

Richmond Drill Hall



Proposed addition of solar panels

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Executive Summary

The owners of the Richmond Drill Hall (RDH – VHR1362, HO258), 24 to 28 Gipps St Richmond, are wanting to fit solar panels to the north facing roof of the building. In identifying the most appropriate design for the installation of panels to the building the owners have sought advice from industry experts and reviewed local and international guidelines and examples in their review of the site to develop the proposed layout.

Having determined a layout they have sought comments from Yarra Council, all neighbours, the local heritage society and local state member. All of whom support the proposed solar panels.

Finally this report summarises clear evidence that the heating and cooling of the homes and costs associated in the use of the Richmond Drill Hall are multiples of conventional housing and a failure to support a panel application would result in significant economic loss to the owners of the Drill hall properties.

HERITAGE ACT 2017 - SECT 101

Determination of permit applications

Proposed Solar Panels on northern roof of Richmond Drill Hall.

Relevant Clauses:

In determining whether to approve an application for a permit, the Executive Director must consider the following—

(a) the extent to which the application, if approved, would affect the cultural heritage significance of the registered place or registered object;

(b) the extent to which the application, if refused, would affect the reasonable or economic use of the registered place or registered object;

With respect to a) Visual Impact

There are 2 opposing views, as advised by the officers of HV they see solar panels as a visual impact and oppose applications that propose panels that can be seen from the street. Whilst as owners of heritage buildings and as active members of the community in which they are located there is unanimous support across the local community supporting the addition of solar panels. The community and owners' views are driven by the urgent need for climate change and associated transition to zero CO2 emissions and the understanding that the Heritage building's features remain in place and the buildings cultural significance remains unaffected and intact. The roof has numerous skylights and recently a lift shaft all added to allow light and mobility within the buildings. The roof is also partially hidden by street trees that line Gipps Street making it difficult to view the roof. In Europe laws have been passed to support the addition of solar panels to all heritage buildings based on the urgent need to transition to zero carbon energy.

With respect to b) Economic impact

Heritage Buildings, by the nature of their construction, require significant energy to heat and cool them. The State government policy is driving all buildings to be energy efficient and generate energy with solar panels and moving their own source of energy to 100% renewable energy under the VRET program by 2025. Thus the extent to which the application, if refused, would affect the reasonable or economic use of the registered place is significant to the owners of Heritage buildings. They require multiple quantities of electricity when compared to a standard house and restricting their ability to add solar panels has a significant economic impact.

Physical Constraints:

The main roof line of the Richmond Drill Hall runs from east to west, creating a large northern roof plan. In the case of the Richmond Drill Hall the only option for the location of solar panels on this building is that they are placed on the north facing roof. The owners are therefore looking to work with HV to arrive at an agreeable arrangement for the installation of solar panels as an important element supporting the long-term sustainability of the structure for both the owners of the property and the broader Victorian community.

Climate Change:

The owners have a strong commitment to action on Climate Change and are motivated to fit solar panels to the building in line with local, State, Federal and International energy sustainability policy and carbon reduction targets. This includes a commitment to the full electrification of the dwellings at 24 to 28 Gipps St.

Australia's recent electoral results have demonstrated the clear, strong, and growing commitment that our community has for transition to renewable and clean energy. This is a critical step in preserving our climate for future generations. It seems unthinkable that HV can unilaterally determine to prohibit structures in their remit from participating in this globally critical transition. The ongoing sustainability of our heritage buildings will, in part, be dependent on their ability to be appropriately adapted to meet future community needs and standards. This will include the capture of solar energy.

Victorians, per capita, are leading global adopters of solar power technology. Over 510,000¹ homes have solar PV installations, exceeding 20% of Victoria's housing stock. Victorians value and accept Solar PV technology and this is clearly demonstrated by their behaviour. While once, solar panels may have been aesthetically offensive to some within the community, that time has now passed. The fitment of panels now reflects one mark of a responsible and community minded citizen.

The owners of the Richmond Drill Hall are looking to be such citizens by installing solar panels on the north facing roof of the property to reduce their energy consumption and carbon emission by up to 84%. When considering the granting of the permit the Executive Director the economic impact of refusing a permit is significant, a refusal is also considered out of step with the local Richmond community that engages with, and values this building.

Economic Impact:

As a heritage building, given the design, age and composition of the structure, the properties have electricity usage levels significantly above modern buildings resulting in significantly high energy use to heat and cool the building. The economic impact has escalated under the increases in electricity prices and forecasts of further 50% price increase through 2023. The fitment of solar panels is an economic imperative for the owners and goes some way to ameliorating the higher ongoing maintenance costs associated with the maintenance of a heritage property.

100% Local support for the solar panels:

In order to understand local views on the visual impact, the solar panels have been widely discussed with all local neighbours, Yarra Council and the Richmond and Burnley historical society – all have unanimously endorsed the proposal. Copies of the letters of support are attached to this document for review.

Heritage Victoria's Solar Panel Guide:

The owners have received verbal advice through the Heritage Victoria (HV) pre application/application process, that HV are unlikely approval for panels to be fitted on the north facing roof of the structure. HV have advised that this may be considered a visual impact and thus may not be granted a permit based on impact to '**Cultural Significance**' of the site due to the '**aesthetic**' impact of the panels. The HV supervisor tabled a draft Solar Guide for HV. Unlike the NSW guide where the guide allows for north roof planes to have solar panels where they are set out as per the guide preferred schematics the HV document basically reject all north facing roofs that are adjacent to a roadway. In the view of the Richmond Drill Hall owners the HV guide is inconsistent with Interstate and International guidelines and importantly inconsistent with existing local HV registered examples in the Yarra area.

Visual Impact:

The owners are strong supporters of the importance of retaining Victoria's heritage, however, find this interpretation of 'Cultural Significance', despite the unanimous local support from neighbours through to the

¹ Solar Victoria

R&B Heritage Society, to be inconsistently with both Australian and Global best practice. In particular, the residents note,

- HV's draft solar panels guide is restrictive to the point of being unworkable for buildings abutting a road on the north side of the building. The guide appears to be inconsistent with community and State and federal policy for residential buildings.
- Other local historic and Heritage Listed properties have panels installed that are clearly visible from street level, including the Fitzroy Football pavilion on Brunswick Rd, Fitzroy.
- The Richmond Town Hall, a prominent and important local historic building, listed by the National Trust, has panels installed that are clearly visible from Bridge Rd, Church St and Citizens Park.
- The owners note that historic buildings throughout Europe including the Vatican, a UNESCO World Heritage listed site, has panels installed that are clearly visible from the surrounding streetscape. Italy has passed legislation supporting solar panels on all Heritage buildings.
- The owners have a high commitment to the Richmond Drill Hall's preservation other local heritage sites have been approved for development where the façade of the site is maintained, and then significant multistorey construction is erected immediately behind that façade. It is difficult to understand how this style of development passes '*aesthetic impact*' on the Cultural Significance of those sites whilst the installation of solar panels has on the Richmond Drill Hall site is stated as a visual impact.

In addition to these observations, the owners have consulted with the local community who may be '*visually impacted*' by the installation of the panels and note the following,

- The Gipps Street trees restrict views of panels to limited sections of the roof.
- Given the steep pitch of the roof, the panels will not be visible to pedestrian walking past the premises on the Gipps St south side footpath.
- The tree coverage on the north side of the property, the panels are only partially visible to pedestrians walking past the premises on the Gipps St north side footpath.
- The owners have spoken to all neighbours whose properties have any partial visibility of the panels and have received their written support for the installation of the proposed panels.
- The owners have spoken to the Richmond & Burnley Historical Society Inc. and have received their strong written endorsement for the installation of the panels.
- The owners have received confirmation of support from the Yarra City Council for the proposed design for the fitment of panels to the north facing roof, and
- The owners have spoken to The Hon Ms Gabrielle De Vietri (Member for Richmond) and have received a strong letter of support for the installation of the panels.

The attached document provides further detail and appendices supporting the above.

Conclusion:

Significance is defined as the importance or meaning of something. In the case of heritage buildings the significance of each building has a wide range of elements, in many cases the significance can be seen as the preservation of the building as an important part of local history. In being significant to the State buildings must be relevant and at differing degrees vibrant parts of the ongoing urban form. In 2023 this includes the need for urgent change to zero carbon-based energy driven by Climate Change.

The Richmond Drill Hall homeowners are committed to the building and preserving the halls' many historic features. Equally they support the federal, state government and local governments commitment to the transition to zero carbon energy and see the addition of solar panels as a crucial adaptation for the Richmond Drill Halls ongoing future.

We see that a balanced approach in line with the feedback from Yarra Council and with the principles outlined in the City of Sydney's guidelines as striking a sensible balance to facilitate the adaptation to sustainable energy on heritage buildings.

The installations on Richmond Town Hall and the large north facing roof of the Fitzroy Pavilion provide excellent examples of heritage buildings where solar panels have been added without any reduction in the significance of the buildings or impact on the building's heritage fabric. Both these buildings have not experienced any loss of significance and with respect to climate change they provide clear examples of buildings that are relevant to today.

1. Richmond Drill Hall

1.1 Heritage Listing

24-28 GIPPS STREET RICHMOND,

YARRA CITY Municipality YARRA CITY

Level of significance Registered Victorian Heritage Register (VHR) Number H1362

Heritage Overlay Numbers HO258 VHR

Registration October 23, 1997 Heritage Listing Victorian Heritage Register



Original post in Dickmann Street, the oldest feature on the site. East end quarters added 1891 with detail to roof truss and windows.

1.2 Statement of Significance

Last updated on - July 6, 1999 The Richmond Rifles Volunteer Orderly Room was constructed in timber in 1867 with donations from members of the Richmond company of the Volunteer Rifle Corps. With the disbandment of the volunteer system in 1884 the Richmond building was one of the few orderly rooms substantial enough to be taken over by the new Victorian Department of Defence.

The initial use was as a public building to allow the community to assemble and provide protection for the wider community as the British soldiers transitioned out of Victoria.

The building was then transferred on federation to the Australian Defence Forces and used during both WW's for recruitment.

The building was altered and extended in 1891 mainly by the addition of offices along the Gipps and Docker Street frontage, The also attached Sergeant Major's residence at the rear of the Hall with a new entrance from Dickmann Street. These additions were made to the design of Public Works Department Architect Samuel Bindley thereby giving the orderly room a superficial resemblance to other timber orderly rooms of the 1880s.

In the 1950's the building was used for cooking training by the army. This ceased in the 1960's as the building became surplus to army needs as it no longer met the changing standards required in army buildings.

The building was used infrequently from the 1960's and sold in 1996 to residential use.

The subdivision and conversion of the building was completed in 1998.

The Richmond Rifles Volunteer Orderly Room is historically important to the State of Victoria. The Richmond Rifles Volunteer Orderly Room is historically important as one of only two surviving timber orderly rooms from the volunteer era of Victorian colonial defences, the other being the Collingwood Rifles orderly room in Powlett Street East Melbourne.

1.3 Conservation Plan - Adaptive Reuse.

As owners of both the Richmond Rifles Volunteer Orderly Room (part) and the Collingwood Rifles orderly room in Powlett Street East Melbourne we are dedicated to the ongoing preservation of the buildings and have ensured both buildings have been sensitively preserved. As one of the early people involved with the

establishment and for 11 years oversight of Heritage Victoria John Lawson has a long history in the preservation of Victoria's cultural heritage including historical buildings and shipwrecks.

Both buildings have a history of addition and adaptation and preservation. There is a strong history of adaptation through the timeline of each Drill Hall.

In the case of East Melbourne, the use of the main hall has been converted to offices as a single space with lightweight partitions to define areas, but the volume maintained.

With regard to the roof the original structure and fabric has been maintained. Skylights have been added for light whilst the original shingles have been preserved under the steel roofing and the drainage upgraded over time to adjust for increased intensity in rainfall. The material used on original roof on the Richmond Hall is not known and as the hall was built within a year of the East Melbourne Drill Hall it is suspected the roofing material may have been the same on both halls.

With the Richmond Drill Hall, the building was adapted to residential housing in 1997/98. The original orderly room has undergone ongoing adaptation to ensure it continues as a viable building that is both preserved and valued. The halls' function has changed:

- its beginning in 1864 as an orderly room for local meeting to support local community order
- In 1891 the building was extended to the boundaries in Docker, Gipps and Dickmann Streets with a residence included on the east end.
- The building was transferred to Commonwealth ownership after Federation in 1901 where it was used as a recruiting centre for WW1 and WW2.
- In the 1950's and 60's it operated as a cooking training facility for the Army reserve. Its current roof being added in the 1960's
- From the late 1970's the building was left vacant and fell into disrepair. With no heating and maintenance, the building sat ideal until the 1990's when it was sold as surplus to needs army needs. As owners we commissioned Liz Vines to develop a conservation plan for the property.
- In 1996 we bought the site and set about adapting it to its new use, residential housing. This included the full replacement of the corrugated roof in the centre of the Hall. The corrugated iron is a mixture of 1960's and 1990's corrugated iron. The roof trusses remain intact in the eastern and western ends and were modified in the centre of the hall.
- Skylights, vents etc were added to the northern and southern roof planes to enable the transition from Army Hall to homes. The skylights do not detract from the historic significance of the building rather they support an updated aesthetic consistent with the building's change of use to residential homes.
- Throughout the hall, both internally and externally the features and woodwork of the hall were restored and preserved.
- Recently a lift well has been added to the northern roof to cater for mobility in 26 Gipps Street.

This adaptation to residential dwellings saw the building divided into 3 areas and a basement garage added under the building. The volume and space were preserved as were a majority of the buildings' structure and features. In order to adapt the building electric heating was included on the ground floor and interiors added that respected the buildings structure and volume. In addition to the timber structure the timber lined walls were maintained and preserved at each end of the hall.

The adaptation produced an excellent result, the building has been enjoyed for the last 25 years as residential homes. It has been included in print articles highlighting the sensitive conversion to residential homes. It is also featured on the local heritage societies 6 month walk program where people are able to access the interior and see the buildings many features.

The proposed addition of solar is next adaptive change in history of changes to the building and is consistent with the ongoing viability of heritage buildings in a world impacted by climate change and the clear transition to zero carbon renewable energy.

The urgency driven by climate change and energy (building electrification for transport and housing) sees the Richmond Drill Hall requiring its next adaptive change with the addition of solar panels to provide sustainable energy for heating, lighting, cooking, and transport (EV charging). These changes enhance the building as a vibrant and relevant historic building adapting to the demands of climate change and electrification. The economic impacts of not applying solar panels are also significant and onerous.

2 Property Construction and Electricity Usage Profile

As noted above, the drill hall is a timber framed structure built around exposed Oregon and steel structural beams. The external cladding of the property is weather board, with corrugated iron roofing. Inside, high 20 - 30' ceilings, timber walls and building ventilation created in 1891 all lead to housing that requires significant heating and cooling. The building walls have no insulation and any attempt to retrofit insulation would be both significantly expensive and destructive to the fabric of the structure.

2.1 Key features of 1860's Drill Halls

- Light weight timber structure, timber lining, ventilation, 1860 / 1890's timber and steel features
- Sense of volume and space.



Internal fabric maintained, steel fixings, timber lining, columns, purlins etc preserved in situ.

2.2 Electricity Profile

The design, construction and material composition of the building makes it inherently inefficient in energy usage. This is particularly due to the energy required to heat and cool the large open spaces in the building and exacerbated by building materials that are poor insulators.

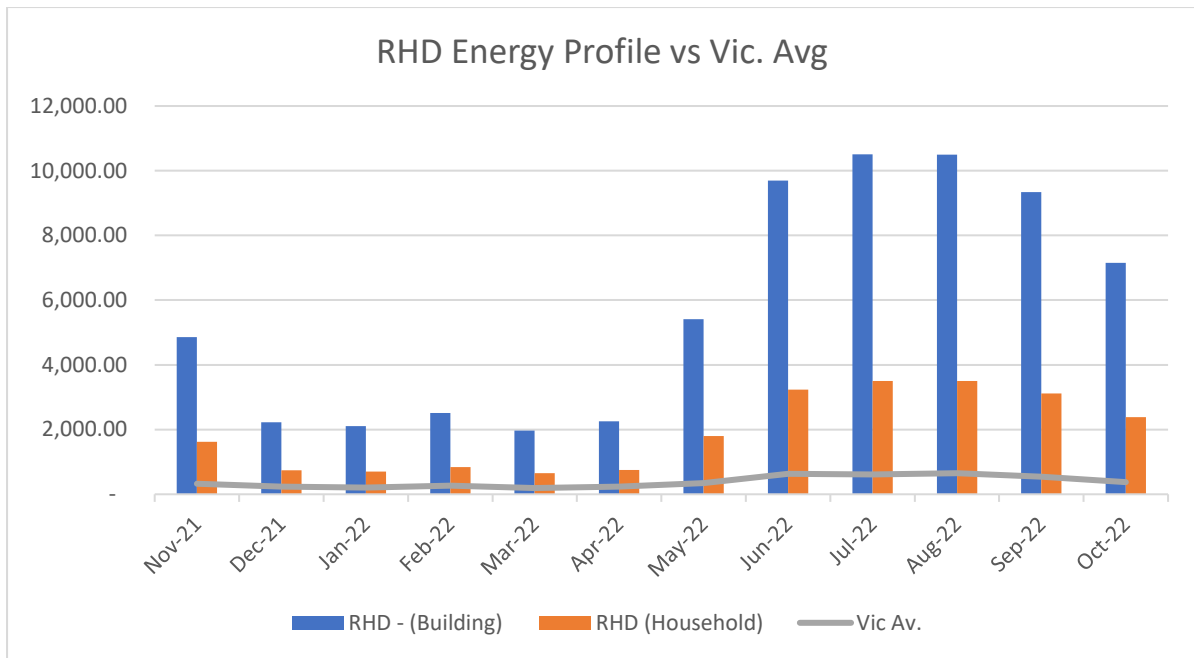
Average electricity usage for a property in Victoria is 4,615 kWh/annum.

Average annual usage for the Richmond Drill Hall Property is **68,524 kWh**, or an annual average of **22,842 kWh** per dwelling which is circa **5 times the Victoria average**. The environmental impact of these levels of conventional energy exceeds 80 tonnes per annum.

This demonstrates the significant economic impact of this project for property owners and environmental impact for the broader community.

The graph below shows the seasonal energy usage in the property. This seasonal pattern clearly demonstrates the energy usage required to heat the property over the winter months in Victoria² and reinforces the important nature of this installation.

² Vic Seasonal pattern sourced www.energymadeeasy.vic.gov.au/benchmark



This electricity usage generates approximately 85.5 Tonnes of CO₂³.

Indicative annual energy generation for the proposed Solar panel array is 59,018 kWh. Pending energy storage and usage patterns, this will cover up to 84% of the building’s electricity needs and reduce annual CO₂ generation by approximately 73 Tonnes per annum.

3 Solar Panel Specifications and Installation

The Richmond Drill Hall has been adapted to 3 residential homes. The residents are all passionate about the building and preserving the buildings fabric and see that the addition of solar panels is entirely consistent with the continued adaptation of a building in world undergoing a fundamental change, driven by climate change and the urgency to transition to electrification and zero carbon electricity.

The proposed panels are an additional aesthetic that enhance the buildings relevance in its environment and will enable the building to continue to be a home to each of the residents.

The owners engaged solar PV specialists, Going Solar, and architects Atcliffe Walder Atelier to review the site and advise on the most appropriate panel layout for the property given its available roof space, structural roofing considerations, property orientation and energy usage profile.

A critical element of the brief was to install 100% removable light weight solar panels on the roof of the Richmond Drill Hall. The addition of the solar panels are to have zero impact on the buildings fabric / structure elements.

In April 2022 Going Solar provided the owners with an optimal design⁴ for the installation of panels on each property. Systems as designed would provide the following outputs

Address	System Size	Est Annual Production
24 Gipps St	15.9kW	20,928kWh

³ P19. Victorian Greenhouse Gas Emissions Report 2018.

⁴ Specification Documents included as Appendix 1.

26 Gipps St	13.69kW	18,303kWh
28 Gipps St	14.8kW	19,787 kWh
Total	44.39kW	59,018kWh

Designs located panels dominantly on the north facing roof, with some panels on the east and west facing rooves. In the installation on 24 Gipps St there are a small number of panels recommended for installation on an attic bedroom roof.

In making this design recommendation it was noted,

- **Placement of Solar Panels on the Richmond Drill Hall.**

In Melbourne, the sun rises in the east and tracks in an arch to the north. As Melbourne is a long way south of the equator the effect of shading is amplified all year round, particularly in winter. The Richmond Drill Hall north roof is a large single plane with several chimney's, skylights and vents. The roof is pitched at approximately 40 degrees.

- **Gipps Street Roof: North Orientation:**

North facing solar panels produce the most electricity overall and have the greatest environmental benefit.

- **East and West Orientation:**

Panels facing east and west produce around 15% less electricity overall when compared with north facing solar panels.

- **South Orientation: (Rear)**

The angle on the roof shades the southern roof nearly entirely in winter and for more than 70% of the day in summer – all solar installers have strongly advised that there is minimal generation of electricity (5 – 15%) and consistent with this the southern roof is not suitable for the erection of solar systems. The only exception to this being the flat section of roof above 24 Gipps Street upper bedroom.

This is further exacerbated in the case of 26 Gipps St, where the south facing roof has been removed and replaced with a rooftop deck area. There is therefore no south facing roof for panels to be fitted to.

- Given the steep pitch of the roof the panels on the north facing roof would not be visible to pedestrians walking on the south side Gipps St footpath.



The predominant view of the hall is from the footpath. Street trees in Gipps Street limit views of the roof in its entirety.

- Given the tree covering at the front of the building panels on the north facing roof would be significantly obscured to pedestrians walking on the north side Gipps St footpath.



View from the northern footpath in Gipps Street

- The installation of solar panels will be carried out in a manner which prevents damage to the fabric of the building (roof, trusses and purlins) and be 100% reversible.
- The proposed solar system has the added benefit of providing additional protection to the roof.

4 Heritage Victoria Application Overview

In March 2022 the owners engaged in the HV pre application process. (No. 36282) and based on this meeting determined that an application was required for the project.

In June 2022 the owners prepared an application for the installation of solar panels to the premises and the installation of a lift in the 26 Gipps St residence (No. RA 86662). The application⁵ was prepared and lodged by Atcliffe Walder Atelier.

On 9th August Heritage Victoria provided an initial response⁶ to the application raising concerns about the placement of panels and requiring further information. Heritage Victoria also provided a response to the application from the City of Yarra⁷. The response from the City of Yarra supported the application pending;

'Remove the lowest two rows of solar panels on the northern plane of the roof and all solar panels on the north-eastern corner and western planes of the roof.'

Owners took note of the City of Yarra request and amended the design of the panel array as requested⁸. We provided this redesign to Heritage Victoria for approval.

On Tuesday 13th September Heritage Victoria staff met the owners on-site at the Richmond Rifle Hall for a review of the site. During the meeting Heritage Victoria staff advised the owners that they would not approve a permit to install panels on the north facing roof of the building. The reason provided for this statement was the aesthetic impact of the panels on the building.

On 7th October 22 the application was further amended⁹ to remove the installation of solar panels. The owners advised Heritage Victoria that they would pursue the application for panels as a separate item and waited for the draft Heritage Victoria solar panel guidelines to be released.

The amended application for works on 26 Gipps St Richmond has been approved and planning for works commencement is underway.

5 Heritage Act 2017 – Determination of Applications

The owners note that in determining an application Heritage Victoria are required by the Act to:

⁵ RA 86662 application details included as Appendix 2

⁶ Heritage Victoria RFI included as Appendix 3

⁷ City of Yarra response included as Appendix 4.

⁸ Amended design of panel array included as Appendix 5

⁹ Final HV amended application included as Appendix 6.

HERITAGE ACT 2017 - SECT 101

Determination of permit applications

Proposed Solar Panels on northern roof of Richmond Drill Hall.

Relevant Clauses:

In determining whether to approve an application for a permit, the [Executive Director](#) must consider the following—

(a) the extent to which the application, if approved, would affect the [cultural heritage](#) significance of the [registered place](#) or [registered object](#);

(b) the extent to which the application, if refused, would affect the reasonable or economic use of the [registered place](#) or [registered object](#);

[Cultural heritage](#) significance is defined in respect to: aesthetic, archaeological, architectural, cultural, historical, scientific or social significance;

In considering the verbal advice provided by heritage Victoria that panels are not supported on the north facing roof of the building due to the aesthetic impact of the panels the owners withdrew the solar panels to enable HV to support the urgently needed lift and associated building adaptations. The owners then worked to understand the level of local and legislative support for the panels and also the economic impacts of rejecting the application for the addition of the solar panels to the Richmond Drill Hall. The owners sought expert advice from the author of the Building's Conservation Management Plan (CMP) Liz Vines OAM and sustainable buildings consultant and former member of Heritage Victoria's Climate Advisory Panel, Jeffery Robinson.

5.1 Heritage Victoria's Solar Guide.

Heritage Victoria provided a copy of their draft solar panel guidelines used in the assessment of solar panels on heritage buildings in Victoria. The HV document basically reject all north facing roofs that are adjacent to a roadway. In the view of the Richmond Drill Hall owners the HV guide is inconsistent with Interstate and International guidelines and importantly inconsistent with existing local HV registered examples in the Yarra area.

The owners used the City of Sydney (NSW) Solar guideline¹⁰ to investigate a sensitive installation of solar panels to heritage buildings that protects heritage values.

This is an excellent document and provides clear guidance for the addition of solar systems to Heritage buildings. The document.

- Notes that in protecting the character of heritage conservation areas, roofscapes of most heritage conservation areas are very important to their character.
- The guidelines are designed to ensure that solar panels are not substantially disrupt the form and character of roofs that are visible from the street.
- As a general principle, installations on rear roofs are preferred, however installations on front roofs are permitted where there is no alternative for solar panels on the rear of a building.
- It notes that south facing pitched roofs (>15%) are not suitable for solar panels due to shading. (*The Richmond Drill Hall roof faces north and is pitched at 40% to the north and to the south from the ridgeline*)

Key Guidelines (NSW 2020 paper):

Primary street facing roofs are supported where the panels

- Match the existing pitch of the roof
- Do not require external structural alterations
- A minimum of 4 solar panels can fit on the front roof plane

¹⁰ [City Of Sydney Guidelines Appendix 7.](#)

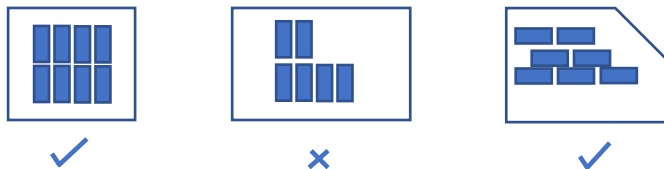
Definition: primary street facing roofs are roof planes (and parts of roof planes) that are visible from the primary street, have a slope of more than 15 degrees and are in front of the main ridge of the roof.

Installation requirements

On primary street facing roofs and parts of side boundary facing roofs that are visible from the primary street, the following criteria must be met,

- Alignment: mount solar panels with one edge parallel to the slope of the roof face (i.e. the panels must not be crooked to the slope of the roof face);
- Projection: solar panels do not extend over the edges of the roof plane and are not located within 300mm of the ridge(s) of the roof;
- Maximum height: solar panels are mounted at the same angle as the roof plane (not propped at a greater angle than the roof) and protrude no more than 250mm above the roof plane;
- Location: solar panels are not located on primary street facing verandah or dormer roofs;
- Visibility: only solar panels and associated fixings and clips are visible from adjacent streets and parks – this means conduit and other equipment like inverters do not protrude from under the panels and that mounting rails are trimmed to the extent of the panels and clips;
- Pattern: solar panels are arranged in orderly rows with consistent offsets from the roof edges (see Figure 2); and

Figure 2 Solar panel pattern



- Pattern: solar panels on roof planes containing parapets, dormer windows, skylights and chimneys must be arranged in a symmetrical pattern on the roof plane
- Encouraged to use solar panels that have a design that is visually recessive in colour and pattern, particularly where they are visible from the street. For example, there are now solar panels available that are entirely dark grey/ black with no prominent silver banding patterns.

The proposed installation of the solar panels on the Richmond Drill Hall complies with the NSW guideline principles.

5.2 Local Community Support for Installation

The owners have consulted the local community who could see the solar panels as a visual impact and note the following,

- The owners have spoken to all neighbours whose properties have any partial visibility of the panels and have received their written support for the installation of the panels to proceed. Copies of the letters of support are included in Appendix 8
- The owners have spoken to the Richmond & Burnley Historical Society Inc. This society represents a group of local residents strongly committed to the cultural significance of local historical buildings and their preservation. Their letter both provides strong support for the installation of the panels and affirms that they do not diminish the cultural significance of the building. A copy of this letter is included as Appendix 9

In engaging with the local community, the owners found 100% support for the proposed addition of the solar panels to the Drill Hall. 100% of the feedback confirmed that they did not believe the Solar Panels will have any impact on the cultural significance of the site.

5.3 Federal, State and Local government policy.

The Australian community has provided a clear mandate to both State and Federal Governments supporting the transition to clean and renewable energy.

Federal Government Policy

The Albanese Government has set the ambitious carbon reduction target of **Net-Zero Carbon Emissions by 2050**. Household Solar PV is a critical element for achieving this Target. The “**Australia Solar Rebate Scheme**” is designed to accelerate the uptake of rooftop PV technology. Aligned with this is a suite of policies to encourage the transition from ICE vehicles to Electric Vehicles in preparation for bi-directional EV charging as a source of storage for solar PV generated energy.

Victorian Government Policy

Victoria is aligned with the Federal Government target of Net-Zero emissions by 2050.

Victoria’s Climate Change Strategy is detailed in ‘The roadmap to net-zero emissions and a climate resilient Victoria by 2050’¹¹. It sets out ambitious, but achievable targets to reduce the state’s greenhouse gas emissions from 2005 levels by 28–33% by 2025 and 45–50% by 2030. The Strategy outlines actions that reduce emissions now and lay the foundations for future emissions reduction. These include;

- Commitment of 100% renewable electricity for government operations by 2025
- Support new investment and jobs in Victoria’s renewable energy supply chain
- \$1.3B Solar Homes program, Victorians to save \$13B on energy bills by 2030
- supporting local adaptation, embracing renewable energy.
- assisting communities to switch to renewables and adapt to the impacts of climate change.

The Victorian ‘Energy pledge’ includes the commitment that

‘778,500 households will receive rebates for solar panels, solar hot water systems and batteries’

This is a clear commitment to expand rooftop solar across all Victorian homes.

The owners have spoken to The Hon Ms Gabrielle De Vietri (Member for Richmond) regarding the installation of panels on the Richmond Drill Hall and have received a strong letter of support¹² for the installation to progress.

Yarra Council Policy

Yarra City Council is a ‘Green’ council, indicating the strong clean and renewable energy preference of the voting residents of Yarra City. It is therefore no surprise that the City of Yarra is also committed a transition to clean and renewable energy. Yarra Council encourages residents to join with others in the community to create a city powered by 100% renewables.

Yarra provide four ways for residents to act:

1. Switch to 100% renewable electricity,
2. Install rooftop solar,
3. Create an all-electric home, and
4. Use less energy

Yarra Council provide residents with guidelines for fitting rooftop solar to Heritage buildings and these are very similar to the guidance provided by the City of Sydney.

5.4 Heritage Victoria building in the local area.

Heritage Buildings are an important part of Melbourne and the high concentration of heritage buildings in t Melbourne and Yarra require a balanced approach to the preservation of heritage fabric in a world which is facing urgent need for action on climate change.

The Victorian Heritage Register is charged with ensuring all Heritage buildings on the register can continue to be preserved and adapted in line with Government policy on climate change and importantly ensure that a world’s best practice approach is being adopted.

¹¹ [Victoria's Climate Change Strategy](#)

¹² The Hon Ms Gabrielle De Vietri is included as Appendix 10

Local heritage listed sites in the area provide direct examples where solar panels have been installed on a rooftop in clear view of the surrounding streetscape without impact to the buildings cultural significance. Some examples of these sites include;

Fitzroy Football Pavilion. VHR: H0751



View from Edinburgh Gardens



View from St Georges Road



Brunswick Rd view



Aerial view. VHR: H0751



11 Stanton Street Abbotsford. VHR H0141

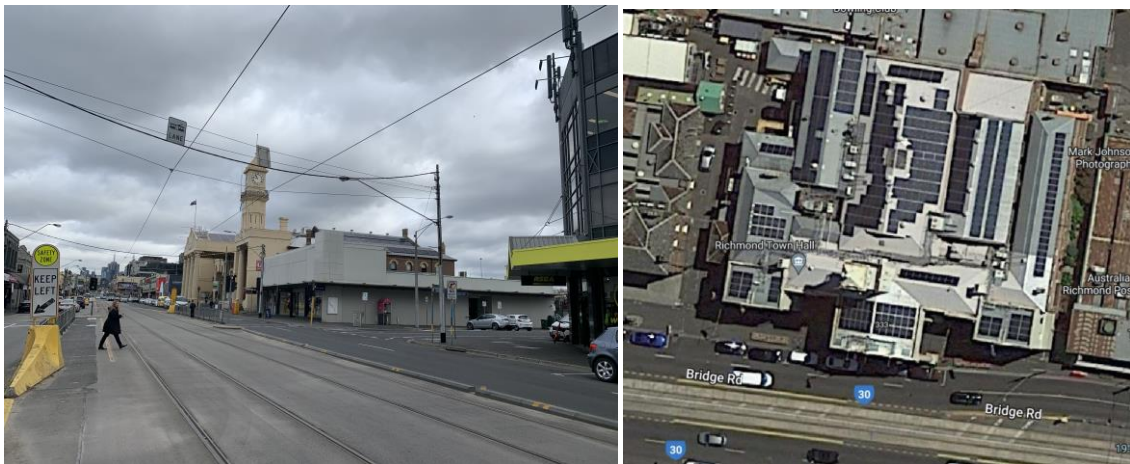
5.5 National Trust Local Buildings

The Richmond Town Hall is listed on the National trust (B2547) with a Statement of Significance noting that;

'The Richmond Town Hall, remodelled in 1934-36, is of State architectural significance as the largest and most comprehensive (in regard to major internal and external elements) of the small group of Egyptian Revival designs in the State..... The building is historically and culturally significant as a bold statement of Richmond 's progress, as the municipality's contribution to Victoria's centenary in 1934, and as the scene of many of the great battles over the split of the Australian Labour Party in the 1950s.'

The Richmond Town Hall as a major public facility and a site of significance.

The installation of solar panels on this site is extensive, including panels fitted to both the east facing and west facing rooves of the entry portico, and clearly visible from all surrounding streetscapes.



Richmond Town Hall, view from Bridge Road and aerial view.



View From Church Street, Town Hall and Community building

5.6 UNESCO World Heritage Sites

Vatican: UNESCO world heritage site

UNESCO is a leader in exploring and managing the impacts of climate change on World Heritage. In its 'Renewable Energy Transition and World Heritage'¹³ project it recognises that

'The transition to the utilization of renewable energy is an important mean to combat climate change. UNESCO World Heritage Centre wishes to take a proactive role in supporting States Parties and all stakeholders in this important step by conveying a message of solidarity and cooperation, but also by ensuring the protection and preservation of the Outstanding Universal Value of World Heritage properties. In line with the Agenda 2030 for Sustainable Development and contributing to the Sustainable Development Goals 7, 13 and 11.4, the World Heritage Centre believes that protection of the world cultural and natural heritage and renewable energy projects could go hand in hand if these projects are planned, evaluated and implemented in ways that assure the safeguarding of the OUV of World Heritage properties.'

The Vatican is listed as UNESCO world heritage site (*property is safeguarded by the law for the protection of the cultural heritage (no. 355, 25/07/2001)*) and provides an excellent example of the installation of a significant solar panel installation (3400 panels) aligned with bit the maintenance of its world heritage significant and the recognition that renewal energy is a critical tool in addressing the global climate crisis.

As noted above in Italy and throughout Europe laws have been passed to support the addition of solar panels to all heritage buildings based on the urgent need to transition to zero carbon energy.

¹³ [World Heritage Centre - Renewable Energy Transition and World Heritage \(unesco.org\)](https://www.unesco.org/en/renewable-energy-transition-and-world-heritage)

The **Vatican** shows off its green credentials with a large PV array – Photo: Bruno Gaiddon



They used inexpensive, mass-produced panels in a very simple way the integration is simple and elegant. The Vatican has 2400 panels which generate power to run the building.

Another example of a remarkable installation combining the old and the modern is the **Reichstag** in Berlin by Norman Foster where he put photovoltaics on the four sides of the building.



These examples are a further demonstration that the time for seeing solar panel installations as aesthetically damaging to cultural significance is well behind us. Now is the time for understanding the important role that Solar PV technology will play in enabling us to transition to a clean and sustainable future.

5.7 Advice that HV would likely not support the installation of solar panels to the RDH does not consider the impact of a permit refusal on the economic impact on the owners.

The Heritage Act 2017 call for Heritage Victoria to assess application both on the basis of Cultural Significance and

(b) the extent to which the application, if refused, would affect the reasonable or economic use of the [registered place](#) or [registered object](#);

In section 3 of the document, we detailed the electricity use profile of the building. We noted that given the building design, construction and materials it is a highly inefficient building, resulting in energy usage that is approximately 5 times higher than an average Victorian household.

In the 12-month period (Dec 21 to Nov 22) the combined electricity cost for the property was in excess of \$14,000 (\$4500 – 5000 per household) If, as forecast, the Victorian Default Offer (VDO) increases by at least a further 40% on July 1 23, then this will translate to an increased cost of \$6000 p.a. with a total estimated cost of supply in excess of \$20,000 p.a.

The installation of the proposed solar array will provide circa 84% of the property's energy requirements equating to an annual cost saving for the owners of \$16,800 (i.e. \$5,600 per household).

Refusal of a permit to allow solar panels to be fitted to the property would result in significant economic impacts to the use of the property. The owners and local residents, council, state member, historical society all support the panels and see no impact on the building's cultural significance. It is clear that on economic grounds, the status quo with regard to energy usage of the property is not sustainable in a residential environment and that the cost of electricity has a major impact on the buildings operation.

Appendix 1. Going Solar Design Documents



1. Solar Proposal for 24 Gipps Street



1. Solar Proposal for 28 Gipps Street



1. Solar Proposal for 26 Gipps Street

Appendix 2 –RA 86662 application details



2. RA 86662 - Application Details.

Appendix 3 – Heritage Victoria - RFI



3. Heritage Victoria RFI request under S

Appendix 4 – City of Yarra response to application RA 86662



4. City of Yarra Response to Heritag

Appendix 5 – Amended Solar panel design aligned to City of Yarra requirements.



5. Amended solar panel design.pdf

Appendix 6 -Amended HV application removing panels.



6. AWA2113 Heritage Vic Permit /

Appendix 7 – City of Sydney Solar panel guideline for heritage buildings.



7. City of Sydney - Solar Panel Exempt (

Appendix 8 – Neighbours letters of support for panel installation.

Letter of Support:

34 Docker Street

Richmond, 3121

Re: Proposed Solar Panels for the north roof on the Richmond Drill Hall

To whom it may concern,

As residence local to the Richmond Drill Hall we, the undersigned, support the addition of solar panels to the northern roof of the Richmond Drill Hall. The panels do not change the cultural heritage significance of the building, nor do they create a visual impact to the Drill Hall Building.

Federal, State and Local Government policy is based on the urgent need to decarbonize energy. Australia is leading the world in adoption of solar panels on residential and commercial buildings.

We support the owners who are committed to preserving the hall's historic features. We understand and support the owner's commitment to a transition from coal-based energy to zero carbon energy.

We join the local heritage society, the local State Government Member and Council in support the addition of panels and do not believe the panels have any impact on the heritage value of the building.

We confirm the addition of the solar panels will not have any visual impact to the surrounding neighbourhood.

Yours Sincerely



34-36 DOCKER ST
RICHMOND, 3121

Letter of Support:

37 Docker Street

Richmond, 3121

Re: Proposed Solar Panels for the north roof on the Richmond Drill Hall

To whom it may concern,

As residence local to the Richmond Drill Hall we, the undersigned, support the addition of solar panels to the northern roof of the Richmond Drill Hall. The panels do not change the cultural heritage significance of the building, nor do they create a visual impact to the Drill Hall Building.

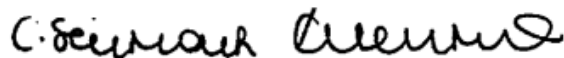
Federal, State and Local Government policy is based on the urgent need to decarbonize energy. Australia is leading the world in adoption of solar panels on residential and commercial buildings.

We support the owners who are committed to preserving the hall's historic features. We understand and support the owner's commitment to a transition from coal-based energy to zero carbon energy.

We join the local heritage society, the local State Government Member and Council in support the addition of panels and do not believe the panels have any impact on the heritage value of the building.

We confirm the addition of the solar panels will not have any visual impact to the surrounding neighbourhood.

Yours Sincerely

A handwritten signature in black ink, appearing to read "C. Seaman". The signature is written in a cursive, slightly slanted style.

Letter of Support:

38 Docker Street
Richmond, 3121

Re: Proposed Solar Panels for the north roof on the Richmond Drill Hall

To whom it may concern,

As residence local to the Richmond Drill Hall we, the undersigned, support the addition of solar panels to the northern roof of the Richmond Drill Hall. The panels do not change the cultural heritage significance of the building, nor do they create a visual impact to the Drill Hall Building.

Federal, State and Local Government policy is based on the urgent need to decarbonize energy. Australia is leading the world in adoption of solar panels on residential and commercial buildings.

We support the owners who are committed to preserving the hall's historic features. We understand and support the owner's commitment to a transition from coal-based energy to zero carbon energy.

We join the local heritage society, the local State Government Member and Council in support the addition of panels and do not believe the panels have any impact on the heritage value of the building.

We confirm the addition of the solar panels will not have any visual impact to the surrounding neighbourhood.

Yours Sincerely

Kerryn GABARA / SALLY CLARKE

Letter of Support:

40 Docker Street
Richmond, 3121

Re: Proposed Solar Panels for the north roof on the Richmond Drill Hall

To whom it may concern,

As residence local to the Richmond Drill Hall we, the undersigned, support the addition of solar panels to the northern roof of the Richmond Drill Hall. The panels do not change the cultural heritage significance of the building, nor do they create a visual impact to the Drill Hall Building.

Federal, State and Local Government policy is based on the urgent need to decarbonize energy. Australia is leading the world in adoption of solar panels on residential and commercial buildings.

We support the owners who are committed to preserving the hall's historic features, it is these features which preserve the Hall's cultural heritage not the views of the corrugated metal roof installed in the 1960's. We understand and support the owner's commitment to a transition from coal-based energy to zero carbon energy.

We join the local heritage society, the local State Government Member and Council in support the addition of panels and do not believe the panels have any impact on the heritage value of the building.

We confirm the addition of the solar panels will not have any visual impact to the surrounding neighbourhood.

Yours Sincerely

A handwritten signature in black ink, consisting of a large, stylized initial 'S' followed by a long, sweeping horizontal line that tapers to the right.

Letter of Support:

41 Docker Street
Richmond, 3121

Re: Proposed Solar Panels for the north roof on the Richmond Drill Hall

To whom it may concern,

As residence local to the Richmond Drill Hall we, the undersigned, support the addition of solar panels to the northern roof of the Richmond Drill Hall. The panels do not change the cultural heritage significance of the building, nor do they create a visual impact to the Drill Hall Building.


Federal, State and Local Government policy is based on the urgent need to decarbonize energy. Australia is leading the world in adoption of solar panels on residential and commercial buildings.

We support the owners who are committed to preserving the hall's historic features. We understand and support the owner's commitment to a transition from coal-based energy to zero carbon energy.

We join the local heritage society, the local State Government Member and Council in support the addition of panels and do not believe the panels have any impact on the heritage value of the building.

We confirm the addition of the solar panels will not have any visual impact to the surrounding neighbourhood.

Yours Sincerely



STEPHEN. KOKLAS

Letter of Support

43 Gipps Street
RICHMOND 3121

29 May 2023

Re: Proposed Solar Panels for the north roof of the Richmond Drill Hall

To whom it may concern,

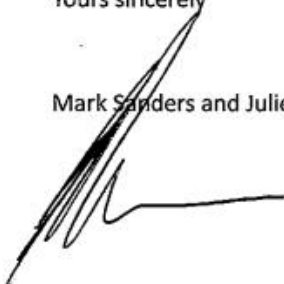
As residents local to the Richmond Drill Hall we, the undersigned, support the addition of solar panels to the northern roof of the Richmond Drill Hall. The panels would not seem to change the cultural heritage or significance of the building. The visual impact would seem to be small. Solar panels are part of residential and commercial buildings.

We support the owners, who are committed to preserving the Hall's historic features. We understand and support the owners' commitment to the transition to zero carbon energy.

We join the local heritage society, the local member and council to support the addition of panels and do not believe the panels have any impact on the heritage value of the building nor have any visual impact on the surrounding neighbourhood.

Yours sincerely

Mark Sanders and Julie Maguire



Letter of Support:

45 Gipps Street
Richmond, 3121

Re: Proposed Solar Panels for the north roof on the Richmond Drill Hall

To whom it may concern,

As residence local to the Richmond Drill Hall we, the undersigned, support the addition of solar panels to the northern roof of the Richmond Drill Hall. The panels do not change the cultural heritage significance of the building, nor do they create a visual impact to the Drill Hall Building.

Federal, State and Local Government policy is based on the urgent need to decarbonize energy. Australia is leading the world in adoption of solar panels on residential and commercial buildings.

We support the owners who are committed to preserving the hall's historic features. We understand and support the owner's commitment to a transition from coal-based energy to zero carbon energy.

We join the local heritage society, the local State Government Member and Council in support the addition of panels and do not believe the panels have any impact on the heritage value of the building.

We confirm the addition of the solar panels will not have any visual impact to the surrounding neighbourhood.

Yours Sincerely



RICHARD GORDON
45 GIPPS STREET
RICHMOND

Letter of Support:

3 Dickmann Street

Richmond, 3121

Re: Proposed Solar Panels for the north roof on the Richmond Drill Hall

To whom it may concern,

As residence local to the Richmond Drill Hall we, the undersigned, support the addition of solar panels to the northern roof of the Richmond Drill Hall. The panels do not change the cultural heritage significance of the building, nor do they create a visual impact to the Drill Hall Building.

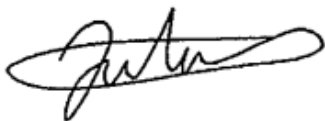
Federal, State and Local Government policy is based on the urgent need to decarbonize energy. Australia is leading the world in adoption of solar panels on residential and commercial buildings.

We support the owners who are committed to preserving the hall's historic features. We understand and support the owner's commitment to a transition from coal-based energy to zero carbon energy.

We join the local heritage society, the local State Government Member and Council in support the addition of panels and do not believe the panels have any impact on the heritage value of the building.

We confirm the addition of the solar panels will not have any visual impact to the surrounding neighbourhood.

Yours Sincerely



Juliette Donaldson

Letter of Support:

4 Dickmann Street
Richmond, 3121

Re: Proposed Solar Panels for the north roof on the Richmond Drill Hall

To whom it may concern,

As residence local to the Richmond Drill Hall we, the undersigned, support the addition of solar panels to the northern roof of the Richmond Drill Hall. The panels do not change the cultural heritage significance of the building, nor do they create a visual impact to the Drill Hall Building.


Federal, State and Local Government policy is based on the urgent need to decarbonize energy. Australia is leading the world in adoption of solar panels on residential and commercial buildings.

We support the owners who are committed to preserving the hall's historic features. We understand and support the owner's commitment to a transition from coal-based energy to zero carbon energy.

We join the local heritage society, the local State Government Member and Council in support the addition of panels and do not believe the panels have any impact on the heritage value of the building.

We confirm the addition of the solar panels will not have any visual impact to the surrounding neighbourhood.

Yours Sincerely


RHYS GOUSS

Letter of Support:

5 Dickmann Street
Richmond, 3121

Re: Proposed Solar Panels for the north roof on the Richmond Drill Hall

To whom it may concern,

As residence local to the Richmond Drill Hall we, the undersigned, support the addition of solar panels to the northern roof of the Richmond Drill Hall. The panels do not change the cultural heritage significance of the building, nor do they create a visual impact to the Drill Hall Building.

Federal, State and Local Government policy is based on the urgent need to decarbonize energy. Australia is leading the world in adoption of solar panels on residential and commercial buildings.

We support the owners who are committed to preserving the hall's historic features. We understand and support the owner's commitment to a transition from coal-based energy to zero carbon energy.

We join the local heritage society, the local State Government Member and Council in support the addition of panels and do not believe the panels have any impact on the heritage value of the building.

We confirm the addition of the solar panels will not have any visual impact to the surrounding neighbourhood.

Yours Sincerely



Margaret Lane
5 Dickmann St
Richmond VIC 3121

Letter of Support:

7 Dickmann Street
Richmond, 3121

Re: Proposed Solar Panels for the north roof on the Richmond Drill Hall

To whom it may concern,

As residence local to the Richmond Drill Hall we, the undersigned, support the addition of solar panels to the northern roof of the Richmond Drill Hall. The panels do not change the cultural heritage significance of the building, nor do they create a visual impact to the Drill Hall Building.

Federal, State and Local Government policy is based on the urgent need to decarbonize energy. Australia is leading the world in adoption of solar panels on residential and commercial buildings.

We support the owners who are committed to preserving the hall's historic features. We understand and support the owner's commitment to a transition from coal-based energy to zero carbon energy.

We join the local heritage society, the local State Government Member and Council in support the addition of panels and do not believe the panels have any impact on the heritage value of the building.

We confirm the addition of the solar panels will not have any visual impact to the surrounding neighbourhood.

Yours Sincerely



MARSHALL KEWATTOR



Richmond & Burnley Historical Society Inc.

Lower Level Richmond Library, 415 Church Street, Richmond, Victoria, 3121.
Phone: 03 94271800 Mobile: 0425 765 342
ABN: 55 900 596 374 Reg. No: A 000719 6b

RE: Drill Hall Gipps Street – installation of Solar Panels on north facing roof

To whom it may concern,

We have over many years assisted the owners of the apartments in the Drill Hall, Gipps Street Richmond, with information regarding the history and construction of the property. The owners meticulously paid attention to the detail, the heritage listing and approached the restoration and maintenance to ensure the integrity of the building and heritage considerations.

We have reviewed the proposed installation of solar panels on the north facing roof of the building. The extensive consultation and investigation by the owners of the property to consider options to install the panels in a way as to not detract from the heritage of the building has come up with an acceptable option.

We are aware of many other heritage listed buildings which have installed solar panels, and these do not take away from the visual integrity of the property. This includes the Westgarth Theatre in High Street Thornbury and the Fitzroy Pavilion in the Edenborough Gardens. Where their entire north facing roof is clad with solar panels – in both cases whilst the panels can be seen they have no impact on the building's appearance or cultural significance.

We conduct regular heritage walks along Gipps Street and note the history and importance of the Drill Hall. While walking along the Drill Hall side of the street, you cannot see the roof, and when looking from across the road, the large number of trees and their canopy obscures the view of the roof from ground level.

The drive to be energy efficient and encouraging more people to install solar panels is part of the current initiatives for reducing the impact on climate change.

We support the approach taken by the owners of the Drill Hall to install Solar Panels on their north facing roof. The installation of these panels is being done with consideration of the overall building structure and would form part of the normal fabric of many buildings that we are seeing across the suburbs.

Kind regards,

David Langdon
President

Friday, 4 November 2022

Appendix 10 - The Hon Ms Gabrielle De Vietri letter of support for rooftop installation



GABRIELLE DE VIETRI MP
State Member for Richmond

188-196 Gertrude Street
Fitzroy, Victoria, 3065

Electorate Office Phone: 03 9415 8901
Email: gabrielle.devietri@parliament.vic.gov.au

17 April 2023

Heritage Victoria
1 Spring St,
Melbourne
Victoria, 3000

Re: Richmond Drill Hall application for installation of Solar Panels on north facing roof

To whom it may concern,

I am pleased to provide this letter of support for the owners and residents of Richmond Drill Hall with their application to Heritage Victoria. The property owners of the Richmond Drill Hall wish to fit solar panels to the north-facing roof of the building, 24 to 28 Gipps St Richmond, which will significantly reduce their energy consumption.

The owners are committed to preserving the hall's historic features. They equally support the commitment to the transition to zero carbon energy.

The solar panels will improve resident comfort during extreme weather conditions, not only contributing to a zero-carbon future, but mitigating the impact of inevitable climate events. Due to the design, construction and material composition of the building it requires a great deal of energy to heat, cool and maintain. The average annual usage for the Richmond Drill Hall is 5 times the Victorian average. Solar panels would form an important part of addressing the Drill Hall's large carbon footprint.

While I understand there are considerations in the Victorian and Yarra Planning Scheme that require consideration of the heritage status of a building when making energy efficiency measure, in the midst of a climate crisis, I urge Heritage Victoria to support the proposed improvements, which will increase Richmond Drill Hall's environmental footprint and comfort levels of its residents, with minimal material impact on the heritage value of the building.

Please do not hesitate to contact me regarding my support for Richmond Drill Hall's application.

Sincerely,

A handwritten signature in blue ink, appearing to read 'G. De Vietri'.

END

Attachment 2

HERITAGE ACT 2017 - SECT 101

Determination of permit applications

Proposed Solar Panels on northern roof of Richmond Drill Hall.

Relevant Clauses:

The Richmond Drill constructed in the 1860's has continuously evolved over its 160-year history. In 1990's the building was sold as it has no use as an ongoing defence building.

The building was subdivided and converted to residential use.

No Change: The solar panels are 100% removable and require no change to the building.

With the Richmond Drill Hall, the building was adapted to residential housing in 1997/98. The original orderly room has undergone ongoing adaption to ensure it continues as a viable building that is both preserved and valued. The halls' function has changed:

- its beginning in 1864 as an orderly room for local meeting to support local community order
- In 1891 the building was extended to the boundaries in Docker, Gipps and Dickmann Streets with a residence included on the east end.
- The building was transferred to Commonwealth ownership after Federation in 1901 where it was used as a recruiting centre for WW1 and WW2.
- In the 1950's and 60's it operated as a cooking training facility for the Army reserve. Its current roof being added in the 1960's
- From the late 1970's the building was left vacant and fell into disrepair. With no heating and maintenance, the building sat ideal until the 1990's when it was sold as surplus to needs army needs. As owners we commissioned Liz Vines to develop a conservation plan for the property.
- In 1996 we bought the site and set about adapting it to its new use, residential housing. This included the full replacement of the corrugated roof in the centre of the Hall. The corrugated iron is a mixture of 1960's and 1990's corrugated iron. The roof trusses remain intact in the eastern and western ends and were modified in the centre of the hall.
- Skylights, vents etc were added to the northern and southern roof planes to enable the transition from Army Hall to homes. The skylights do not detract from the historic significance of the building rather they support an updated aesthetic consistent with the building's change of use to residential homes.
- Recently a lift shaft was added to the north roof of 26 Gipps Street for mobility.
- Throughout the hall, both internally and externally the features and woodwork of the hall were restored and preserved.

This adaptation to residential dwellings saw the building divided into 3 areas and a basement garage added under the building. The volume and space were preserved as were a majority of the buildings' structure and features. In order to adapt the building electric heating was included on the ground floor and interiors added that respected the buildings' structure and volume. In addition to the timber structure the timber lined walls were maintained and preserved at each end of the hall.

The adaptation produced an excellent result, the building has been enjoyed for the last 20 years as residential homes. It has been included in print articles highlighting the sensitive conversion to residential homes. It is also featured on the local heritage societies 6 month walk program where people are able to access the interior and see the buildings many features.

High 20 -30' ceilings, timber walls and building ventilation created in 1891 all lead to housing that requires significant heating and cooling.

In 1990's whilst the discussion on Climate Change was emerging, electricity was a cheap and with the building required considerable heating and lighting to operate the cost and the origin of the electricity were not the issues they have become. As we head into a new era of climate change and low carbon energy it is becoming increasingly clear that building and transport electrification is forcing a new approach and the need for adaptation.

In 2021 the first electric car was purchased and each of the apartments propose to add electric cars when solar systems provide energy for charging.

To manage the growing electricity required to heat and power each home it is considered critical to add a solar system to meet the needs of heating and transportation of the occupants.

- (a) to demolish or remove a [building](#) or structure on the [place](#); or

The solar panels are 100% removable and require no change to the building. There will be no demolition required to install the solar panels.

- (b) to carry out any [works](#) on, over or under the [place](#); or

The solar panels will sit above the roof and match the existing grade of the roof profile.

- (d) to subdivide or consolidate land comprising the place, including any building or airspace;

No Change: The solar panels do not require any change to the subdivision of the property.

The following is a commentary on the definition elements listed under “Cultural Significance”

Aesthetic,

When viewed from the footpath adjacent to the building there will be no view of the solar panels.

When viewed from the footpath on the north side of Gipps Street the view of the north roof is screened by the existing street trees.

The solar panels are not attempting to be seen as part of the original building, as with all other installations of solar panels they are part of good design in the 21st century.

The proposed panels are an additional aesthetic that enhance the buildings relevance in its environment and will enable the building to continue to be a home to each of the residents.

The panels do not form part of the buildings structure and will be changed in future as technology advances and new forms of sustainable energy production are developed.

Key features of 1860’s Drill Halls

- Light weight timber structure, timber lining, ventilation, 1860 / 1890’s timber and steel features
- Sense of volume and space.

Archaeological,

No Change

The solar panels will have no impact, nor will they change any of the building’s archaeological features or history.

Architectural,

No Change

The solar panels will have no impact, nor will they change any of the building’s architectural features.

Cultural, historical,

No Change

The solar panels will have no impact, nor will they change any of the building’s cultural history.

The initial use was as a public building to allow the community to assemble and provide protection for the wider community as the British soldiers transitioned out of Victoria.

The building was then transferred on federation to the Australian Defence Forces and used during both WW’s for recruitment.

In the 1950’s the building was used for cooking training by the army. This ceased in the 1960’s as the building became surplus to army needs as it no longer met the changing standards required in army buildings.

The building was used infrequently from the 1960’s and sold in 1996 to residential use.

The subdivision and conversion of the building was completed in 1998.