



trethowan 

# Annual Heritage Report 2021

Former Willsmere Asylum, Kew

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# 1 Background

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## 1.1 Introduction

Trethowan architecture has been engaged to undertake the Annual Heritage report for Willsmere in 2021.

To inform on our report, we have relied upon a series of site inspections and previous reports provided by MiCM including:

<b>Title</b>	<b>Author</b>	<b>Date</b>
Conservation Management Plan	Allom Lovell & Associates	March 1996
Willsmere Heritage Architects Report 2014	Studio B	2014
M16263 Willsmere Long Term Maintenance Plan	Donald Cant Watts Clarke	March 2017
Annual Heritage Report 2019	John Briggs Architect	2019
Summary of Works	MiCM	2019-21

The most recent Annual Heritage report from 2019 by John Briggs Architect (we have been advised that no report took place in 2020 due to COVID) and Summary of Works provided by MiCM have informed the focus of this report.

For clarity a summary of the notes from the 2019 report have been included in each category along with our findings from recent site inspections.

## 1.2 Limitations and Qualifications

Trethowan Architecture are a firm of heritage architects and consultants and are not specialists on elements such as structural condition, roof cladding, rainwater goods, plumbing and damp. Comments on these elements are the result of a visual inspection and a general understanding of these issues. Where detailed comments on these issues is required, Trethowan Architecture can recommend specialists for further investigation.

All comments and observations of the external facade contained in this report are based on visual inspections, undertaken from the external ground level. All roof inspections were from within roof space only. Mechanical equipment does not form part of the inspection.



## 2 Review and Findings

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The following section utilises the findings from the 2019 report (*italicised*) and provides an update following the recent inspections with recommendations, where necessary.

Where new works have been identified, these elements have been added.

### 2.1 Masonry Rendered and Painted Walls

*The walls and paint to the walls remains sound with no signs of cracking subsidence or damp observed beyond fine superficial cracking normal to thermal movement. No evident movement has developed that has implication for the conservation of the buildings in the foreseeable future.*

The walls and paint remain in sound condition with no major increase to the expected superficial cracking.

Recommendation: Continue monitoring wall condition and establish a regular painting programme

### 2.2 Brick Walls, Former Privies, Bluestone Plinths and Laundry Chimney

*No evident or noted change has occurred over the last year. Signs of some structural cracking and mortar loss are evident and ongoing monitoring is appropriate.*

Without photographic record it is difficult to determine any change that has occurred since the last inspection, however there was no major structural cracking or movement noted that would warrant immediate action noted from this inspection.

Recommendation: Undertake a detailed photographic record of existing cracking and mortar loss to set a benchmark against which on-going change can be assessed.

### 2.3 Roofs

*Application of rust inhibitor to valleys ridge-cappings and box gutters has been undertaken to the following areas along with the replacement of cracked and broken slates as needed:*

*Southwest wing*

*West wing*

*Northwest wing possibly without completing the roofs to units 79 – 81*

*Gate lodges (incomplete)*

*Southeast wing*

*Northeast wing over units 146 – 15*

*Additional access hatches have been installed to the northeast wing to provide access to the roof over Units 140-145 which is difficult to access from the hatch over 146. A second new hatch has been installed to provide access to the southeast wing.*

The following roofs were inspected internally only from within the roof space:  
 Northwest wing over units 60-54  
 Southwest wing over Museum Library  
 Southeast wing over units 107-114  
 Northeast wing over units 119 -146  
 The central wing could roof could not be accessed due to private apartments.

According to Summary of Work between 2019-21, roof leaks and repairs accounted for approximately 70% of repair callouts and 30% of repair cost (not incl. ~\$300k spent on painting between 2017-19)

While roof works during this period appear to be evenly spread throughout each wing, during the inspection it was noted that majority of the current leaks/ repairs are required on the East wing roof. Three of which are due to damaged / dislodged slate tiles.



Figure 1 - Damaged / Missing slate located at roof valley above unit 113.

Recommendation: A condition report be undertaken by a roofing contractor from on top of the roof to establish the current condition of slate roofs throughout and determine areas where accelerated deterioration is occurring. Therefore, proactive maintenance can occur as opposed to reactive repair (which often requires additional work when dealing with water ingress).

## 2.4 Further Works to the Roofs

The next round of recommended work to the roofs is as follows:

Two further hatches are required to provide more ready roof access over Units 142 and 93 at either end of the main east wing. These roof areas need the valleys, caps and box gutters to be treated with rust inhibitor and re-painted. At the step down in level from Unit 142 to 141 the wall flashings need to be re-plugged and repointed.

The roof of units 65-68 requires better access which might be from one or other of the units from the hall to the attic and then to the roof.

The lead flashing to the wall at Unit 65 and to the chimney at Unit 60 is pulling out and requires repointing and plugging back in position. This is also required on 2 section of the flashings to the chimneys of Unit 207 (east gate lodge) and the box gutters also require some patch and repair as well as replacement of some broken slates.

The roofs to the east wing are to have the valleys and ridges treated with rust inhibitor. Repointing and re-plugging of flashings is also needed to over Units 68 - 81 at the northwest wing.

The roof hatch installed over Unit 126 is constructed of zincalume which is incompatible with the galvanized steel and led of the roofs. This hatch needs coating, or preferably replacement with hatch made of galvanized steel. The box gutter below has also been patched in zincalume and this will also need to be replaced.

As roof access during the inspection was not possible, confirmation is required from the Building Manager as to whether all the above works were undertaken satisfactorily.

There is typically staining to all verandah roofs where downpipes from the roof above discharge. There are many factors that could lead to this occurring. Incompatibly of metals between the gutters, downpipes and roofs leading to increased corrosion of either one of those elements. It could also be caused by secretion of tannins from leaves & debris that have accumulated in gutters and downpipes, in which case the staining would likely be superficial only.



Figure 2 – Typical Staining to verandah roofs found at the base of downpipe spreaders from roofs above.

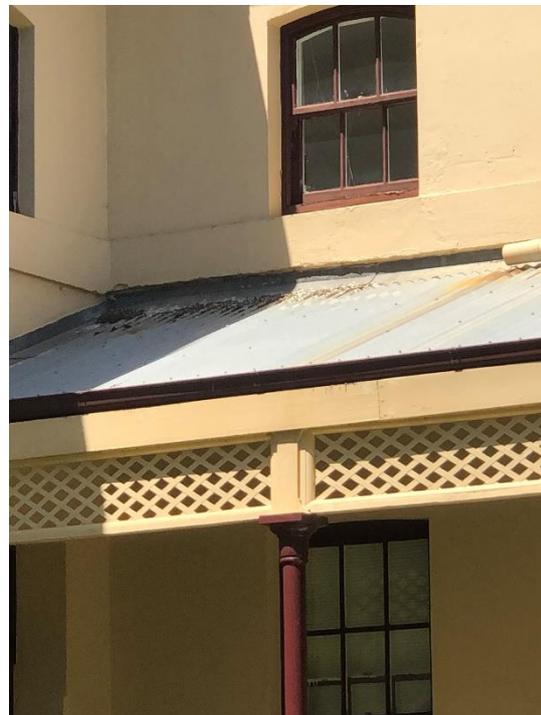


Figure 3 – Bird fouling to West verandah roof outside unit 19 (Central wing)

Recommendation: Further investigation will be required to establish the root cause of staining. Firstly, up-close analysis will be needed to determine if it is actual rusting of the roof sheet or superficial staining.

## 2.5 Monitoring roof works

*It is understood that there is now a drone available for inspection of the roofs.*

*It is recommended that with the approval of the Owner Corporation that the works discussed above could be undertaken on the basis of progressive quotations, with the condition of the roof verified by drone inspection prior to the works. In the same way that I have recently been provided with a raft of before and after photographs via messaging from Doug Davies it may be desirable for this method of recording to be adopted with photo record sent to the Heritage Consultant and to the Facilities Manager for the monitoring of the works. This would provide for current verification of both the need for, extent and the completion of work undertaken. With comparison against progressive quotations for components of the works fair and reasonable cost control can be achieved. The Spanish slates used on the inside slopes area notably inferior to the original Welsh slates and may be expected to begin to fail and require replacement perhaps as early as in fifteen to twenty years. This is an issue to be monitored and provided for. Along with the provision of appropriate access to the roofs anchor points are needed in the roof to provide a safe working environment. Anchor points can be addressed progressively over time.*

## 2.6 Rain Goods – Upper & Lower Eaves Gutters, Valley and Box Gutters & Downpipes

*Presently it is understood that some clearance of gutters has been undertaken although the extent is not recorded. It has been reported that the down pipes of the southwest wing remained blocked. An annual programme for gutter and down pipe clearance following the autumn leaf fall is recommended and it is again recommended that there be briefing of the contractor to recruit their assistance in investigation and evaluation of the gutters with the finding of any damage being recorded and provided to the Facilities Manager.*

Generally, gutters remain in good condition with the exception being the Northern end of the Northeast Wing, where the gutter has severely corroded to the point of complete failure.

It is unlikely this is due to build-up of debris given the height difference to natural ground level however, given the close-proximity of the downpipe, it could be caused by insufficient fall / slump leading to water pooling.

It may be a coincidence that the downpipe on the other side of this wing – See figure 5 (both sides of unit 135) - has also deteriorated excessively, however there is a potential that there is a reactive material on the roof in this area that is contaminating the rainwater.

Recommendation: Replacement of failed gutters and downpipes on the Northeast wing. Further investigation of the roof in this area also is highly recommended to determine what has caused this rapid decay to surrounding rainwater goods.



Figure 4 - Severely corroded gutter to North side of unit 135

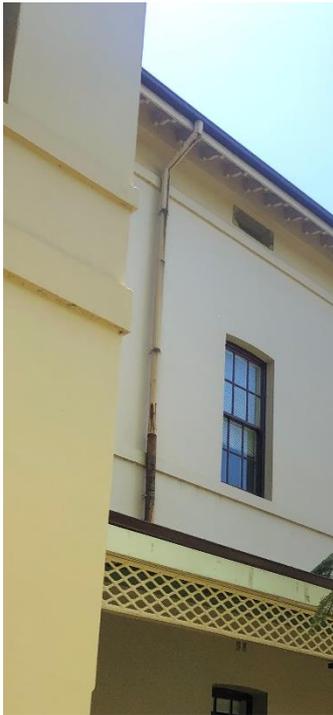


Figure 5 – Downpipe located on east side of unit 135 showing heavy corrosion and detachment from gutter.

Given the proximity of trees to majority of verandah gutters, in some cases being completely overshadowed it is likely leaf build-up and debris will continue to block and increase decay of gutters and downpipes.

Recommendation: installation of leaf guards to gutters near trees and additional overflow spouts to verandah roofs if required. Pruning of trees adjacent to gutters where possible to reduce overhang of roofs.



Figure 6 - Build-up of leaves / debris in verandah eave gutter outside unit 130 note proximity to tree.



## **2.7 Verandah rain goods, posts, fascia boards and soffits**

*The verandah gutters are not in their original configuration which was as exists on the former Outside Ward where the rafter extend over the beam and cast iron frieze to carry the gutter on the projected fascia board. The gutters would have been Ogee profile and would have had a gutter bead below. The current configuration with the gutter set above the fascia is an adaption. The inadequate down pipe area has been addressed by the introduction of pops to provide alternative water release as was demonstrated in the periods heavy rain on the day of our inspection.*

Inspected verandah rain goods, post etc. a in generally good condition. Leaks/ failures in the rain goods are extremely difficult to observe on a dry day, which was the case during the inspection.

Recommendation: Continue to monitor verandas through heavy rain periods

## **2.8 Verandah Cast Iron Lattice Friezes**

*The replacement of the section of cast iron frieze that is damaged and missing at unit no. 136 has commenced. The damaged panels are to be replicated using an original panel as the pattern. It is recommended that an original panel to the verandah west of Unit 119 be demounted and used as a template*

Lattice replacement to unit 136 appears to have been completed satisfactorily

Recommendation: If template has not already been made the original panel to the verandah west of Unit 119 be demounted and documented/ used for a mould. Which can then be used to repair or replace any lattices damaged in the future.

## 2.9 Painted Work

*The repainting works conducted in 2018 have been generally completed and painting is now being undertaken as needed to sundry items missed, overlooked or where ongoing deterioration becomes apparent.*

*There remain observable sections of some limited number of elements such as windows and fascia boards where it appears decay has occurred and is an ongoing issue. The number of locations appears limited and repairs have will be addressed progressively.*

*Awareness of the existence of lead paint throughout the complex an ongoing issue. There is almost certainly lead paint as an under layer behind the layers of modern paint systems. This can become a health issue, particularly for the safety of children and the integrity of paint needs to be monitored and awareness of the issue maintained when external or internal works are to be undertaken. Where the paint is chipped, flaking or friable, children can be attracted to pick and pull the paint away and then potentially put the lead paint in their mouths and swallow it.*

Painted elements throughout are in generally good condition. There are however several west facing first floor windows on the Northeast wing that have substantial paint flaking. While the sills were not observable from ground level it is expected that the sills are in the same if not worse condition and are therefore subject to decay. Some adjacent windows appear to have been painted more recently and are in good condition.

Recommendation: A schedule of problem areas should be maintained by the facilities manager to record areas reported to need attention. Individual owners to be consulted with to advise if serious decay has spread internally.



Figure 7 - West facing first floor windows of Units 123-125



## 2.10 Windows Seals

*There are some water leaking issues with some windows, which has resulted in some damage. The windows look typical for their type, with the seal of the window being the internal bead. The windows will need to be inspected internally, however it is most likely that the bead has deteriorated away enabling water to seep in and damage the frames.*

*Individual property tenants are best placed to determine the wear and tear of internal seals and can seek advice from the Body Corporate if they so wish. In our view these issues are the responsibility of the individual owners, and not the body corporate, to ensure the maintenance of the seals of the window. Generally, the frames built into the walls can be attributed to external fabric and windows sashes and the window beads can be considered to be occupant responsibility.*

Recommendation: Should a high-level external survey or consultation with individual owners be unfeasible, facilities manager and heritage architect to be notified when works are required and monitor areas of concern.

## 2.11 Air Conditioning

*Some enquiry has been undertaken regarding an appropriate method for provision of air conditioning to apartments. In principal, the introduction of reverse cycle split systems, with the compressor in the attic space would have no impact upon appearance of Willsmere and so would be supported from the heritage perspective.*

*There are a number of considerations that would need to be addressed however do not appear any insurmountable obstacle to this method of providing cooling to apartments, at least to the front and side wings where there are large ventilator openings into the attic spaces.*

*The use of domestic scale systems would avoid large concentrated loads and, whilst the adequacy of the structure in each instance would need confirmation, it is expected that the existing structure is sufficient to accommodate the attic installation of condenser units.*

*A limited number of units could likely be installed without needing to provide for assisted removal of hot air from the attics. As it is however likely that quite a number of units would eventually be installed, it is recommended that in association with each installation that fan extraction through an adjacent high wall ventilation opening should be installed and connected to the power line to the unite.*

*It is in turn assumed that the power supply to the condenser units would be run from the apartment served, along with the supply and return coolant pipes. The extraction fans could be thermostat activated so that they operated only when the temperature in the attic rose to a nominated level. It is anticipated that with there being generally one or two vents to each side of the attic space over individual apartment that sufficient air change could be provided to keep the attic temperatures to the existing range and perhaps lower the upper levels achieved on hotter days.*

*Along with structural sufficiency and attic temperature control through air extraction it would also be necessary to ensure there is condensate drainage to each unit and that noise is limited.*

*As the attics are common areas under body corporate control an appropriate agreement would need to be established which could presumably be modelled on that providing for the installation of instantaneous hot water systems in the attics. The installation agreement would need to address liability for service and any damage caused. Units of the kind proposed present a low fire risk however this should also be addressed by the installation agreement, as would be the process for procuring all approvals.*



*The roof space to the towers and centre wing have not been inspected and without the well ventilated attic spaces that exist generally in other areas suitable spaces to accommodate the external compressors may present more difficulty.*

Further to above we have been advised that the committee is now investigating an air-conditioning product that has no external unit. The system would be installed on the inside of the apartment, and then two round vents that would be visible on the outside of the building.

Addition consultation with mechanical consultants and contractors is required to determine the most feasible and discreet solution. Which would then require investigation into how the system would be implemented on the range of different elevation types throughout Willsmere. Finally, Owners Corporation & Heritage Victoria approval would be required.

Recommendation:

Further investigation is required as part of a separate piece of work. Including consultation with both mechanical consultants and mechanical contractors to verify feasibility and typical installation locations and details. A cost can be sought from a contractor and the issues of installation resolved in that process. The outcome can then be presented to the Owner Corporation and then Heritage Victoria for approval for in principal approval. Specific details for application and implementation can then be resolved through this process.

### 3 Summary of Recommendations and Action Plan

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#### 3.1 Summary of Recommendations

ITEM	RECOMMENDATION
	Stricter adherence to the Willsmere Long Term Maintenance Plan - Donald Cant Watts Clarke 2017 is highly recommended, given it can be used to track, anticipate and budget for repair works.
<b>2.1 Masonry Rendered and Painted Walls</b>	Continue monitoring wall condition and establish a regular painting programme
<b>2.2 Brick Walls, Former Privies, Bluestone Plinths and Laundry Chimney</b>	Undertake a detailed photographic record of existing cracking and mortar loss to set a benchmark against which on-going change can be assessed.
<b>2.3 Roofs</b>	A condition report be undertaken by a roofing contractor from on top of the roof to establish the current condition of slate roofs throughout and determine areas where accelerated deterioration is occurring. Therefore, proactive maintenance can occur as opposed to reactive repair (which often requires additional work when dealing with water ingress).
<b>2.4 Further Works to the Roofs</b>	Further investigation will be required to establish the root cause of staining. Firstly up-close analysis will be needed to determine if it is actual rusting of the roof sheet or superficial staining.
<b>2.5 Monitoring roof works</b>	See 2.3-2.4
<b>2.6 Rain Goods – Upper &amp; Lower Eaves Gutters, Valley and Box Gutters &amp; Downpipes</b>	Replacement of failed gutters and downpipes on the Northeast wing. Further investigation of the roof in this area also is highly recommended to determine what has caused this rapid decay to surrounding rainwater goods. installation of Leaf guards to gutters near trees and additional overflow spouts to verandah roofs if required. Pruning of trees adjacent to gutters where possible to reduce overhang of roofs.
<b>2.7 Verandah rain goods, posts, fascia boards and soffits</b>	Continue to monitor verandas through heavy rain periods
<b>2.8 Verandah Cast Iron Lattice Friezes</b>	If template has not already been made the original panel to the verandah west of Unit 119 be demounted and documented/ used for a mould. Which can then be used to repair or replace any lattices damaged in the future.
<b>2.9 Painted Work</b>	A schedule of problem areas should be maintained by the facilities manager to record areas reported to need attention. Individual owners to be consulted with to advise if serious decay has spread internally.
<b>2.10 Windows Seals</b>	Should a high level external survey or consultation with individual owners be unfeasible, facilities manager and heritage architect to be notified when works are required and monitor areas of concern.
<b>2.11 Air Conditioning</b>	Further investigation is required as part of a separate piece of work. Including consultation with both mechanical consultants and mechanical contractors to verify feasibility and typical installation locations and details. A cost can be sought from a contractor and the issues of



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installation resolved in that process. The outcome can then be presented to the Owner Corporation and then Heritage Victoria for approval for in principal approval. Specific details for application and implementation can then be resolved through this process.

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