 2 and 3 – this should be cleared of debris in the short term.



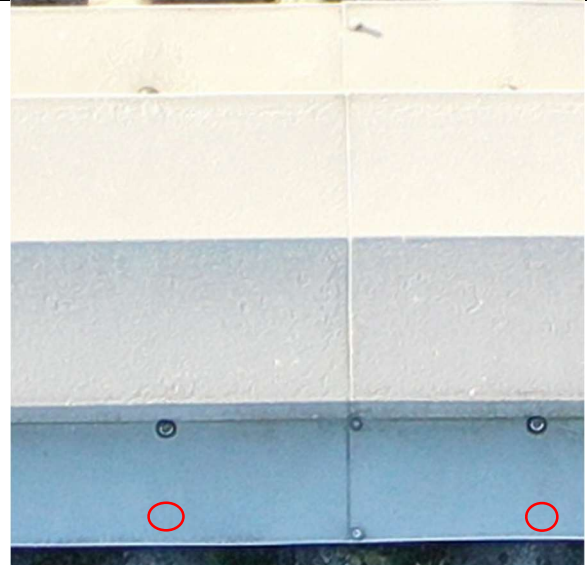




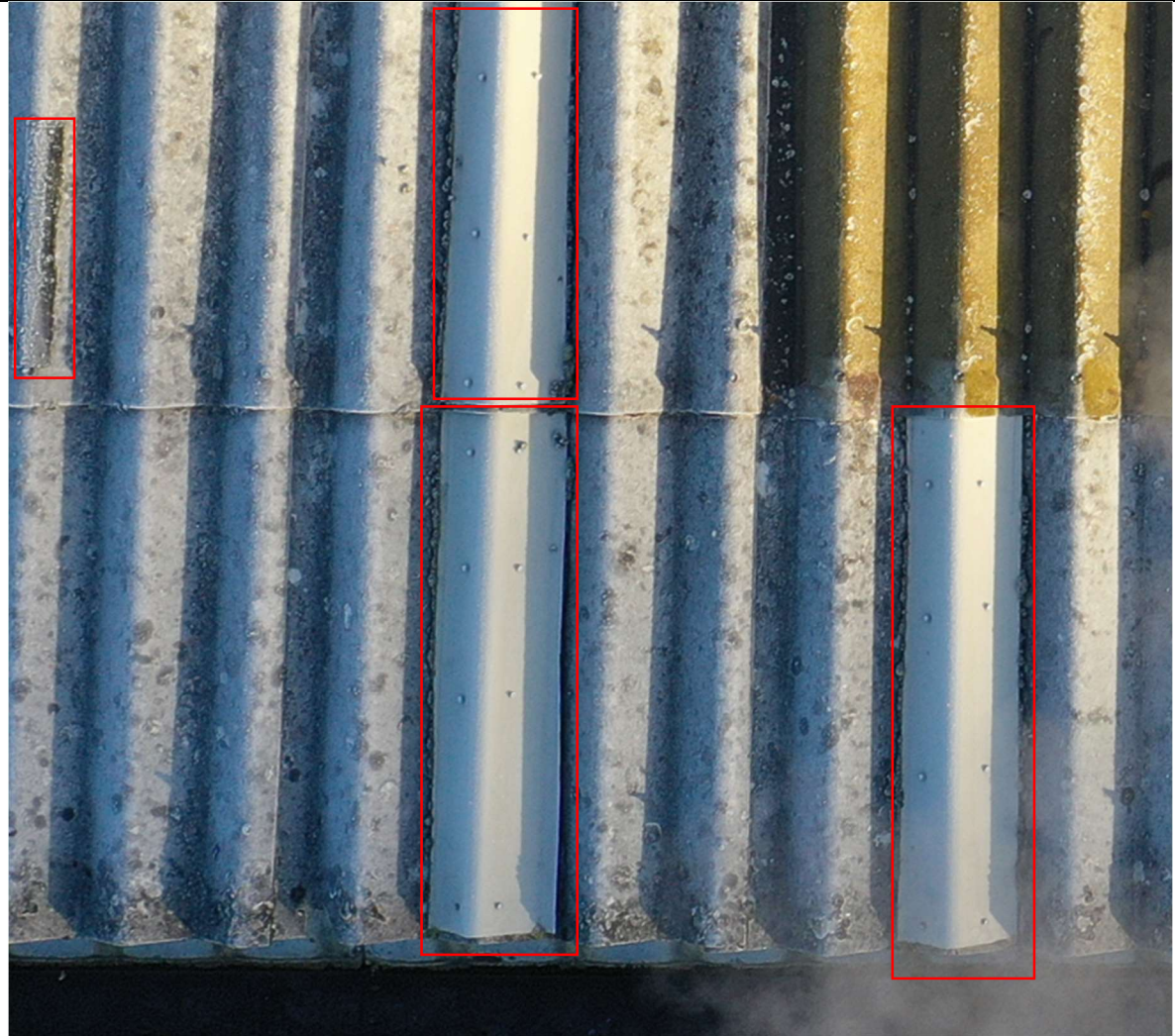
Bay 3

Ridge capping – this looks to have been replaced in the not-too-distant past.

Without knowing the manufacturer's details, we do not know the specification for the fixings, however, there should likely be some closer to the edge of the sheet e.g., where the red circle is.



There have been many repairs to this pitch. The photo below shows some examples of the repairs and the condition of the rooflights.



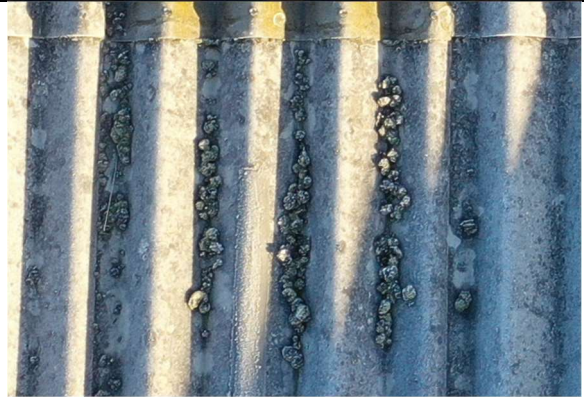
Corrosion is building up around the infill above the extractor.

A plan should be made to replace/treat these sections next year.



Moss is building up across most of the roof.

This should be killed and cleared off the pitch in the spring.



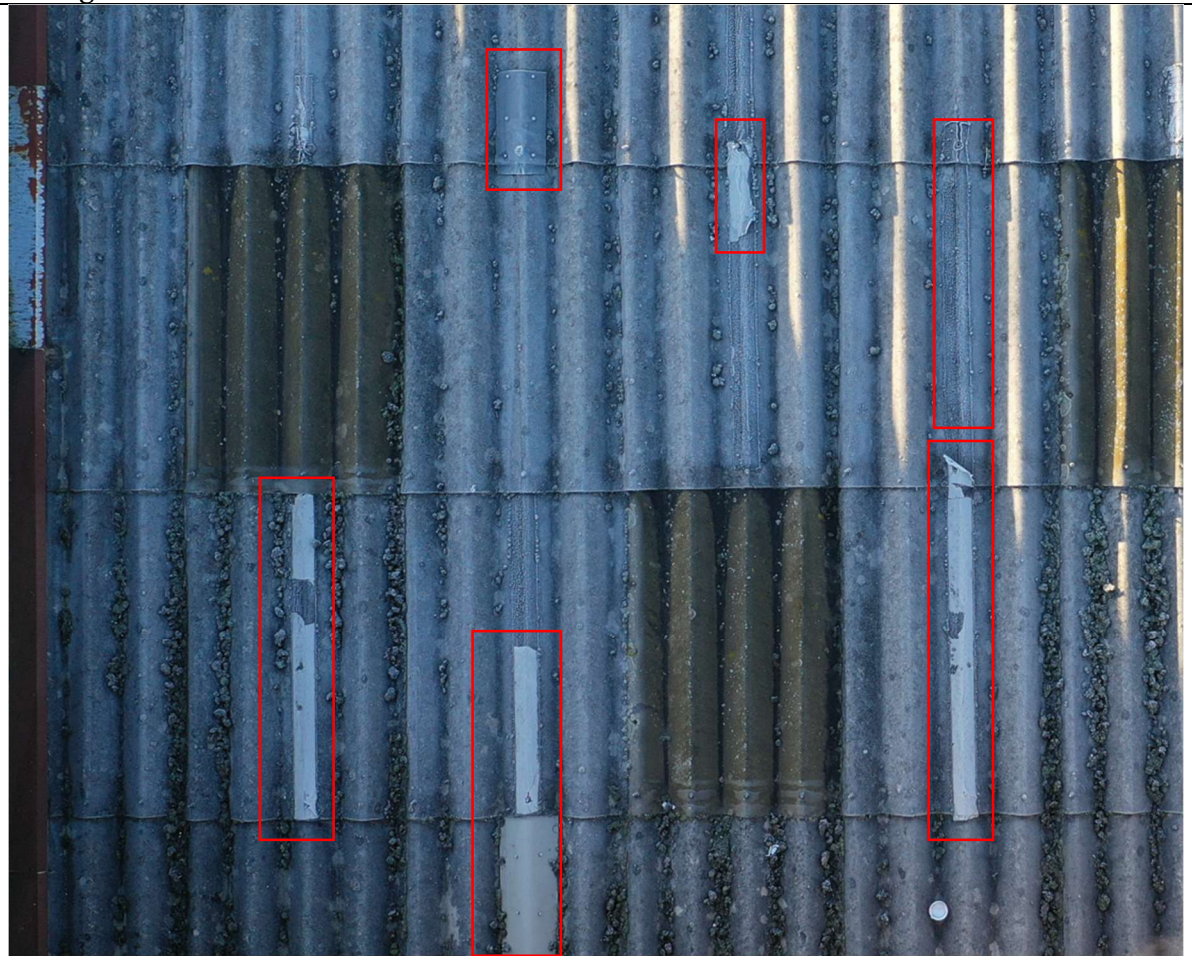
The abutment detail at the front and rear of the bay has corroded. The section still appears to be in one piece so preparation and treatment may be successful, however, the manufacturer would need to be appraised of the condition first.

If it cannot be treated, the sections should be replaced.



Bay 4

There have been many repairs to this pitch, and it is in the worst condition of the four pitches. The photo below shows some examples of the repairs and the condition of the rooflights in one area.



Corrosion is building up around the infill above the extractor.

A plan should be made to treat/replace these sections next year.



Moss is building up across most of the roof. This should be killed and cleared off the pitch.

The opposite is an example photo of the level of moss build-up.



Guttering – example photos showing the amount of debris building up in the guttering run. This should be cleared out as soon as possible.



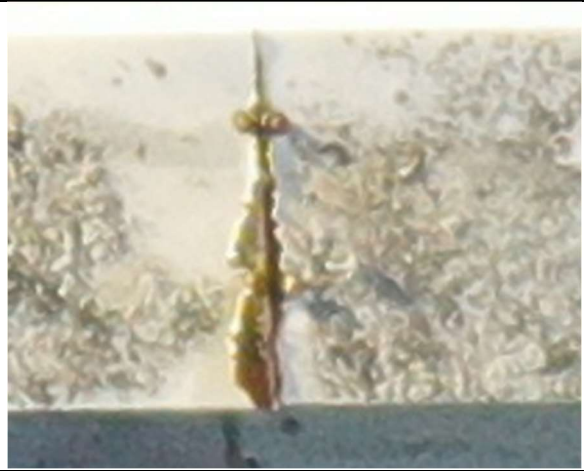
The abutment detail at the front and rear of the bay has corroded. The section still appears to be in one piece so preparation and treatment may be successful, however, the manufacturer would need to be appraised of the condition first.

If it cannot be treated, the sections should be replaced.



Example photo of cut-edge corrosion to the parapet capping detail.

All of the areas affected by this need to be prepared and treated to prevent them from decaying further.



Example photo of the general condition of the parapet cappings.



Example photo of the general condition of the cladding where Roof B and Roof C abut. The cladding is quite heavily stained.



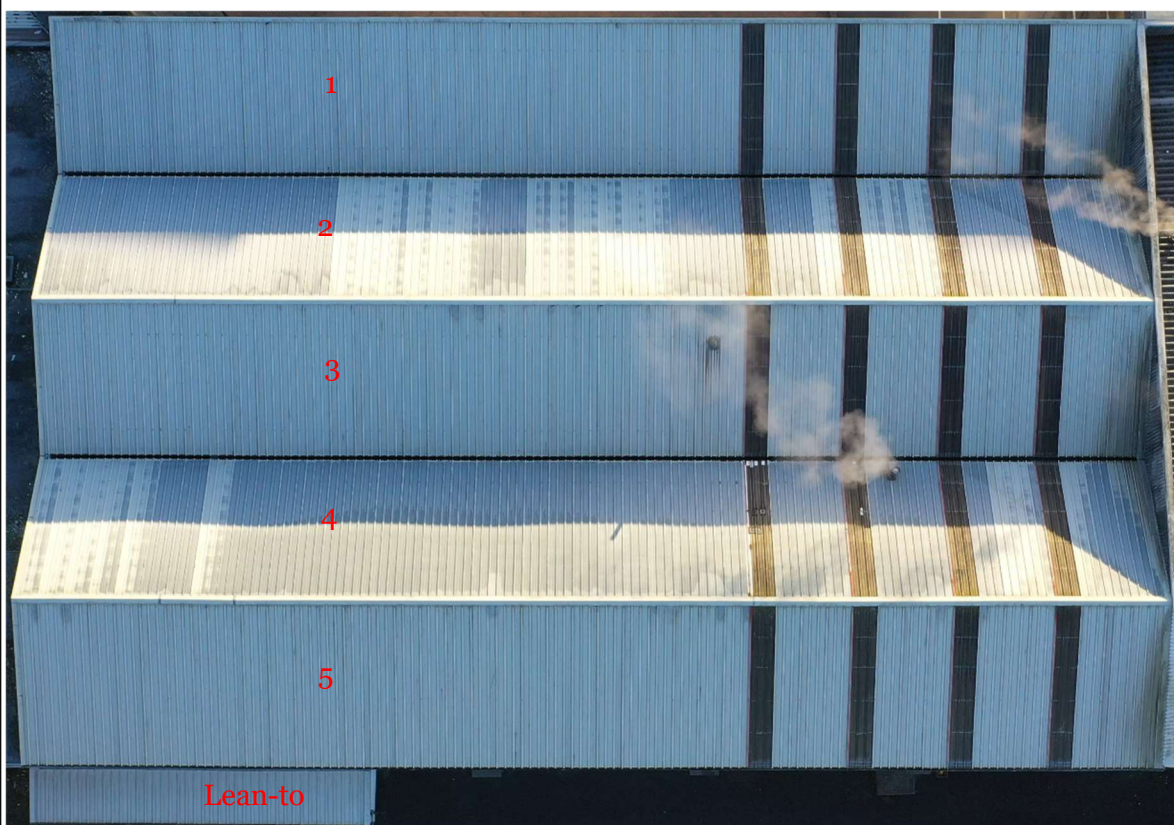
## 2.3 Roof C

Roof C is made up of five bays and a lean-to, all profile composite sheet with rooflights to the left-hand side. It looks like this roof has been previously treated for corrosion, however, this looks like it was some time ago as this looks to be failing and so all bays will need re-treating.

The condition of all bays is broadly the same, hence the photos and description below are a bit repetitive. In summary:

- Ridges – all are suffering from corrosion where the cappings have been cut and are sat next to the profile crown.
- Rooflights – all have lost their transparency and now look very stained and brittle.
- Sheets – all are suffering from cut-edge corrosion all of the way along the bottom edge and most are suffering from isolated areas of corrosion.
- Fixings – there are numerous fixings along each bay that look to have lost their caps.
- Guttering – all needs to be cleaned out and re-inspected for damage.
- Perimeter cappings – all are suffering from corrosion and need to be treated.

An overhead photo of the roof is below, the bays are numbered 1 – 5, front to rear.



Bay 1

Ridge – examples of where the weather strip is slipping down the ridge. This should be replaced in the short term; we noted five areas of this happening.

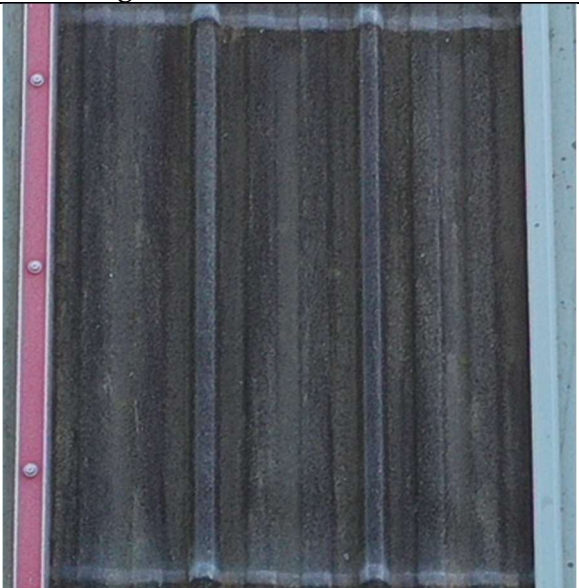


Example of the early stages of cut edge corrosion on the ridge capping. This runs the length of the ridge.

This should be cleaned up and treated.



Example photos of where the rooflights have lost their transparency. The rooflight sheets can be replaced independently of the rest of the covering.



Example of cut edge corrosion at the bottom of all of the profiled sheets. A plan should be made to clean this up and treat it in the short term.



Example of corrosion on the perimeter capping detail.

These areas should be cleaned up and treated in the short term.



Box gutter – example photo of debris building up in the box guttering. This should be cleared out in the spring.

We cannot make out the outlet detailing as the bridge sun put this area in shadow.



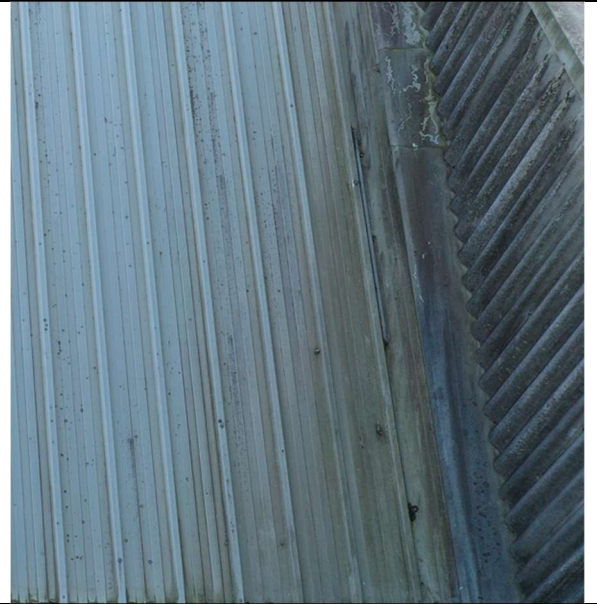
Parapet abutment of bay 1 and bay 2 – there is corrosion forming around the abutment.

This area should be cleaned up and treated.



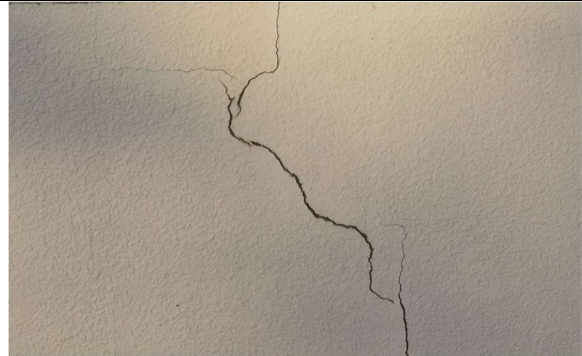


Example of staining to the covering from the capping on the adjoining Roof B.






Although the elevations do not form part of this inspection, we noted that the render on the front and right-hand elevations of Bay 1 and 2 & 3 and 4 & 5 was cracked in a similar fashion to the cracks on Roof B.

These should be inspected and defects repaired as appropriate.

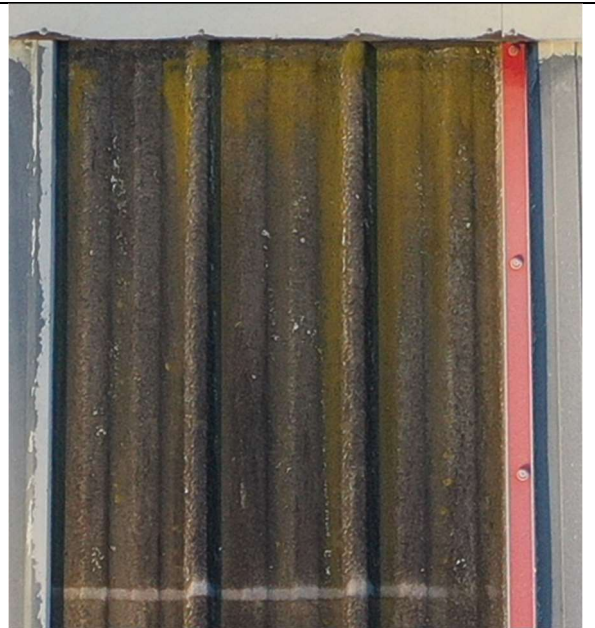




Bay 2	
<p>Ridge – it looks like there is corrosion treatment around the lap.</p> <p>This should be cleaned up and re-treated in the spring.</p>	
<p>Example of the early stages of cut edge corrosion on the ridge capping. This runs the length of the ridge.</p> <p>This should be cleaned up and treated.</p>	
<p>From the different colours present on the five pitches, it looks like this roof may have been treated before, however, as the coating does not appear to be uniform, it will likely need retreating in the short term.</p> <p>You should see if any guarantees are in place for the last treatment.</p>	

Example photo of where the rooflights have lost their transparency.

The rooflight sheets can be replaced independently of the rest of the covering.



Example of cut edge corrosion at the bottom of all of the profiled sheets.

A plan should be made to clean this up and treat it in the short term.

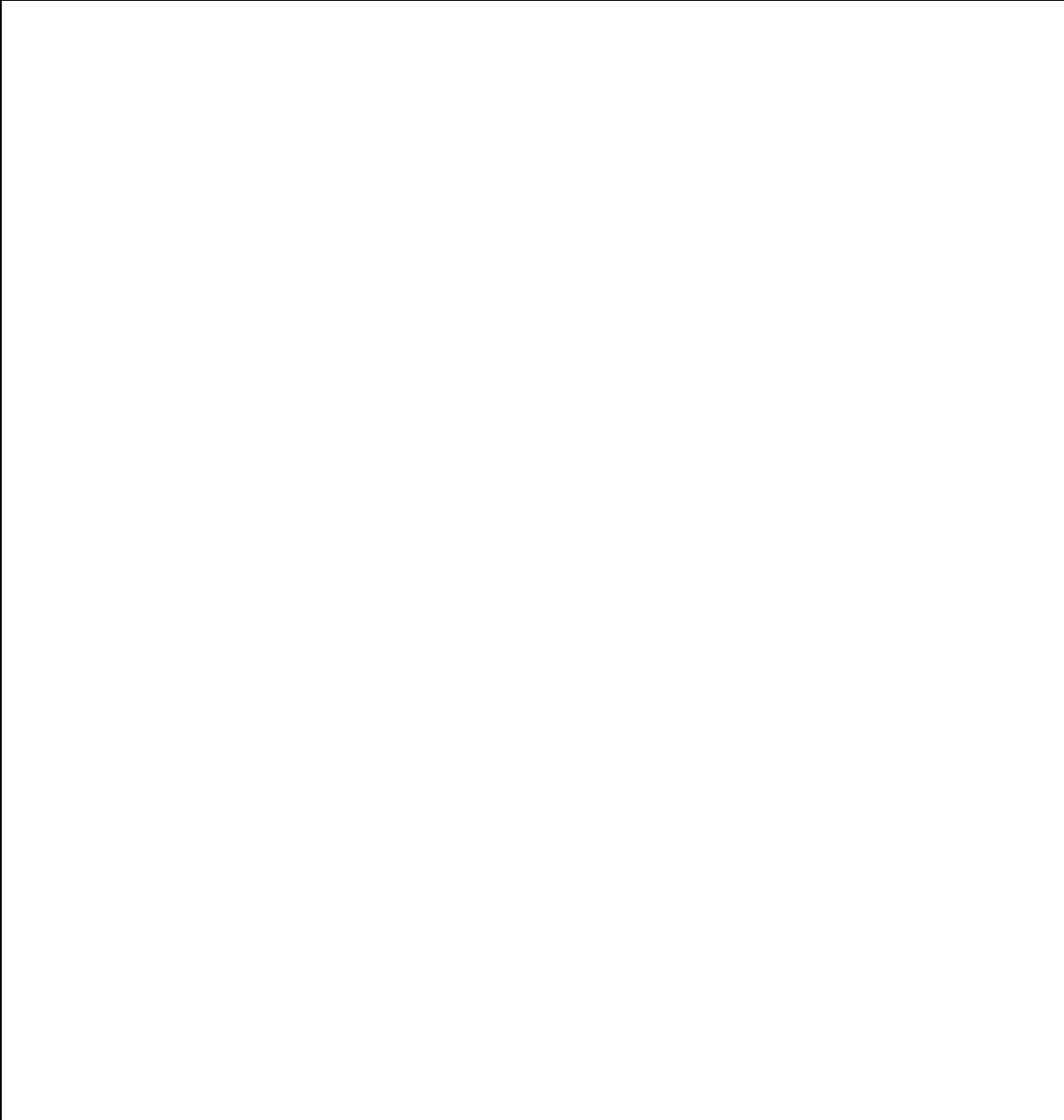
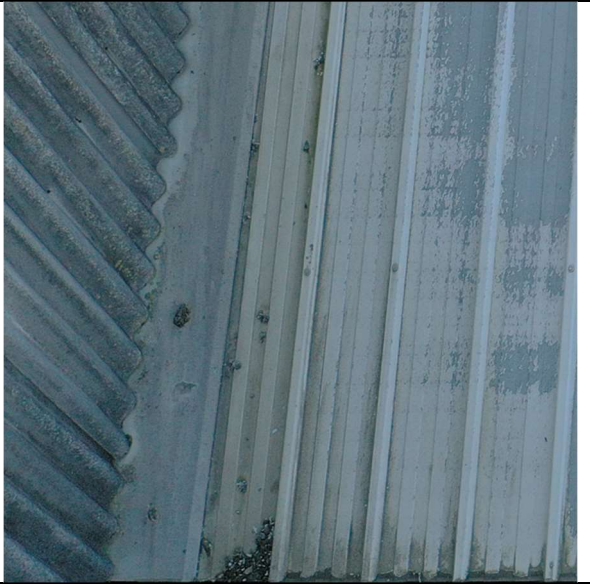






Example of corrosion on the perimeter capping detail.

These areas should be cleaned up and treated in the short term.



Example of staining to the covering from the capping on the adjoining Roof B.

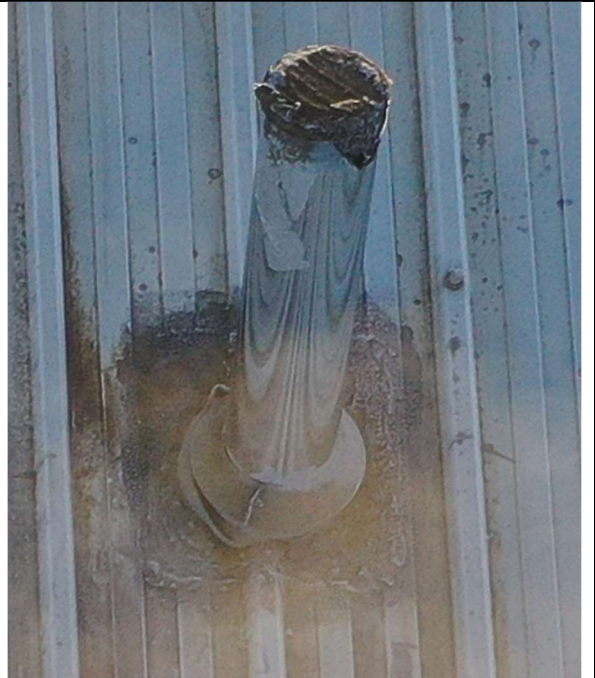


Bay 3	
<p>Example of the early stages of cut edge corrosion on the ridge capping. This runs the length of the ridge.</p> <p>This should be cleaned up and treated in the short term.</p>	
<p>Ridge – examples of where the weather strip is slipping down the ridge.</p> <p>This should be replaced in the short term; we noted three areas of this happening.</p>	
<p>Example photo of where the rooflights have lost their transparency.</p> <p>The rooflight sheets can be replaced independently of the rest of the covering.</p>	
<p>Example of where it looks like a fixing has lost its head (red circle).</p> <p>Compare this to the left-hand fixing.</p>	

This penetration looks to be redundant. It has been poorly detailed where it comes through the sheet.

If it is redundant, it should be removed and the covering sheet overlaid.

If it is to be retained, a proper gasket boot should be fitted.






Isolated areas of corrosion need cleaning up and treating.



Example of cut edge corrosion at the bottom of all of the profiled sheets.

A plan should be made to clean this up and treat it in the short term.



<p>Example of corrosion on the perimeter capping detail.</p> <p>These areas should be cleaned up and treated in the short term.</p>	
<p>Box gutter – example photo of debris building up in the box guttering. This should be cleared out in the spring.</p>	
<p>Example of staining to the covering from the capping on the adjoining Roof B.</p>	



Bay 4

Ridge – previous corrosion treatment to the ridge is failing.

The area should be cleaned up and treated again in the short term.



Example of the early stages of cut edge corrosion on the ridge capping. This runs the length of the ridge.

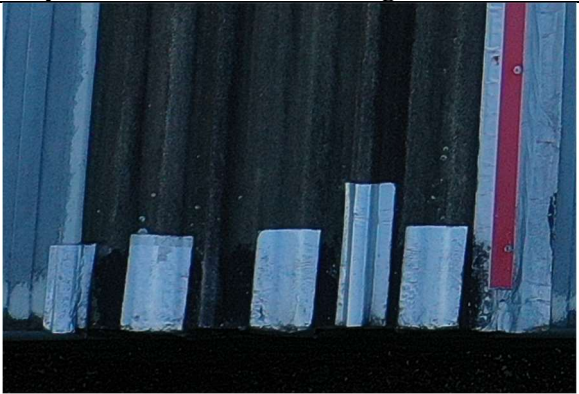
This should be cleaned up and treated in the short term.



Example photo of where the rooflights have lost their transparency.

This one also has several repairs along the sheet including all of the way down the right-hand side and at the base, likely a sign of how brittle it is.

The rooflight sheets can be replaced independently of the rest of the covering.





This penetration has not been particularly well detailed.

A rubber boot-style gasket should be added when works are next undertaken on the roof.



Example of where it looks like a fixing has lost its head.



Isolated areas of corrosion need cleaning up and treating in the short term.

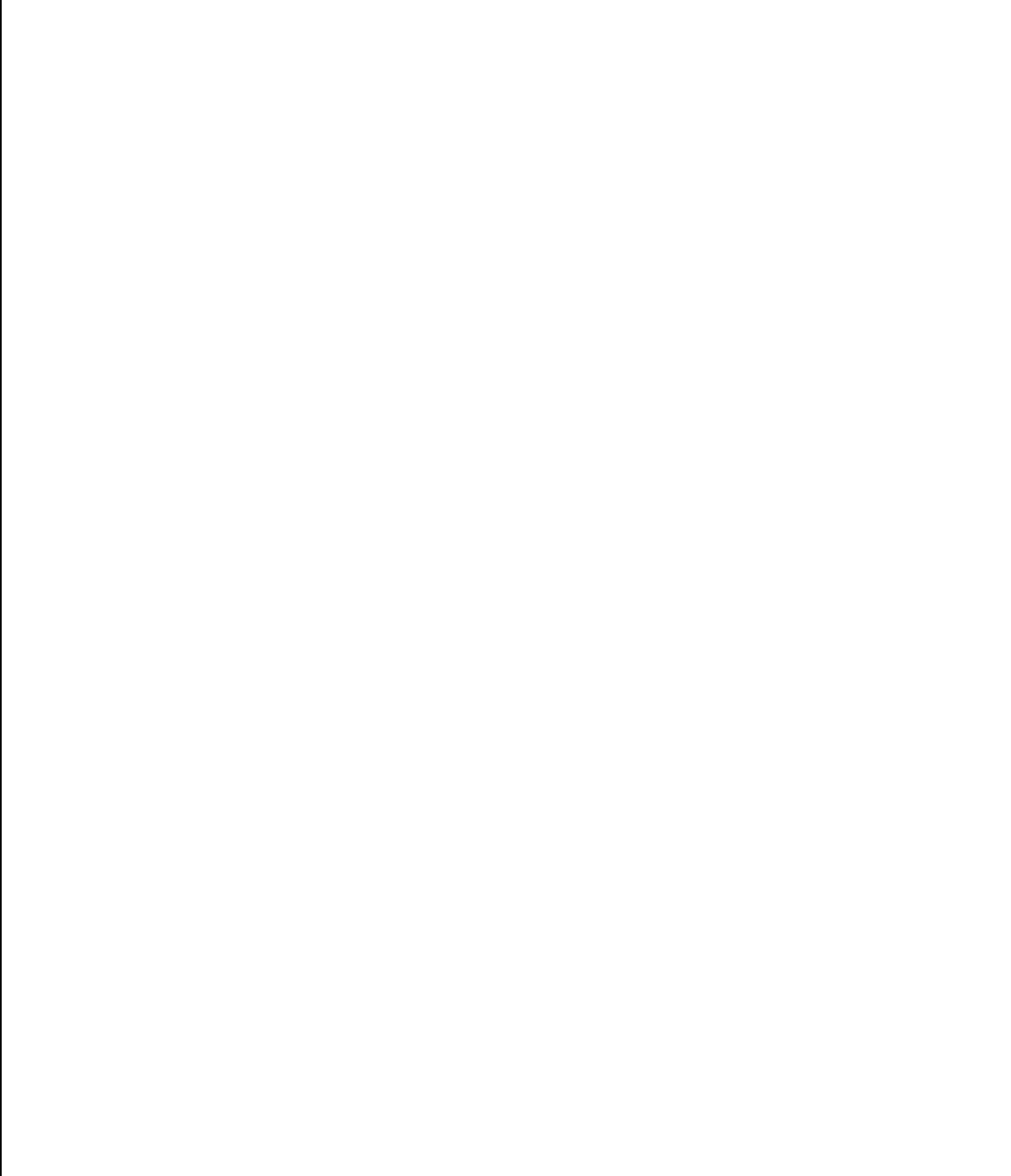


Example of cut edge corrosion at the bottom of all of the profiled sheets. A plan should be made to clean this up and treat it in the short term.



Example of corrosion on the perimeter capping detail.

These areas should be cleaned up and treated in the short term.



Bay 5

Example of the early stages of cut edge corrosion on the ridge capping. This runs the length of the ridge.  
  
This should be cleaned up and treated in the short term.



Example photo of where the rooflights have lost their transparency.  
  
The rooflight sheets can be replaced independently of the rest of the covering.



Example of cut edge corrosion at the bottom of all of the profiled sheets. A plan should be made to clean this up and treat it in the short term.



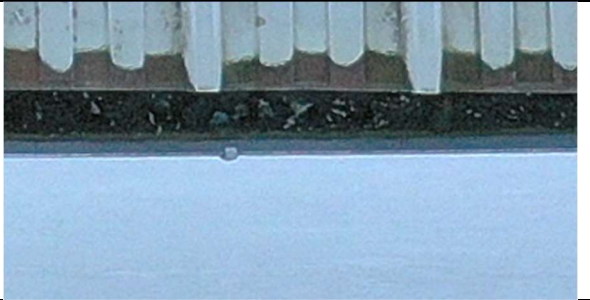
Example of corrosion on the perimeter capping detail.

These areas should be cleaned up and treated in the short term.

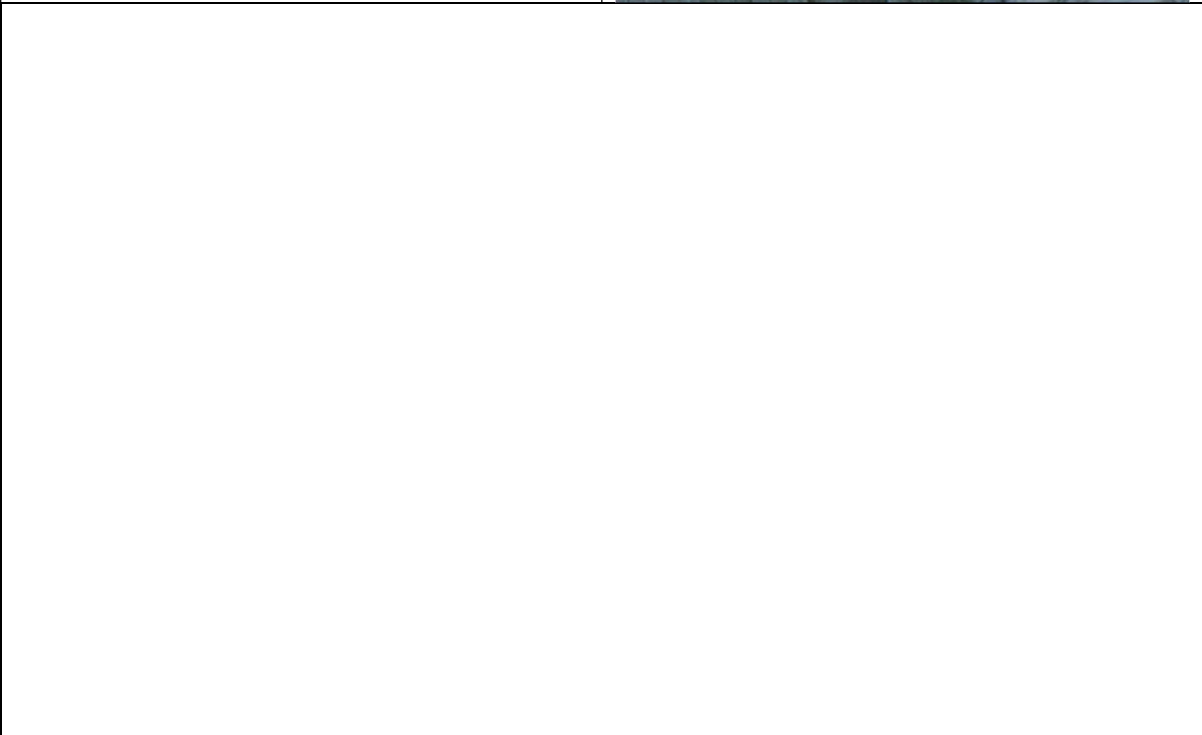


Example of cut edge corrosion at the bottom of all of the profiled sheets.

A plan should be made to clean this up and treat it in the short term.



Example of staining to the covering from the capping on the adjoining Roof B.





Lean-to

Flashing – the flashing detail appears to have no upstand and has been poorly detailed into the rear elevation of bay 5.

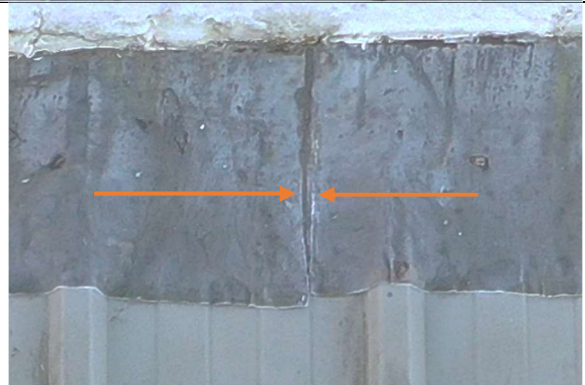
The sections also look to be too long, they should be no longer than 1200 mm.



There is no lap detail where the flashing sections abut each other.

The two sections should overlap by at least 150 mm.

Lead is an odd choice of material to use for this job FYI.



Early signs of cut-edge corrosion at the foot of the panels.

This should be treated in the short term to prevent it from getting worse.



Verge cappings – the coating is peeling off the panels – these areas should be cleaned up and treated before corrosion takes hold.



## 2.4 Roof D

Roof D is made up of three stepped sections of flat deck covered in mineral felt. There is a heavy build-up of moss across the sections which has restricted our inspection. The roof should be re-inspected for defects when the moss has been cleared.

Roof D is an inverted 'L' shape, the wider section at the rear. An overhead photo is below, with part of Roof G greyed out. The area in the red box is stepped up from the adjoining sections.



Rainwater is discharging from the guttering of Roof G onto Roof D and in doing so, is displacing the solar reflective chips and accelerating the decay of the felt.

A suitable run of fall pipes should be added to the Roof G guttering run to take the rainwater to the guttering run at the edge of Roof D.

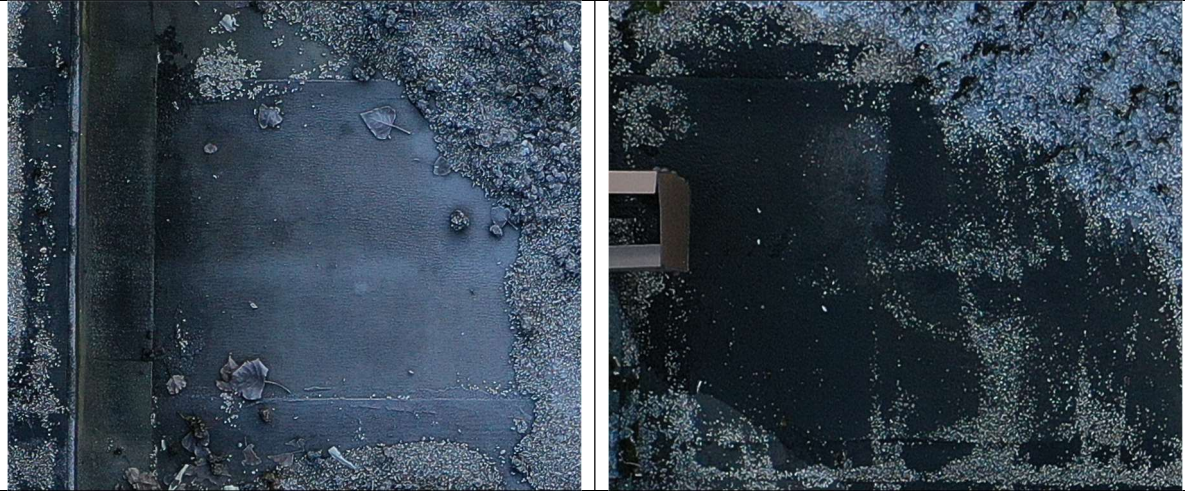
The missing chippings can then be replaced.



Example photos of moss building up on the roof. This should be killed and cleared in the spring.



An example photo of where the solar reflective coating is missing from the top of the felt. The areas without chippings will be subject to increased UV degradation and failure of the felt. Once the moss has been cleared, fresh chippings should be bedded in bitumen in these areas.



Examples of ill-thought-out/executed repairs to the covering. These repairs look to have created high spots in front of the outlets which will cause problems with ponding on the roof. Once the moss has been cleared and the weather has improved, these areas should be reinspected to see if re-detailing would take the moisture stress off the covering.





Upstand detail with Roof F – this looks to have been detailed in mineral felt which is not suitable for this detail.



The upstand detail where Roof D abuts Roof G is in poor condition and should be reformed in lead in the short term.



Plant – the weight of the plant can cause the roof to deflect where it is sited.

Any leaks of refrigerant can also cause chemical decay to the covering.

Any redundant plant should be removed in the short term and any plant in use should be checked for leaks.

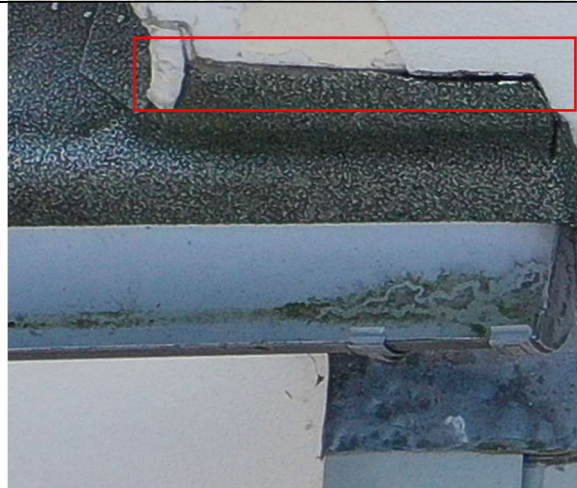


Rainwater outlets – these are choked with debris and should be cleared out and tested in the short term. Once the moss and debris are cleared, service media should be properly affixed and the roof should then be dye tested to check that it discharges rainwater correctly.



Rear left-hand upstand – the upstand does not look to be detailed into the elevation and rainwater will likely get behind here and may cause problems with penetrating dampness internally.

The upstand should be correctly detailed in the short term.



Guttering – there is only a small amount of debris in the guttering. This should be cleared in the spring. Paint is peeling off the timber fascia board holding the guttering.

This should be prepared and redecorated in the spring. Linseed oil-based paint should be used to decorate timber.



## 2.5 Roof E

The roof covering is comprised of sheets of profiled cladding. There is a pain pitch and a smaller off-shot to the left-hand side.

The cut edge along the foot of the roof has cut edge corrosion along its length which needs to be addressed in the short term to prevent further deterioration of the sheets. The capping sections at the ridge are in poor condition and may need to be replaced if the sheets have become too brittle to withstand wind loading.

The guttering is full of debris and should be cleared out in the short term.

Overhead photo of the roof.



Ridge capping – this is in poor condition and should be cleaned up and treated in the short term to prevent further decay.

If the sheets have become too brittle to safely put fixings through without the wind tearing them out, then the cappings will need to be replaced.



There is cut-edge corrosion along the length of the foot of the sheets.

This needs treating in the short term to prevent further decay of the sheets.



Perimeter cappings – an example of the early stages of corrosion. These areas should be cleaned up and treated to prevent further decay.



Guttering – the main and off-shot guttering runs are blocked with leaves. These should be cleared in the short term and on a regular basis thereafter.



## 2.6 Roof F

Roof F has a mineral felt covering and perimeter detail. There is so much moss on the roof that it has been difficult to inspect its condition.

Overhead photo of the roof. Virtually all of the roof is covered in a thick layer of moss. This is a sign that the roof is not draining properly and that it is permanently wet. The moss needs to be killed and removed in the spring and the roof should then be reinspected for defects.



Example photo of 'paint-on'-type repairs. These should only be considered short-term repairs.

The defect should be permanently repaired in the spring.



An example photo of where the solar reflective chippings are missing.

Where the chips are missing, the UV will accelerate the decay of the felt.

These areas should be re-covered in chippings once the moss has been removed.



Guttering run – the fall of the pitch should be tested to see if it adequately discharges rainwater into this run.



## 2.7 Roof G

The roof covering is comprised of two runs of profiled cladding and a smaller section at 90° to the main pitch.

The cut edges where the sheets meet and at the foot of the roof all have cut-edge corrosion which needs to be addressed in the short term to prevent further deterioration of the sheets. There are isolated areas of corrosion around the perimeter capping that should be treated at the same time.

A short-term repair has been undertaken in a 'paint-on'-type product where several sections of capping meet. A permanent repair should be undertaken in the spring.

The box guttering is full of debris (it looks mainly to be sections of the coating that have blown off) and should be cleared out when the abovementioned work has been undertaken.

Overhead photo of the roof pitches.

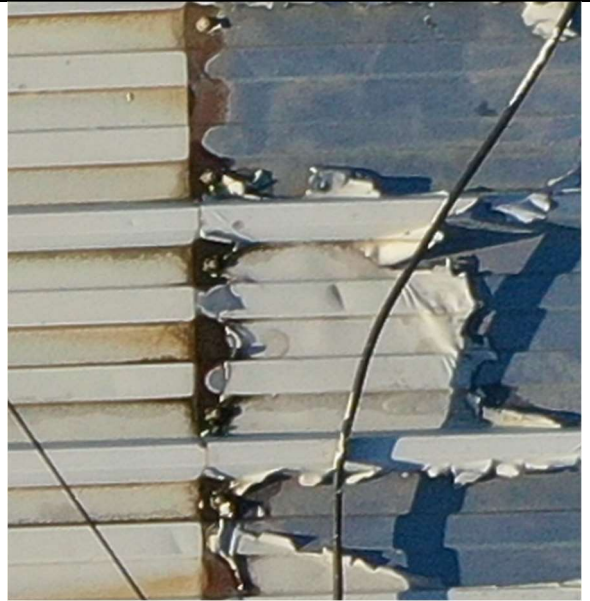


It looks like the roof has been overcoated before, however, this is now peeling off across all of the covering. A plan needs to be made to address this before more serious corrosion sets in.



Example photos of the poor condition of the profiled sheets. There is cut edge corrosion all along the foot of the roof and all along where the sheets abut.

Urgent action is required to address this.



A 'paint-on'-type product has been painted over several of the capping pieces, presumably due to a leak in the area.

This is only a short-term solution and the defect should be located and appropriately repaired permanently.



An example photo of the coating beginning to peel off the capping sections.

These areas should be cleaned up and treated in the short term to prevent further decay.





Guttering – there is no guttering under the smaller section of roof at 90° to the main pitch.

A suitably sized run of guttering should be added together with a fall pipe to take the rainwater to the main fall pipe.



## 2.8 Roof H

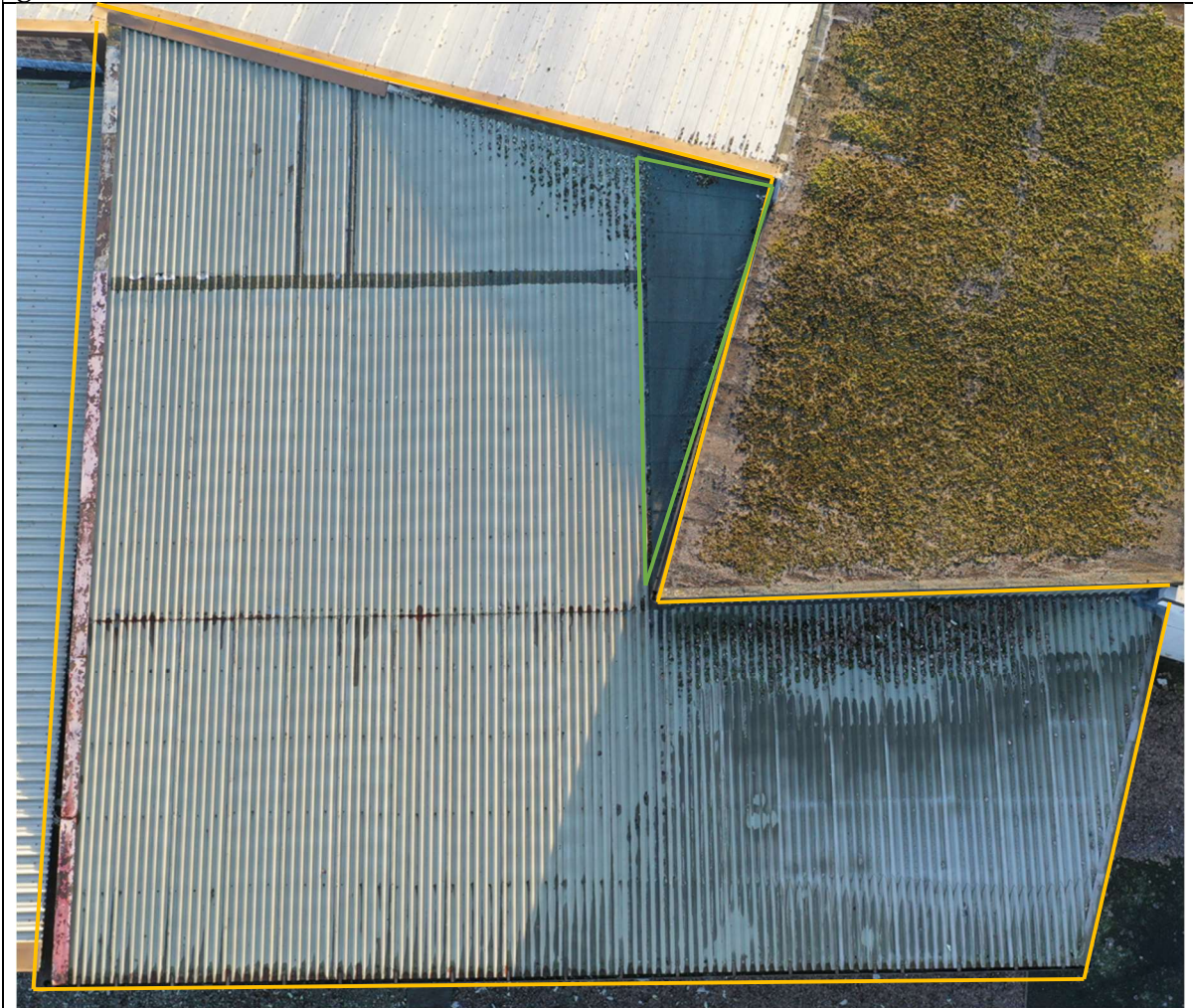
The roof covering is comprised of three runs of profiled cladding and a small section of mineral felt (green triangle).

The cut edges where the sheets meet and at the foot of the roof all have cut-edge corrosion which needs to be addressed in the short term to prevent further deterioration of the sheets. The perimeter capping is in poor condition and will likely need to be replaced as it is badly corroded. It should be checked soon to ensure there is no chance of it lifting in the wind.

A short-term repair has been undertaken at the rear of the pitch in a 'paint-on'-type product. A permanent repair should be undertaken in the spring.

The box guttering is full of debris and should be cleared out when the abovementioned work has been undertaken. The areas of peeling coating should be treated at the same time.

Overhead photo – the main pitch is outlined in orange and the mineral felt area is in green.



Ridge – the ridge detail with the adjoining pitch is inconsistent in its detail.



Example photo of where two sheets have had mineral felt applied across the abutment. The sheets are likely to be corroding under this.

Several other repairs have been undertaken in Flashband above (to the left in the photo).



Example photos of the cut edge corrosion where the sheets abut. This needs cleaning up and treating in the short-term.



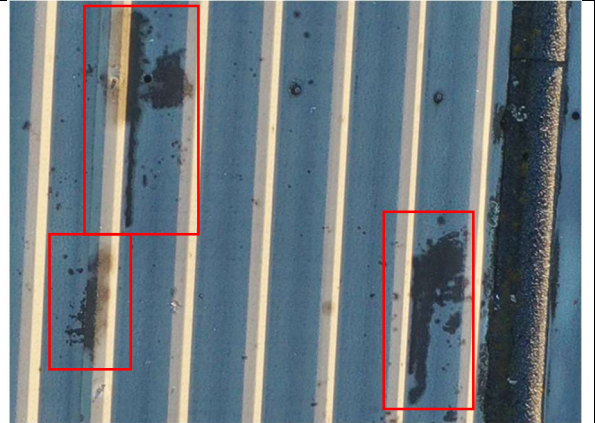
Example photo of the cut edge corrosion at the foot of the sheet.

This needs cleaning up and treating in the short-term to prevent further deterioration of the sheets.



Example photo of isolated areas of corrosion.

This needs cleaning up and treating in the short-term to prevent further decay.



The rear of the pitch – a paint-on type product has been daubed all over the covering and upstand.

A permanent repair should be affected in the spring.



Red circle – an example of where it looks like a fixing head has come away. There are several fixings like this across the pitch.

They should be checked in the spring and any defective fixings replaced with suitable non-ferrous ones.



Example photos of debris building up across the pitch. This should all be cleared away in the spring.



Example photo of corrosion along the verge cappings.

These are likely past the point of being treated now and may need to be replaced.



Guttering – the debris in the guttering should be cleared out in the spring.



Guttering – the finish is flaking along the bottom edge. This should be treated in the spring.



Guttering – there is corrosion around the end of the box gutter runs. This should be repaired in the spring.

The outlet from Roof I should be taken further down into the hopper.



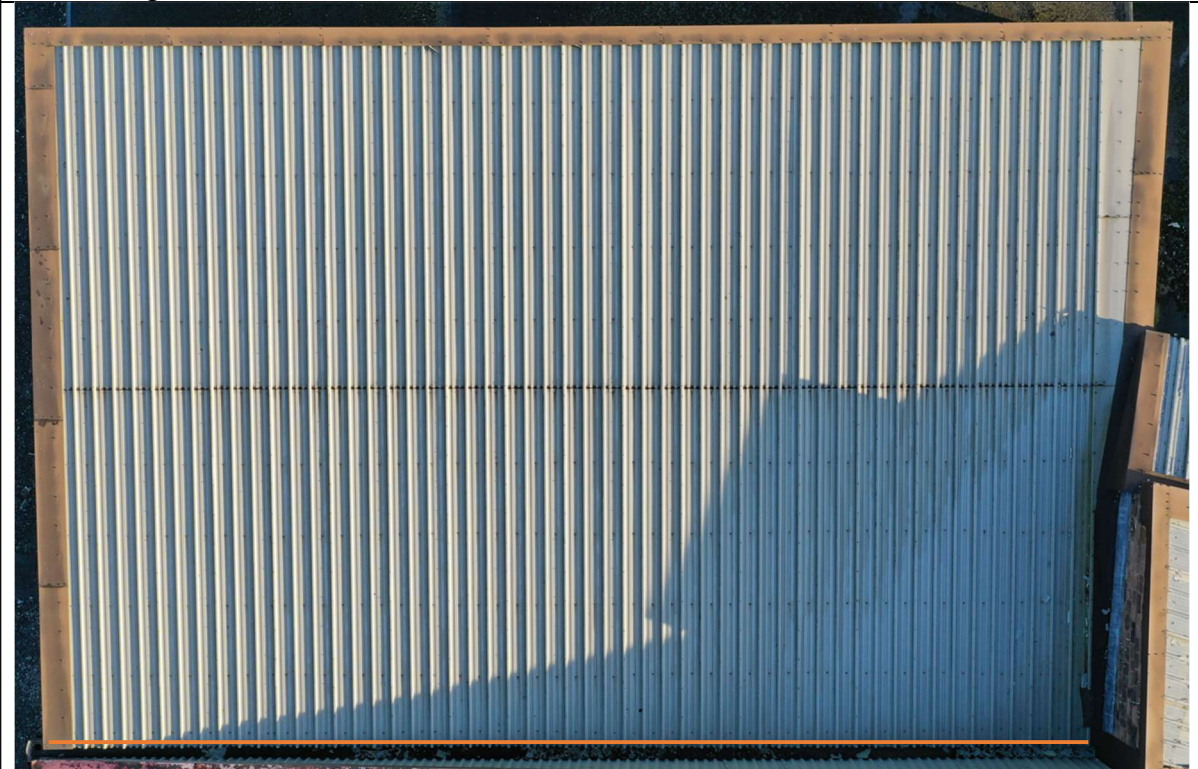
## 2.9 Roof I

This roof is covered with two rows of profiled composite sheets with a perimeter capping detail and a box gutter running along the orange line at the bottom of the photo.

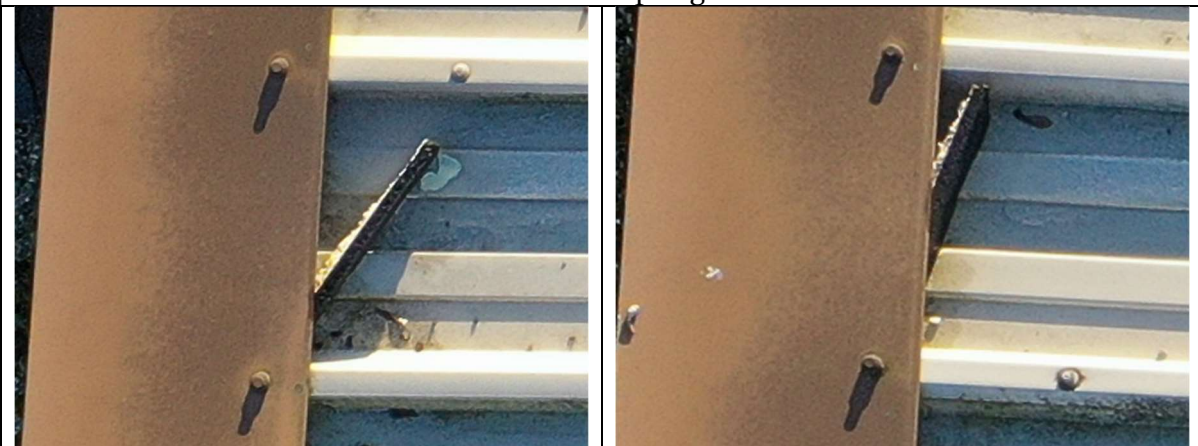
The cut edges where the sheets meet and at the foot of the roof all have cut-edge corrosion which needs to be addressed in the short term to prevent further deterioration of the sheets. There are areas of corrosion on the perimeter capping that should be treated at the same time.

The box guttering is full of debris and should be cleared out when the abovementioned work has been undertaken.

Overhead photo of the roof.

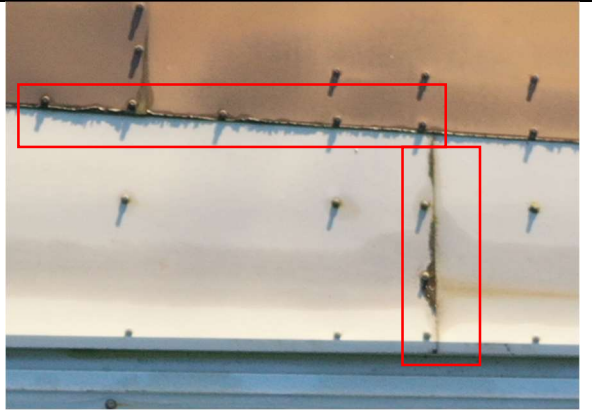


Example of the weather strip coming away from under the capping detail. This should be reaffixed and the other sections checked in the spring.



Example of corrosion on the verge capping sections.

This should be cleaned up and treated to prevent further decay.



Example of cut edge corrosion where the roofing sheets abut each other and at the foot of the sheets. This needs cleaning up and treating in the short-term to prevent further deterioration of the sheets.



Example photo of corrosion staining around the fixings. This needs to be monitored and the fixings may need to be replaced, non-ferrous fixings should be used.

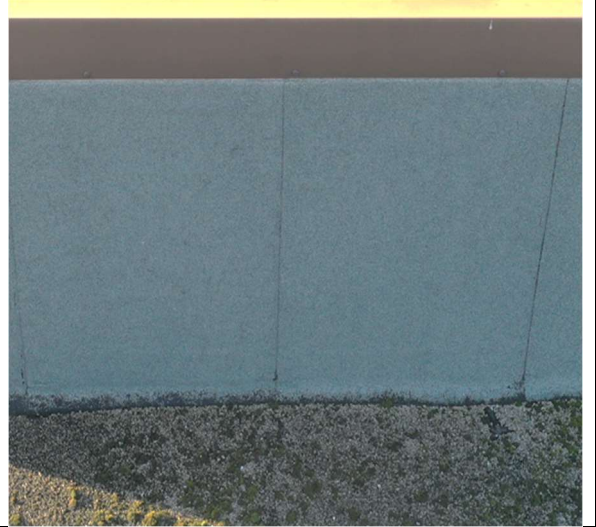
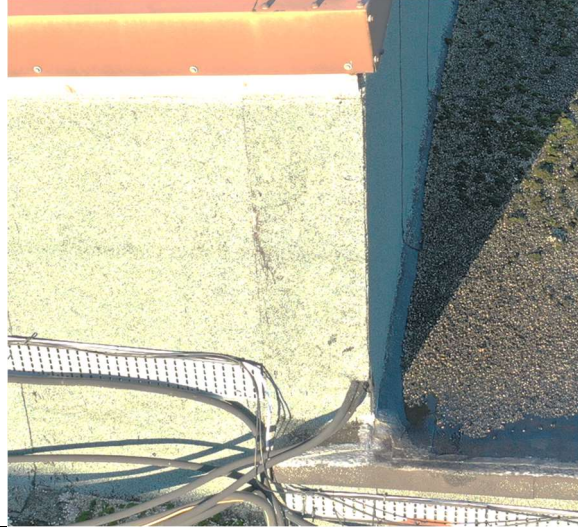




Example of debris building up in the guttering. This should be cleared in the spring.



Example photos of where the upstand around the Roof J abutment has been detailed in mineral felt. This is not appropriate and a suitable cladding material should be used.



At the end of the mineral felt upstand, there is no detail where this meets the corner (e.g., a cover flashing).

Cables are also being run behind the felt.

It is likely that wind-driven rain will be getting in behind here.

If the mineral felt upstand is to be retained, a suitable flashing with cable detail should be added.



## 2.10 Roof J

Roof J has a mineral felt covering. There is a build-up of moss on the left-hand side which has somewhat restricted our inspection of this area. This area should be inspected again once the moss has been cleared.

Some repairs have previously been undertaken in materials that are only designed for use as temporary repairs. Permanent repairs should be undertaken in the spring.

There are several areas where the solar reflective chips are missing. This will accelerate the UV degradation of the felt. These areas should be repaired in the spring.

The rainwater goods need clearing out and the left-hand section needs to be reset to the correct fall.

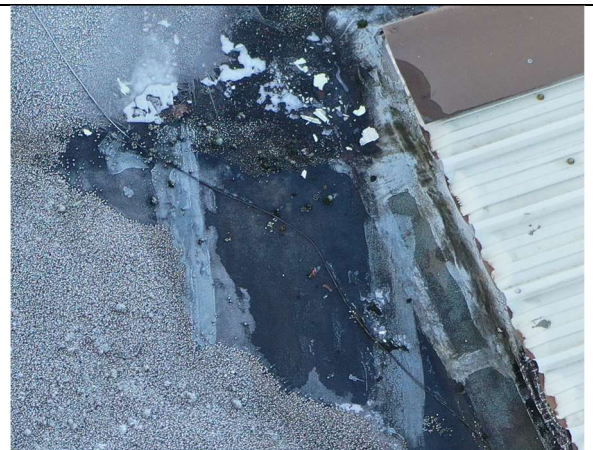
Overhead photo of Roof J – this is made up of the two areas outlined in red which meet between Roof G and Roof K.



Left-hand Section

Example of several short-term repairs that have been poorly undertaken.

The defects should be properly repaired in the spring.





Rainwater discharge has washed away the solar reflective chippings on the left-hand section of the roof.

A fall pipe should be added to the guttering run to take the rainwater to the guttering/vertical fall pipe.

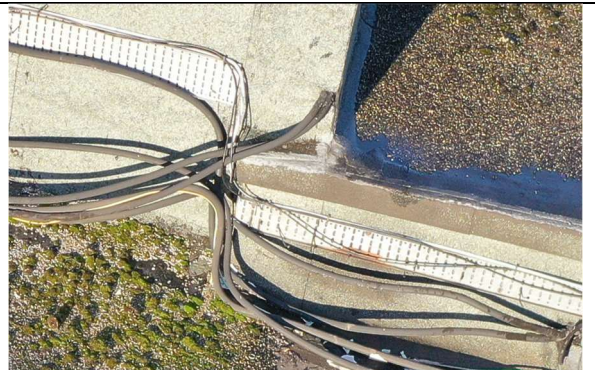
Once this has been done, the solar reflective chips can be replaced.



Left-hand section – there is a heavy build-up of moss towards the rear of the roof which has restricted our inspection. The moss should be killed and cleared in the spring and the roof re-inspected for defects once the moss has been cleared.



The service media has come away from the cable tray all of the way around this section. This should be re-affixed in the short term.



Front guttering run – the debris and ice in the guttering run suggests that it is not set to the correct fall (the lowest point at the outlet, 1:60 fall). This should be addressed in the spring.



Guttering – the union looks like it is leaking on the left-hand side. It should be repaired as soon as possible.

Facia – there is paint peeling all along the fascia board. This should be prepared and redecorated in the spring using linseed oil-based paint.



#### Right-hand Section

The solar reflective chips are missing across several areas of the roof, we have included some example photos opposite and below.

These should be replaced in the short term to mitigate UV degradation of the covering.



Example of an area of blistering in the covering. This suggests that the covering has debonded from the substrate, likely as a result of moisture ingress.

This should be recorded and monitored.



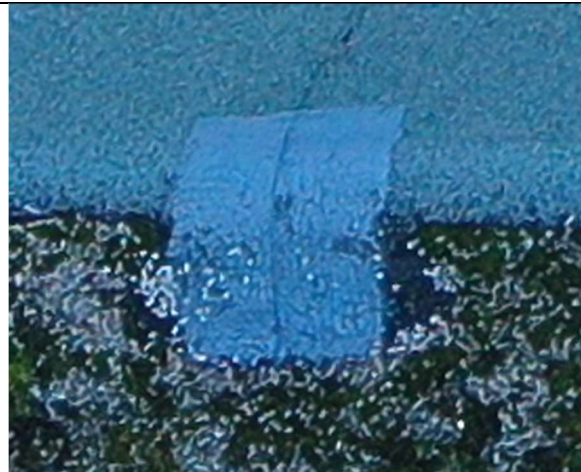
Moss is building up in areas. This should be killed and cleared in the spring.

The areas underneath should then be reinspected for defects.



Examples of where there have been some temporary 'paint-on'-type repairs to the covering.

These defects should be permanently repaired using appropriate repair materials in the spring.



Upstand detail to the Roof M abutment – this has been daubed over with a paint-on-type product. This is not suitable for this type of repair and will also damage the stone substrate.

It should be cleaned off in the spring and replaced with an appropriate lead cover flashing detail.



Right-hand guttering runs – these should be cleared of debris in the short-term.



The boiler house – the debris should be cleared from the covering. We could not determine from the imagery how rainwater is discharged from this section.



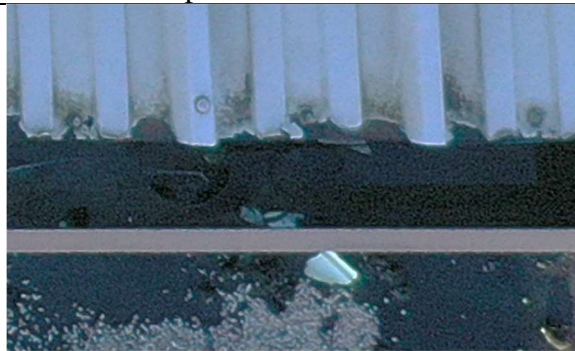
## 2.11 Roof K

Roof K is covered in profiled composite sheeting with a perimeter capping detail. There are signs of cut-edge corrosion at the foot of the sheets and the capping detail. These areas should be cleaned up and treated in the short term to prevent further deterioration.

Overhead photo of Roof K.



Example photos of cut edge corrosion at the foot of the roof. This should be treated in the short term to prevent further deterioration of the sheets.



Example of some light corrosion on the cappings. This should be treated in the short term to prevent further deterioration.



The light covering of moss should be cleared in the spring.



Guttering – debris building up in the guttering should be cleared in the spring.





## 2.12 Roof L

Roof L is made up of two pitches of profiled composite sheeting, 3 pitches of natural slate and a small off-shot area covered in mineral felt.

The sheets are suffering quite badly from corrosion and cut-edge corrosion. These areas should be treated as a priority in the spring.

Moss and lichen should be scraped off the pitched area in the spring. This will likely need undertaking on an annual basis.

The off-shot roof covering and rainwater goods are in poor condition and work will be needed when the weather allows.

The profiled sheeting areas are pitched to fall towards the top of the photo below as indicated by the two orange arrows.



Profiled Pitches

An example photo of an isolated area of corrosion on the pitch.

These areas should be cleaned up and treated in the spring.



Example photo of some disturbance to the coating around the fixings.

These areas should be cleaned up and treated in the spring.



Where the pitch abuts Roof G, there are lots of dents across the covering.

This is likely to have damaged the coating and these areas should be monitored for corrosion.



The foot of the pitch – the foot of the pitch is suffering from corrosion and cut edge corrosion all the way along.

This should be prepared and treated in the spring to prevent further deterioration of the sheets.

Example photos are opposite and below.



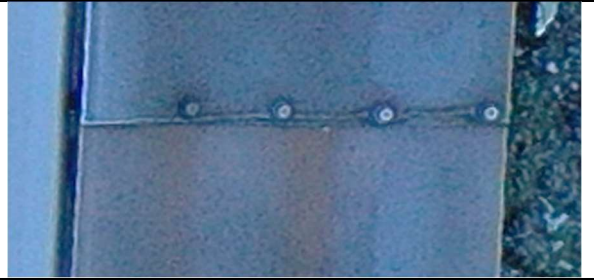
Example photo of some fixing heads that have been treated for corrosion.





Capping – early signs of cut edge corrosion to the capping sections.

These areas should be cleaned up and treated in the spring.



Guttering – debris should be cleared from the guttering in the spring.



Pitched Area

Clocktower – the lead detail should be tamped back down where it is lifting (orange line).



Clocktower – patination oil should be used on all leadwork to prevent it from oxidising and staining the roof covering below.



Ridge and hip detail and roof covering – there is a build-up of moss and lichen. This should be killed and scraped/brushed off in the spring.

A stiff nylon brush and scraper should be used for this.

A wire brush should not be used.



Rear pitch – the damaged slate should be replaced in the spring.



Front guttering run – this is deflecting in places, likely a combination of insufficient clips and UV damage.

Additional clips should be fitted to try and bring it back into shape.



The front, side and rear guttering runs are full of debris and should be cleared out in the short term.



Off-shot



The mineral felt is in generally poor condition.

The build-up of moss should be killed and cleared away in the spring and the roof reinspected for defects.

The areas of missing chippings will need to be reinstated, or another sheet of capping felt added if the roof can be made dry enough.



It looks like additional sections of felt have been added around the perimeter of the roof. This is now making the main deck lower than the perimeter and causing rainwater to pond. Once the ice has melted, this should be tested with a hose pipe. If this is the case, the fall of the roof will need to be re-cut and the roof recovered.



Having the outlet from the large section of the roof discharge onto this roof is not ideal and is likely the principal reason for the washing away of the chippings.

The rainwater goods should be redesigned to better manage this rainwater into the mains drainage.

Having the outlet supported by a brick is also less than ideal!



Ice building up in the guttering indicates that the run is not set to the correct fall.

The guttering should be set to the correct fall in the spring. This run handles a lot of rainwater so needs to be operating efficiently.



The damaged section of guttering should be replaced in the spring.



Where the guttering run stops, the fascia below is damaged suggesting that some rainwater is making its way over the perimeter of this section.

The fascia should be replaced and the guttering run extended in the short term.



## 2.13 Roof M

Roof M is formed of two buildings, one two-storey 'L' shaped building and off-shot and a single-storey detached rectangular building.

Moss needs to be killed and removed from all pitches in the spring. This will likely need to be done on an annual basis. Once this is cleared, some more repairs may be identified.

Main building – the ridge tiles are decaying; this is likely as a result of moisture stress from an incorrect mortar mix. The tiles need cleaning to assess if they can be reused. The valley gutters need to be cleared of debris and the main gutters need to be cleared and re-set at the correct fall. Works are required where the off-shot abuts the main building to prevent problems with penetrating dampness. There are several broken tiles that need replacing on the off-shot pitches.

On the detached building, the gutters need clearing out and re-setting to the correct fall. All of the timber detail (barge boards, fascias and soffits) look to be in poor condition and there is likely decay behind the paint. These should be inspected up close and a plan made for repair or replacement next year.

Both roofs are covered with concrete interlocking tiles. Moss build-up and frost restricted our inspection of some of the areas.

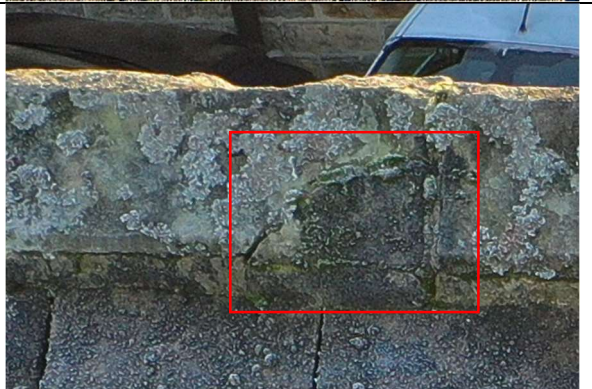


Main Building and Off-shot

Ridge, main building – the ridge tiles are decaying, likely in part as a result of the moisture stress being placed on them by the use of an incorrect mortar mix. Once the moss and lichen have been cleaned off them, they should be reassessed to see if they are salvageable or if replacement needs to be planned for. Example photos are below.



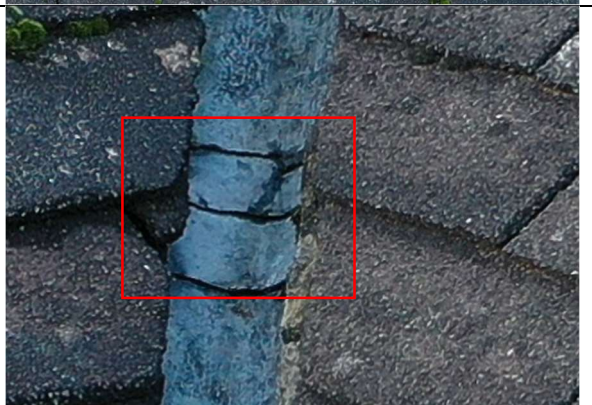
Ridge – cracked tile should be appropriately repaired with a suitable repair compound.



Moss and lichen build-up needs to be cleared off all of the pitches.



Example of a repair that has been undertaken to the front valley gutter.  
  
This should be monitored internally for leaks.





Both valley gutter runs are blocked with debris. These should be cleared out as soon as possible. Consideration should be given to redesigning the plastic guttering adjacent to the front valley to prevent it from creating a blockage further up the lead valley.



There are damaged tiles on the off-shot part of the building. These should all be replaced as soon as possible. Photos below. There are also several chipped tiles that should be replaced; however, these could wait until the spring.





Verge detail – the verges should be detailed as they are in the left-hand photo – tile, tile and a half, tile, tile and a half.

Some of the verges are detailed as in the right-hand photo – tile, half-tile, tile, half-tile.

This arrangement makes it more likely that the smaller verge tiles will be subject to wind uplift and therefore failure.

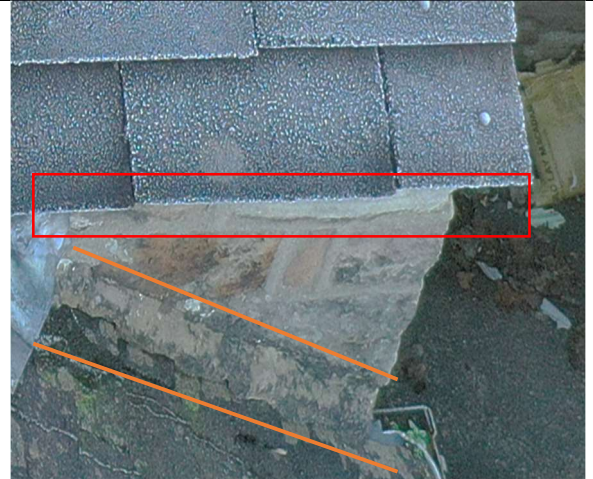


Where the main building and the off-shot roof pitches abut, this detail (orange lines) should be formed in a stepped lead flashing and soaker detail, this is especially important where, as we have here, there is a valley gutter discharging above.

On both sides of the building, this detail is formed in a mortar fillet which is not appropriate and will fail and lead to problems with penetrating dampness.

Plans should be made to replace this detail with the correct one in the spring.

Red box - also note that on the rear section, there is no guttering run at the foot of the pitch. A guttering run should be added in the short term.



On the rear of the abovementioned area, there needs to be a wrap-around flashing added as part of the lead detailing.



Guttering – front of the main building – the guttering run is either bowing or, the wallhead is deflecting. This should be checked and monitored.



Guttering – front of the main building – the guttering run should be set to a fall of c. 1:60. Here, it is set to a much greater fall – note the distance from the tiles to the guttering on the left compared to the right.



There is a lot of debris building up in the off-shot guttering. This should be cleared in the next month.

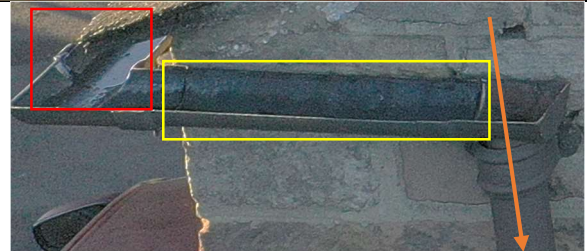


Red box – ice (from ponding water) is building up in the guttering run.

Yellow box – note that there is no ice building up here.





This indicates that the guttering run is not set correctly (outlet at the lowest point).

The guttering run should be reset in the spring.



The rear of the off-shot – there is a lot of debris built up in the guttering. This should be cleared out as soon as possible.



Detached Building	
<p>Ridge – moss and lichen should be cleared from the ridge in the spring.</p> <p>Red box – pointing is missing at various points on both sides of the ridge. The ridge should be repointed once the moss has been cleared away.</p>	
<p>The damaged tile on the eaves course should be replaced in the spring.</p>	
<p>Rear corner – we are not sure what is sticking out of the rear corner; however, it is unlikely that it should be there.</p> <p>It should be inspected close-up and removed as necessary.</p>	
<p>Barge boards – all of these are in weathered condition and there are likely to be areas of timber decay under the paint.</p> <p>These should be repaired (or replaced if more economic to do so).</p> <p>All timber should be painted with linseed oil-based paint.</p>	



Guttering – red box – ice is building up in the guttering run.

Yellow box – note that there is no ice building up here.

This indicates that the guttering run is not set correctly (outlet at the lowest point).

The guttering run should be reset in the spring.

Also, note the poor condition of the timber barge boards, fascias and soffits in the right-hand photo. These will need to be repaired and redecorated in the short term.



The debris building up in the guttering runs should also be cleared in the short-term.



## 2.14 Roof N

Roof N is formed of 3 areas – the main roof (3-storey building - 2 chimneys and 2 pitches), a two-storey building to the front (2 chimneys and 4 pitches) and a single-storey off-shot (2 pitches).

Routine maintenance is required to all of the roof pitches. The box guttering where the two buildings abut needs to be cleared out as a priority and the left-hand guttering run as soon as possible.

Overhead photo of Roof N.





Main Roof

Left-hand Chimney Stack

Pots

The pots have been removed and the stack crudely capped off.

Pots with vented caps should be reinstated to ventilate the redundant flues and the rooms they serve.

Flaunching

In acceptable condition.

Corbelling

In acceptable condition, one joint needs pointing.

Stack

Red box – this stone is delaminating. The surface should be de-frassed and if necessary, re-faced.

Flashings

See below.



Flashings – this design of cover flashing is only appropriate if there are soakers or secret gutter running underneath it.

This should be checked next time roof works are being undertaken.

Red circle – there is no saddle piece where the ridge and stack abut. One should be added next year.





### Right-hand Chimney Stack

#### Pots

The pots have been removed and the stack crudely capped off.

Pots with vented caps should be reinstated to ventilate the redundant flues and the rooms they serve.

#### Flaunching

In acceptable condition.

#### Corbelling

In acceptable condition.

#### Stack

In acceptable condition. Television ariel fixings should be inspected on a regular basis.

#### Flashings

This design of cover flashing is only appropriate if there are soakers or secret gutters running underneath it.

This should be checked next time roof works are being undertaken.

Red circle – there is no saddle piece where the ridge and stack abut. One should be added next year.



### Front Pitch

The Ridge (and the rest of the main roof) are covered in a thick layer of moss which has restricted our inspection somewhat.

The moss should be killed and scraped off in the spring.

The roof should then be re-inspected to check for defects.



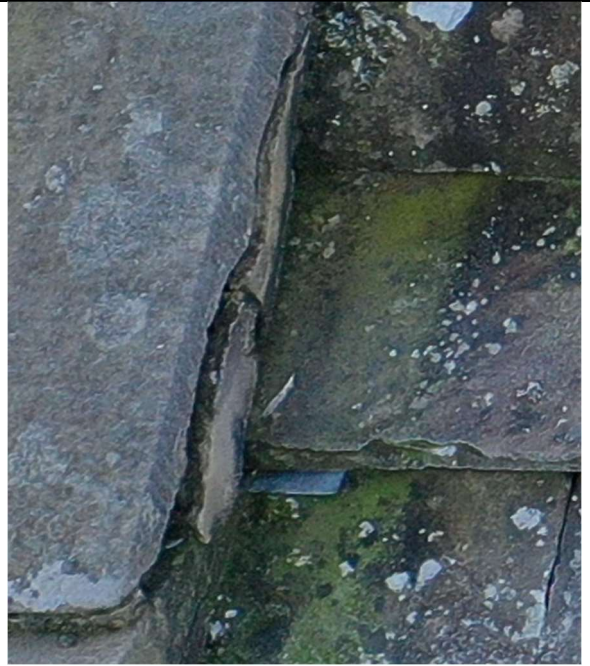
Left-hand parapet (but applies to all) – the upstands on all of the parapet walls should be detailed in lead.

All of the parapets on this building are detailed with mortar fillets which will fail as is the case here.

A plan should be made to replace the mortar flashings with an appropriately designed lead detail in the short-medium term.

In the meantime, this mortar should be replaced.

Note that an appropriate mortar mix should be used. Please do contact us if you need further advice on this.



Left-hand parapet – staining of the wallhead (and likely some internal water penetration) where there is missing pointing on the coping stones.

If the abovementioned upstand detail is to be corrected, it would make sense for a lead damp proof course to be designed to work with this which would reduce the reliance on the mortar joints between the stones (this applies to all of the parapet wall/coping stone details).



Guttering – the guttering run is in need of minor debris clearance and then refurbishment next year.

Cast iron guttering refurbishment is specialist work. Please do contact us if you need further advice on this.



Rear Pitch

The broken slates should be replaced in the short term. This should be undertaken in like-for-like materials.



There are no restraint straps on the flashings. The right-hand flashing looks like it is slipping down the pitch and it should be re-secured. Restraint straps should be added to both flashings.



The rear and right-hand guttering runs are in need of refurbishment in the next year. This is specialist work.



#### Front Building

##### Right-hand Chimney Stack

##### Pots

The pots have been removed and the stack crudely capped off.

Pots with vented caps should be reinstated to ventilate the redundant flues and the rooms they serve.

##### Flaunching

See below.

##### Corbelling

In acceptable condition.

##### Stack

In acceptable condition.

##### Flashings

See below.



Photo of the flaunching.

This is cracked all over and if these sections are loose, they could be subject to wind displacement.

The stack should be checked for loose mortar as soon as possible.

If pots are not to be added (as advised above) the flaunching should be replaced with an appropriate mortar mix.



Flashings - there are no restraint straps on the front aprons. This should be addressed together with the wrap-around detail when the flashings are replaced (they do not require replacement at the moment).

Pitch - this design of cover flashing is only appropriate if there are soakers or secret gutter running underneath it.

This should be checked next time roof works are being undertaken.



#### Left-hand Chimney Stack

##### Pots

The pots have been removed and the stack crudely capped off.

Pots with vented caps should be reinstated to ventilate the redundant flues and the rooms they serve.

##### Flaunching

In acceptable condition.

##### Corbelling

In acceptable condition.

##### Stack

In acceptable condition.

##### Flashings

This design of cover flashing is only appropriate if there are soakers or secret gutter running behind it.

This should be checked next time roof works are being undertaken.



There are no restraint straps on the front aprons. These should be added when the detail is replaced (there is no need to replace this at the moment).

Ridge - main and left-hand pitches – the ridge pointing is failing and sliding down the pitches/into the valley gutters in sections.

A plan should be made to remove the defective pointing and re-point the ridges next year. An appropriate mortar mix should be used for this i.e., not a cementitious one.



Front bay window ridge – the pointing is also failing in this area and slipping down to block the valley gutters.

The valleys should be cleared in the short term and the ridge repointed at the same time as the main roofs.



Front and rear pitches – the verge detail is incorrect – the slates should run:

Slate  
Slate and a half  
Slate  
Slate and a half.

Here, they run:

Slate  
Half slate  
Slate  
Half slate

The half slates will be subject to wind lift and as a result, failure. There is no economic way to address this now, but it should be considered when the building is ready for a re-roof (which is not needed at present).



Verge – there looks to be inadequate projection on the verge detail – the slates should project at least 50 mm from the elevation. There is no economic way of addressing this now.

There are a couple of areas where sections of the verge pointing are missing. These areas should be repointed in an appropriate mortar mix in the next couple of months.



There are a couple of damaged slates across the pitches which should be replaced in the spring.



Left-hand pitch – there are several damaged slates along the eaves course. These should be replaced in the next month or so.

Also, note that this run of guttering is full of debris and should be cleared as soon as possible.





Front guttering run – this is in poor decorative order and full of debris. The debris should be cleared out in the next month and a plan made to redecorate the guttering next year. Example photos are below.



Rear pitch, valley and box gutter – the foot of the valley and the box gutter are packed with debris. This needs to be cleared out as a priority (as soon as possible) as rainwater will back up and cause problems with water ingress internally.

This area should be monitored and cleared on a regular basis.



Left-hand pitch – the guttering run is full of debris and the ice (as a result of ponding water) illustrates that the run is not set to the correct fall. The guttering should be cleared of debris as soon as possible and the fall reset in the spring.



Front Off-shot

Sections of pointing are missing from both sides of the ridge.

The ridge should be repointed in the next year. An appropriate mortar mix should be used.



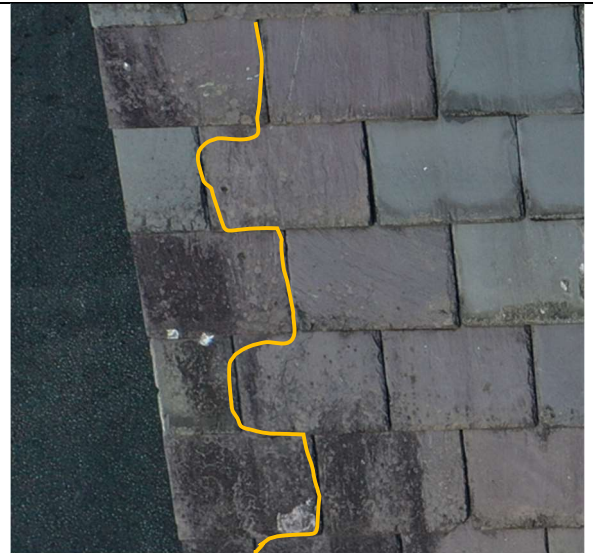
Front and rear pitches – the verge detail is incorrect – the slates should run:

Slate  
Slate and a half  
Slate  
Slate and a half.

Here, they run:

Slate  
Half slate  
Slate  
Half slate

The half slates will be subject to wind lift and as a result, failure. There is no economic way to address this now, but it should be considered when the building is ready for a re-roof (which is not needed at present).



Not related to the roof survey we have undertaken, but worth mentioning – the stone on these buildings has been over-pointed with an incorrect mortar mix, likely cementitious. This is causing moisture stress on the stone and accelerating its decay.

If you are planning to undertake work to the stone buildings in future, we would be happy to assist/review proposals.

