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studio**

## **Heritage Impact Statement**

Royal Exhibition Building and Carlton Gardens (H1501)

9 Nicholson Street, Carlton

Prepared for



**Date:** 11/07/2025

**Revision:** B

Revision	Date	Comments
A	09/07/2025	Draft
B	11/07/2025	Final

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# 1. Project Overview

## 1.1 Introduction

This Heritage Impact Statement (HIS) has been prepared on behalf of Museums Victoria to support a permit application for the Now or Never event proposed to be held at the Royal Exhibition Building (REB) over the period 21-24 August 2025.

The Royal Exhibition Building and Carlton Gardens is included on the Victorian Heritage Register as H1501. The place was inscribed on the UNESCO World Heritage List on 1 July 2004.

Now or Never is a major arts and culture event presented by the City of Melbourne. It showcases art, ideas, sound, technology, and future thinking through a carefully curated program of events.

It is proposed to hold an installation, MATRIA, by Barcelona-based collective Penique Productions. Curated in partnership with Museums Victoria, MATRIA also plays host to three night-time music and performance events.

### 1.1.1 Background

Now or Never events have been held at the REB for the past two years. Both 2023 and 2024 Now or Never events at the REB were 'dance party' style events. In response to advice from Heritage Victoria that such events were high risk and not compatible with the State and World Heritage significance of the REB, these events have been moved to Melbourne Town Hall for this year's Now or Never, while the REB will host an art installation with ambient music and performance events that has previously been held in several historic buildings around the world.

The 2023 and 2024 Now or Never events at REB received a permit from Heritage Victoria on the basis of the readings of a single vibration monitor located on the cornice ledge of the north eastern corner of the dome transept and calibrated to the maximum peak particle velocity limit based on the centre of the arch below the eastern lunette mural.

The live event readings on this monitor have confirmed that the event peaks over the 2mm per second limit on a number of isolated occasions. The reporting on this event has been based on 5 minute intervals, therefore averaging out the data and reducing the representation of the number of exceedance events; whereas the data provided under the current building monitoring programme (BPM) is logged at 1 minute intervals and provides a more accurate representation of exceedance events and resultant impacts on the building.

BMP results from the 2024 Now or Never event showed exceedances over the peak vibration limit. However, these exceedances have not impacted the fragile nature of the building, and the aging condition of the building is not related to past Now or Never events. Deterioration of the building's fabric is more to do with the aging nature of the building and its long-term water ingress issues.

The 2024 Now or Never permit (P39738) expires on 19 August 2025 and there are still several outstanding conditions that need to be met, namely:

*12. Within 20 business days of completion of the music events at condition 4, a condition report by the heritage conservation consultant identified in condition 5 must be submitted to the Executive Director, Heritage Victoria. Once approved the condition report will be endorsed and will then form part of the permit. The conditions report must include but not be limited to:*

*a) Identification of any new losses of plaster or paint caused by vibrations at the events at condition 4. The assessment of new loss should be based on the 'REB Interior Condition Report', Conservation Studio (dated 20 June 2022)*

*b) Recommendations on any immediate make safe actions required to avoid further loss or damage.*

*13. Recommendations in the conditions report endorsed by the Executive Director, Heritage Victoria under condition 12 must be implemented within 45 business days of endorsement.*

*14. Within 3 months of completion of the events identified at condition 4, (by Monday 25 November 2024) a 'Temporary Events Management Plan' must be prepared to the satisfaction of the Executive Director, Heritage Victoria.*

*15. Within 3 months of the approval of the 'Temporary Events Management Plan' required at condition 14, the owner must apply for a s.92(3) permit application to include the Temporary Events Management Plan in the place specific permit exemptions.*

The condition report prepared by Conservation Studio in response to Condition 12 is submitted together with this permit application as supporting documentation. It is understood that Museums Victoria are working on fulfilling the remaining above outstanding conditions.

### **1.1.2 Documents for approval**

The following documents are submitted with this HIS as part of the application for a permit to host the Now or Never event:

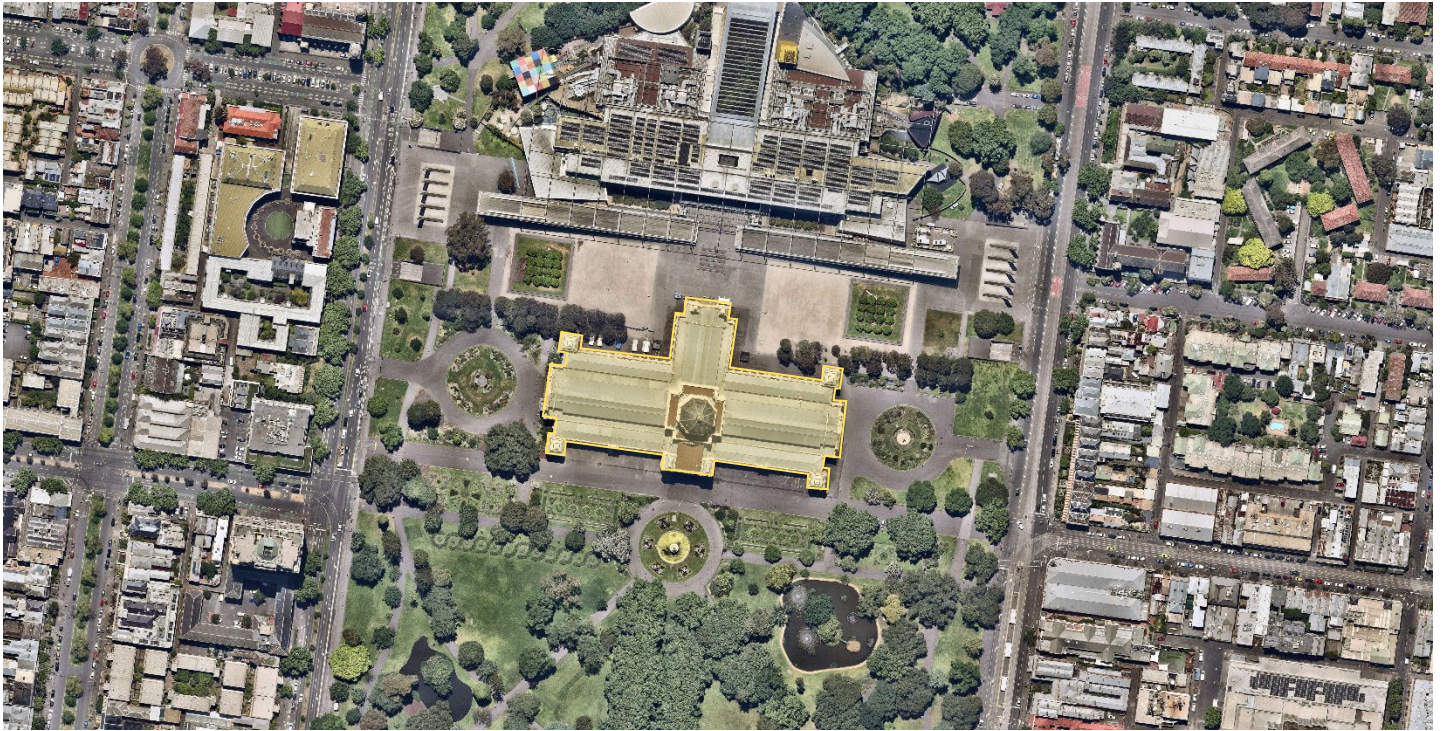
- 04-001-E – prepared by Additive and dated 10 July 2025
- 04-002-E – prepared by Additive and dated 10 July 2025
- 04-003-E – prepared by Additive and dated 10 July 2025
- 04-004-E – prepared by Additive and dated 10 July 2025
- 04-005-E – prepared by Additive and dated 10 July 2025
- 04-001-E – prepared by Additive and dated 10 July 2025
- Penique Productions Technical Details – outlinign materials, fans and general arrangments of the works. Please note that materials data sheets for testing are in Spanish.
- Product Data Sheet Code: 1000198-K, Name: PYROSTAB ET 198.
- Alkathene LDH215 Technical Data Sheet

### **1.1.3 Supporting documentation**

The following documents are submitted as part of this application for information and do not form part of the application for a permit:

- Response to Permit Condition 12, Royal Exhibition Building H1501, 9 Nicholson Street, Carlton, dated 16 September 2024.
- Structural Considerations – Inflatable Installation at the Royal Exhibition Building prepared by BG&E and dayed 11 July 2025.





**Figure 1**  
Aerial view – Royal Exhibition Building (yellow).

## 1.2 The site

The site comprises several buildings, tennis courts, established nineteenth century gardens, remnant fencing, sculptures and other landscape elements, along with the REB and Melbourne Museum.

The REB and Melbourne Museum are located within the area of Carlton Gardens which is known as the ‘Exhibition and Museum Purposes Reserve’ (generally referred to as the ‘Exhibition Reserve’) and includes the East and West Forecourts and the Southern Drive of the REB along with the Museum Plaza, located on the north side of the REB and abutting the Museum. The Plaza was constructed over the underground carpark as part of the broader Museum development in the late 1990s.

The Plaza and the Museum are not considered to be part of the heritage fabric of the place. Whilst the Plaza interfaces with the REB, it forms part of the public space surrounding the northern transept of the REB and is frequently activated for public events.

For the purposes of this HIS, the site is limited to the interior of the Royal Exhibition Building.

## 1.3 Condition

### 1.3.1 Interior

Over the past five years the interior finishes (plaster and paint) of the Royal Exhibition Building (REB) have begun to show signs of fragility and wear, with extensive paint loss over the northeastern side of the dome transept. The localised loss of plaster mouldings and lath plaster ceiling has become more prevalent throughout the building. Since 2020, urgent works have been undertaken to stabilise some ceilings and plaster mouldings. Due to extensive cracking and popping-off of the plaster in the northern lunette, stabilisation works were undertaken to install facings over the lifting paint finishes with a foam boards and metal armature to secure the area of plaster that had popped off.

Since 2021 regular six monthly assessments of the interior plasterwork and murals has been undertaken along with a three-monthly programme of removal of lifted paint finishes and application of a facing along the outer edge of the peeled paint to suture the frayed edge of the paint layers in an attempt to minimise the lifting and curling. Reports outlining the condition, changes and recommend action are issued following these works.

The substrate has been found to be drying out after a long period of water ingress issues that appear to have been resolved following the 2018-2019 Protection and Promotion Works. The drying out is impacting the painted layers on the northeastern side of the dome transept and causing the extensive peeling. It is noted that other areas of paint have

begun to crack and lift from the substrate. Given it is 30 years since the decorative plasterwork was re-painted, it appears that the paint system along with underlying systems are reaching the end of their product life.

The area in which the temporary installation is proposed – the eastern nave – remains in good condition and is a part of the building where the paint finishes are stable. The timber columns are regularly repainted on an as needs basis to manage day-to-day wear and tear.

### 1.3.2 Protection works

#### ***Lunette murals***

Protection works approved by the Permit P39577 have been installed over the east, south and west lunette murals to assist in holding areas of popped plasterwork and failing paint. The protection works comprise facing applied over the areas of lifting, lost or failing paint, which is covered by a rigid board held in place by a series of aluminium brackets fixed into the architraves top and bottom of the murals.

This is a temporary solution to make safe the murals and prevent the loss of further plaster of painted finishes until investigations into the cause of the extensive cracking, popping off the plaster and other impacts on the murals are completed.

#### ***Moulded plaster cornices***

The plasterwork, particularly the moulded plaster cornices and impost of the dome drum windows are in poor condition. The moulded plaster at the springing point of the windows (impost) in the dome drum, has been the location that several large sections of the moulded plaster have been removed.

The plaster cornices remain deleterious and highly friable, unfortunately, the plaster finish is so impacted by efflorescence and past water ingress issues that have affected the slate course within the cornices and resulted in highly friable and powdering plaster and has resulted in the loss of several areas of detached plaster (mostly July 2023). The initial use of the pinning repair methodology has not been successful in this instance due to the fragility of the plasterworks and its lack of integrity means it is unable to be mechanically fixed. As such, the plasterwork has been netted as per permit exemption P40685 to prevent the continued detachment of plaster.

### 1.3.1 Vibration monitoring

In June and July of 2024, fifteen vibration monitors were installed in various locations within the REB along with seven external weather stations and seventeen humidity monitors to gather data and assess impacts of weather patterns and events on the fabric of the REB.

#### ***Parameters***

Without applicable Australian Standards for understanding the effects of vibration in existing buildings, and particularly in historic buildings such as the REB that contain material in poor condition, project parameters have been established primarily using two applicable international standards:

- Swiss Standard SN 640 312: 1992 Edition 2013-12 (translated to English by the project team).
- German Standard DIN 4150-3 – Vibration in buildings – Part 3: Effects on structures (English translation of DIN 4150-3:2016-12).

In addition to the two aforementioned international standards, the project team has also referred to *Vibration Limits for Historic Buildings and Art Collections* by Arne P. Johnson and W. Robert Hannen in 2015. This article was published in the APT Bulletin Journal of Preservation Technology 46:2-3 2025, and discusses four different international standards for understanding the effects of vibrations in buildings (United States, British, Swiss and German).

The article by Johnson and Hannen concludes that vibration limits for historic buildings should be established on a case-by-case basis using a rational procedure and should consider human perception thresholds, ambient levels in buildings, and damage levels documented in other research studies.

The key project specific considerations for establishing parameters for the building monitoring project are:

1. the condition of the interior of the building, being poor; and
2. the painted murals which we have considered as artworks in a museum sense, rather than as building materials.

Therefore, the project parameters have been established conservatively, as a balance of the more applicable elements of the Swiss Standard SN 640 312 and the German Standard DIN 4150 and as an interpretation of provisions of each standard as they might apply to the unique conditions of the REB which contains painted murals (artworks) and elements of the building that are in poor condition.



The project parameter, 2mm per second peak particle velocity (PPV) vibration limit for the investigation of exceedances has been established as a more conservative value than those outlined by the Swiss and German Standards as they both pertain to “buildings” and do not consider painted murals which are a project specific factor at the REB. As such, the threshold of 2mm/s PPV is based on mitigating levels of vibration that might result in cosmetic damage of paint finishes – not necessarily reaching the levels that might result in cracking of the plaster itself (the mural substrate) which is generally the entry point for damage assessment in both the Swiss and German Standards as they are focused on building materials rather than artworks which have been applied to building materials.

## Results

### Q1

Q1 of the building monitoring programme (BMP) spanned 29 July 2024 – 9 September 2024 during which a large number of events of a varying nature occurred. These ranged from bump ins, events, Now or Never and significance wind events, along with the use of large machinery (boom lift) on several occasions.

There were over 15,000 exceedances recorded over the 15 vibration monitors over this reporting cycle. The majority of these exceedances relate to the Now or Never event accounting for over 9550 exceedances and the two vibration monitors located in the floor, which are registering the floor movement of the day-to-day bump-in and events and account for over 6000 exceedances (excluding the Now or Never event).

The project parameter of 2mm/s PPV as the threshold (vibration limit) for the investigation of exceedances has resulted in a high amount of substantial exceedances being identified in some monitor locations, such as the timber sub-floor structure of the REB where monitors VM12 and VM14 are installed, that upon further investigation appear unlikely to cause damage.

### Q2

Q2 of the BMP commencing in September 2024 and concluding on 1 January 2025 had a large number of long-running events with minimal bump-in and bump-out, including the University of Melbourne graduation and exams. Beyond this, the events mainly comprised markets and fairs and the overall events calendar included higher degrees of vacancy from 19 December – 1 January and 14 – 30 September.

Overall the events of this nature appear to have low impact on the overall building with some exception of bump-in and bump-outs.

### Q3

Q3 of the BMP spanned 2 January 2025 – 1 March 2025 having been reduced slightly to better align with event dates. Q3 contained a number of relatively short-running events. The most significant bump-in and bump-out event was the Melbourne Opera which comprised installation of a stage/set design under the dome and temporary grandstand seating throughout the Eastern transept of the REB.

Generally, during the five major events that took place during Q3 and the construction works that took place during Q3, all vibration monitor PPV data was within the project parameter threshold limits. Minor project parameter PPV exceedances during the Q3 monitoring period generally occurred during bump-in or bump-out periods for events. All exceedances were recorded on vibration monitors affixed to timber elements of the building within the transepts or within the sub-floor. No exceedances were recorded on vibration monitors affixed to plastered surfaces.

The data from the sub-floor vibration monitors are generally to be considered outlying from the data set due to large number and degree of exceedances, many of which are unlikely to cause damage to the flooring or floor-structure itself.

### Q4

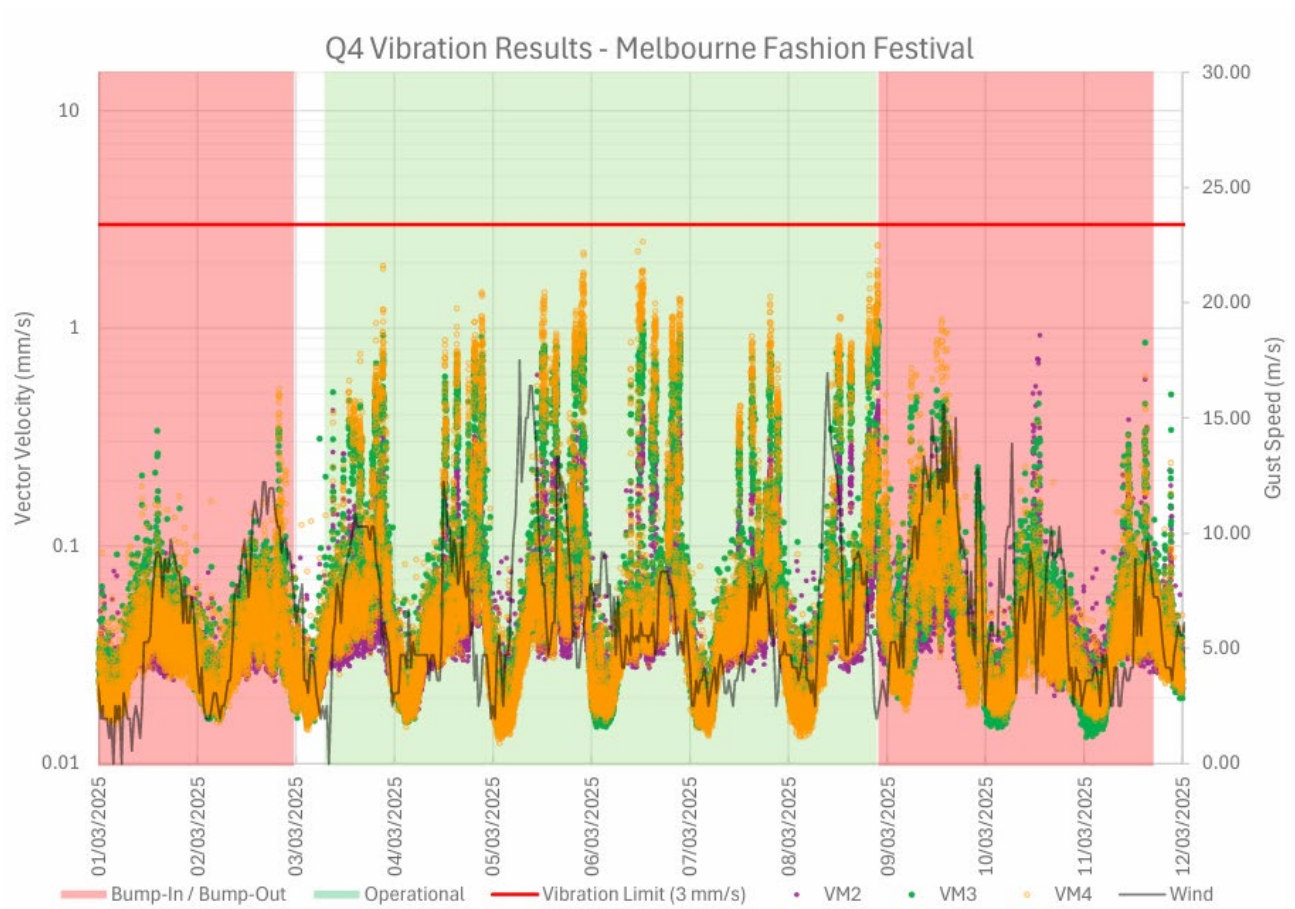
The Q4 data has recently been received and includes large events such as the Melbourne International Flower and Garden Show. The data is still being reviewed and the reports for this quarter prepared.

In summary, vibration monitors fixed to masonry did not report any exceedances with the exception of one monitor at one instance. The exceedance appears to have occurred at a ‘daytime vibration peak’ and appears to have occurred during the University of Melbourne Gala Dinner.

Melbourne Fashion Festival (Figure 2) - Vibrations are higher than other events, with almost all under 2 mm/s. - Vibrations during the event are higher than bump-in / bump-out periods. - Strong winds had no effect on vibrations.

Melbourne Fashion Festival is considered to be of a similar, or lower, level of music and anticipated to have similar vibration output to the proposed event outlined in the HIS.



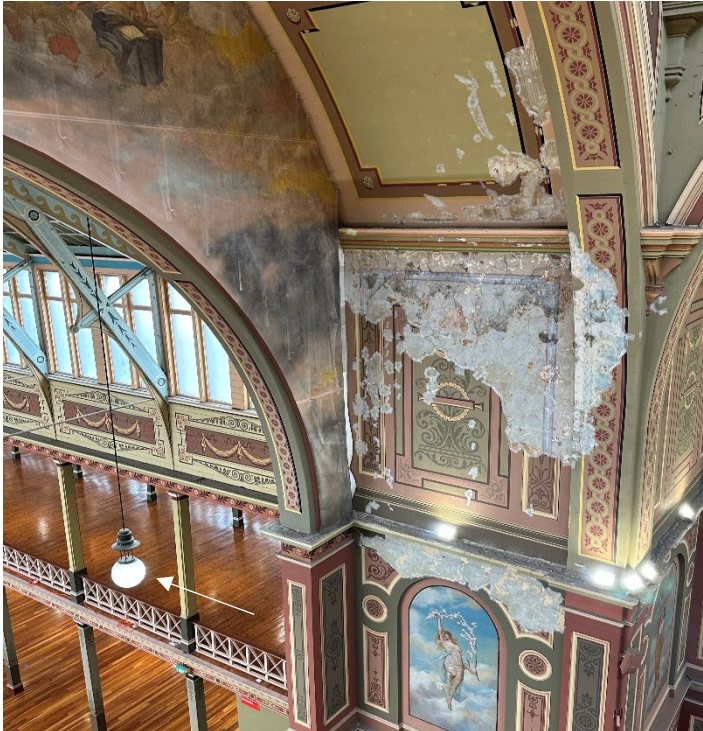


**Figure 2**  
Vibration result mapping for Melbourne Fashion Festival.





**Figure 3**  
Lunette protection in the transept (pink), indicating location of vibration monitor (yellow) and gasolier (white).



**Figure 4**  
Mural protection in transept indicating location of pendant light (white).



**Figure 5**  
Netting of cornice in the dome (pink), indicating location of vibration monitor (yellow).



**Figure 6**  
Vibration monitor.

## 2. Heritage Considerations

### 2.1 Overview

The heritage considerations that are relevant to the site are summarised in the table below:

Name	Authority	Identifier	Statutory Controls
<b>Statutory Controls Apply</b>			
Royal Exhibition Building and Carlton Gardens	UNESCO World Heritage List	N/A	Yes, by inclusion under the NHL
Royal Exhibition Building and Carlton Gardens	National Heritage List	105708	Yes
Royal Exhibition Building and Carlton Gardens	Victorian Heritage Register	H1501	Yes
Royal Exhibition Building and Carlton Gardens	City of Melbourne	HO69	Yes, superseded by listing on the VHR
<b>Non-statutory listings</b>			
Royal Exhibition Building & Josef Hochgurtel Fountain	National Trust of Australia (Victoria)	B0842	No
Royal Exhibition Building	Victorian War Heritage Inventory	184036	No

### 2.2 Statutory controls

The following Statutory controls apply to the Royal Exhibition Building and Calton Gardens.

#### 2.2.1 UNESCO World Heritage List

The Royal Exhibition Building and Carlton Gardens is inscribed on the UNESCO World Heritage List (WHL).

The Royal Exhibition Building and Carlton Gardens were inscribed in the WHL in 2004 for its 'Outstanding Universal Value', being the main extant surviving purpose-built exhibition building associated with the international exhibition movement which remains in its original setting.

The building and gardens were designed by Joseph Reed of the noted architectural partnership Reed and Barnes, for Melbourne's involvement in the great international exhibitions of 1880 and 1888. The Melbourne building is one of the finest and largest nineteenth century buildings in Australia, with its size reflective of the scale of the 1880s exhibitions which were, up to that time, the largest events ever held in Australia.

Key values are:

- Themes of the Industrial Palace and the World Exhibition movement of the late nineteenth century including the associated landscape.
- Place of the opening of the first Federal Australian Parliament and events associated with the opening.

#### 2.2.2 National Heritage List

The Royal Exhibition Building and Carlton Gardens is included on the National Heritage List as a listed place ID: 105708.

The National Heritage List is a list of places with outstanding heritage value to our nation. These places are protected under the Australian Government's national environment law — the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Site which are included on the Commonwealth Heritage List, which are not under Commonwealth Management are subject to the bilateral agreement between the States and Commonwealth under the provisions of the Environment Protection Biodiversity Conservation Act (EPBC).



In October 2014, the Victorian and Australian Governments signed the Victorian Assessment Bilateral Agreement under Section 45 of the EPBC Act. This means that assessments are assessed in accordance with Part 4, Division 1 of the Heritage Act (Vic) which enables the Executive Director of Heritage Victoria to undertake the assessment for National Heritage places. Excluding places under Commonwealth jurisdiction and places included on the Commonwealth Heritage List.

As such assessment of the works or any permit application for works can be assessed by the Executive Director, Heritage Victoria or can be assessed against any state authority-based policy documents published by the Executive Director, Heritage Victoria.

### 2.2.3 Victorian Heritage Register

The Royal Exhibition Building and Carlton Gardens is included as H1501 on the Victorian Heritage Register (VHR) to the extent of:

#### *Extent of Registration*

1. All of the buildings and structures marked as follows on Diagram 1501 held by the Executive Director:

*B1 Royal Exhibition Building*

*B2 Curator's Cottage*

*B3 Hochgurtel Fountain*

*B4 French Fountain*

*B5 Westgarth Drinking Fountain*

*B6 Stawell Sandstone Sample*

*B7 Palisade Fence and Gate*

*B8 Remnants of Bluestone Base to Palisade Fence*

*B9 Iron Rod Fence*

2. All of the landscape features marked as follows on Diagram 1501 held by the Executive Director:

*P1 Pathways (south garden)*

*P2 Pathways (north garden)*

*P3 Pond and Island*

*P4 Pond and Islands*

3. All the mature trees and palms, including avenues, rows and individuals growing in the Carlton Gardens including the following species:

*Acmena ingens*

*Angophora floribunda*

*Araucaria bidwillii*

*Araucaria cunninghamii*

*Araucaria heterophylla*

*Cedrus deodara*

*Chamaecyparis funebris*

*Corymbia citriodora*

*Cupressus macrocarpa*

*Cupressus torulosa*

*Eucalyptus cladocaylx*

*Ficus macrophylla*

*Ficus platypoda*

*Harpephyllum caffrum*

*Magnolia grandiflora*

*Phoenix canariensis*

*Pinus canariensis*

*Pinus nigra var. corsicana*

*Pinus pinea*

*Pittosporum undulatum*

*Platanus x acerifolia*

*Populus alba*

*Populus x canadensis 'Aurea'*

*Quercus acutissima*

*Quercus bicolor*

*Quercus canariensis*

*Quercus cerris*

*Quercus ilex*

*Quercus robur*

*Robinia pseudoacacia*

*Salix babylonica*

*Schinus molle*

*Taxodium distichum*

*Tilia x europaea*

*Ulmus procera*

*Ulmus x hollandica*

*Washingtonia robusta*

*Waterhousea floribunda*

4. All of the Crown Land Reserve Rs 9990 (Carlton Gardens) and Rs 37130 (Royal Exhibition Building and Museum of Victoria), crown allotment 19A, shown on Diagram 1501 held by the Executive Director, being the land bounded by Rathdowne Street, Carlton Street, Nicholson Street and Victoria Parade.

#### 2.2.4 City of Melbourne

The Royal Exhibition Building and Carlton Gardens is individually included as HO69 in the Schedule to the Heritage Overlay of the City of Melbourne Planning Scheme.

The provisions of Clause 43.01 – Heritage Overlay in the City of Melbourne Planning Scheme is superseded by the inclusion of the Heritage Place on the Victorian Heritage Register under the *Heritage Act 2017*.

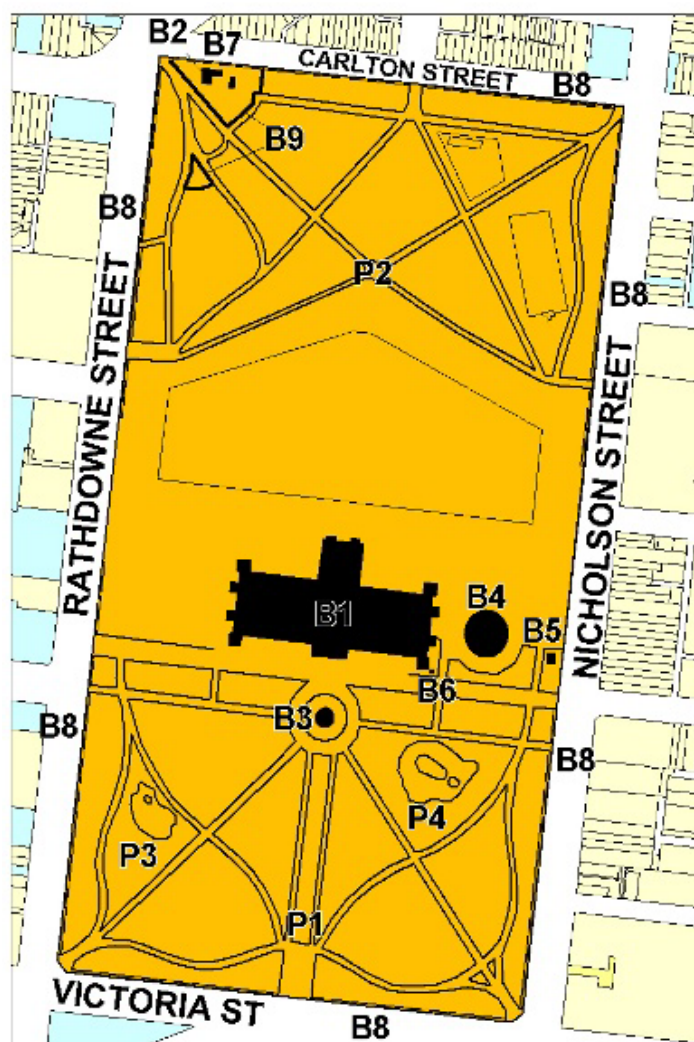


Figure 7  
VHR extent of registration. | Source: Victorian Heritage Database.



## 2.3 Non-statutory controls

The following non-statutory controls apply to the Royal Exhibition Building and Carlton Gardens.

### 2.3.1 National Trust of Australia (Victoria)

The Royal Exhibition Building and Carlton Gardens is classified by the National Trust of Australia (Victoria) File Number: B0842. This is a non-statutory listing.

### 2.3.2 Victorian War Heritage Inventory

The Royal Exhibition Building is included on the Victorian War Heritage Inventory Place ID: 184036. This is a non-statutory listing.

## 2.4 Exemptions

The VHR citation includes a number of specific exemptions for works to the place.

The General conditions of the specific exemptions typically relate to the management of the landscaping, the curators lodge (interior and exterior), and the tennis court and includes a policy for works in accordance with the Heritage or Conservation Management Plan, stating:

*3. If there is a conservation policy and plan approved by the Executive Director, all works shall be in accordance with it.*

The relevant policies included in the most recent Heritage Management Plan are discussed in Section 2.6.1 of this HIS.

## 2.5 Statements of significance

The place has various Statements of Significance related to the various levels of registration. They are all generally aligned on the significance and Universal values of the place and identify the site to be of historical, architectural, aesthetic, social and scientific (botanical) significance.

This HIS is predominantly concerned with the REB and not the broader Calton Gardens, as such the key values related to the building are the historical, architectural and social values.

The REB is architecturally significant as one of the finest and largest nineteenth century buildings in Australia. The stylistic choice of Renaissance motifs and the modelling of the dome on that of Brunelleschi's Florence Cathedral is emblematic of the sense of confidence of the young colony of Victoria in 1880.

The REB is architecturally significant as the largest design carried out by renowned Melbourne architectural firm Reed and Barnes.

The REB is historically significant as the only major extant nineteenth century exhibition building in Australia. It is one of the few major nineteenth century exhibition buildings to survive worldwide.

The building demonstrates the wealth and confidence of the colony of Victoria in the late 1870s. It has been the stage for highly significant and historic national events, including the Melbourne Exhibition of 1880, the Centennial Exhibition of 1888, the opening of the Federal Parliament in 1901 and as the venue for the Victorian State Parliament from 1901 until 1927. The decorative scheme by John Anderson for the opening of Parliament in 1901 is of historical and aesthetic significance and is among the finest public art works in Victoria.

The REB is of social significance for its continuing involvement in the lives of Victorians. The buildings have hosted countless major exhibitions as well as other community uses such as an influenza hospital, wartime military use, migrant reception centre and a venue for several events during the 1956 Olympic Games.

### 2.5.1 Victorian Heritage Register

*The Royal Exhibition Buildings and Carlton Gardens were inscribed on the UNESCO World Heritage List on 1 July 2004*

*The site was inscribed under Criterion (ii) of the Operational Guidelines for the UNESCO World Heritage Convention (1972) as follows:*

*The Royal Exhibition Building and the surrounding Carlton Gardens, as the main extant survivors of a Palace of Industry and its setting, together reflect the global influence of the international exhibition movement of the 19th and early 20th centuries. The movement showcased technological innovation and change, which helped promote a rapid increase in industrialisation and international trade through the exchange of knowledge and ideas.*

## Statement of Significance to the State of Victoria

### What is significant?

The Royal Exhibition Building was constructed in 1879–1880 to house the International Exhibition of 1880. It is the only major extant nineteenth century exhibition building in Australia and one of only a handful remaining world wide. It is set within the Carlton Gardens, one of Melbourne's finest public parks. The design by noted architect Joseph Reed was awarded first prize of £300 in an architectural competition. The successful tenderer was David Mitchell at a price of £70,257. Governor Sir George Bowen laid the foundation stone on 19 February 1879 and the main building was ready for the opening of the International Exhibition on 1 October 1880. Temporary annexes to house some of the exhibitions were demolished after the exhibition closed on 30 April 1881. The subsequent 1888 Centennial International Exhibition was one of the largest events staged in Victoria's history. By the turn of the twentieth century the buildings and environs had become a combination of concert hall, museum, art gallery, aquarium and sports ground. The Royal Exhibition Building played an important role in Federation. On the 9 May 1901 the Duke of York presided over the opening of the first Federal Parliament, and from 1901 to 1927 the western annexe was used as a temporary State Parliament while the new Federal Parliament occupied the Victorian Houses of Parliament. In 1919 the buildings became an emergency hospital for influenza epidemic victims and during the Second World War were used mainly by the RAAF. From 1948 to 1961 part of the complex was used as a migrant reception centre. The Royal Exhibition

Building was still widely used in the post-war era for popular exhibitions such as the Home Show. The building is cruciform in plan with the nave known as the Great Hall on the main east-west axis. The main dome is 60 metres high and sits over the crossing of the nave and transepts. The southern transept, which contains a 13 metre wide semi-circular fanlight and is flanked by two towers, forms the main entrance. The decorative scheme by John Anderson for the opening of Federal Parliament saw the dome was decorated in imitation of the sky and the pendentives adorned with murals. An unusual

and interesting aspect was the decorated exposed roof trusses throughout the building. The decorative scheme, hidden under layers of paint, was recovered and restored in a major renovation in the 1990s. In 2001 the Royal Exhibition Building hosted centenary celebrations of the opening of the first Federal Parliament. On 1 July 2004 the Royal Exhibition Building was inscribed on the World Heritage List.

Superintendent Charles La Trobe first planned the 26 hectare site of the Carlton Gardens in 1839 as part of the green belt encircling Melbourne which included Batman Hill, Flagstaff Gardens, Fitzroy Gardens, Treasury Gardens and the Domain. The original layout of the gardens was by Edward La Trobe Bateman and dates to 1856. Further redesign and planting took place under the direction of the State's leading landscape designers and horticulturists, including Clement Hodgkinson, William Sangster, Nicholas Bickford, John Guilfoyle and architect Joseph Reed. Reed and Sangster, who was also a nurseryman, worked in conjunction to ensure a suitable setting for the building, planning gardens, paths, entrances and other features. As well as the Royal Exhibition Building and the 1891

Curator's Lodge, first lived in by John Guilfoyle, the gardens contain three important fountains: the Hochgurtel Fountain, designed for the 1880 Exhibition by Joseph Hochgurtel; the French Fountain; and the Westgarth Drinking Fountain. The original perimeter fence was removed in about 1928 leaving only a small remnant and all of the bluestone plinth. The Melbourne Museum, designed by architects Denton Corker Marshall and constructed in the gardens immediately to the north of the Royal Exhibition Building, opened in 2000.

### How is it significant?

The Royal Exhibition Buildings and Carlton Gardens are of historical, architectural, aesthetic, social and scientific (botanical) significance to the State of Victoria.

### Why is it significant?

The Royal Exhibition Building is historically significant as the only major extant nineteenth century exhibition building in Australia. It is one of

*the few major nineteenth century exhibition buildings to survive worldwide. Together with the associated landscaped gardens, the building forms one of the major surviving nineteenth century exhibition precincts in the world. The building demonstrates the wealth and confidence of the colony of Victoria in the late 1870s. It has been the stage for highly significant and historic national events, including the Melbourne Exhibition of 1880, the Centennial Exhibition of 1888, the opening of the Federal Parliament in 1901 and as the venue for the Victorian State Parliament from 1901 until 1927. The decorative scheme by John Anderson for the opening of Parliament in 1901 is of historical and aesthetic significance and is among the finest public art works in Victoria.*

*The Royal Exhibition Building is architecturally significant as one of the finest and largest nineteenth century buildings in Australia. The stylistic choice of Renaissance motifs and the modelling of the dome on that of Brunelleschi's Florence Cathedral is emblematic of the sense of confidence of the young colony of Victoria in 1880. The Royal Exhibition Building is architecturally significant as the largest design carried out by renowned Melbourne architectural firm Reed and Barnes, who were responsible for many of Melbourne's most prestigious public buildings, including the Melbourne Town Hall and the State Library.*

*The Carlton Gardens, the setting for the Royal Exhibition Building, are aesthetically significant for their nineteenth century 'Gardenesque' style featuring specimen trees, parterre garden beds, in a symmetrical design with the use of axial views and foci. The landscape features outstanding tree avenues, rows and specimen trees on the lawns, a curator's lodge, two lakes with islands, shrubberies and elaborate annual bedding displays along the southern promenade. The nineteenth century path layout is enhanced by magnificent avenues of trees, including the grand avenue of 26 Plane trees which frames the Exhibition Building dome, Elms, Cedar, White Poplar, English Oak and an uncommon avenue of 35 Turkey Oaks. Carlton Gardens is notable for the creative achievement demonstrating skilful garden design, and a landscape character which features plantings of Pines, Cedar, Araucaria,*

*Cypress, Gums, Figs, Pepper trees, Elms, Planes, Oaks, Poplars, Canary Island Date palms and Washington palms, that display contrasting colours and forms which enhances the Gardens, Royal Exhibition Building and the local urban area. Josef Hochgurtel's Exhibition Fountain of 1880 is the only known work of the artist in Australia and is historically significant as an expression of civic pride in Victoria's emerging international importance. Hochgurtel's fountain is the largest and most elaborate fountain in Australia, incorporating frolicking putti, fish-tailed Atlantes, goannas, platypus and ferns. The fountain and the 'Grand Allee' lined with Plane trees is integral to the setting of the Royal Exhibition Building.*

*The Carlton Gardens are of scientific (botanical) significance for their outstanding collection of plants, including conifers, palms, evergreen and deciduous trees, many of which have grown to an outstanding size and form. The elm avenues of *Ulmus procera* and *U. x hollandica* are significant as few examples remain world wide due to Dutch elm disease. The Garden contains a rare specimen of *Acmena ingens* (only five other specimens are known), an uncommon *Harpephyllum caffrum* and the largest recorded in Victoria [Removed Sept 2010], *Taxodium distichum*, and outstanding specimens of *Chamaecyparis funebris* and *Ficus macrophylla*, south west of the Royal Exhibition Building.*

*The Royal Exhibition Building and the Carlton Gardens are of social significance for their continuing involvement in the lives of Victorians. The buildings have hosted countless major exhibitions as well as other community uses such as an influenza hospital, wartime military use, migrant reception centre and a venue for several events during the 1956 Olympic Games. The gardens have been enjoyed by visitors for passive recreation, entertainment and social interaction and have been the venue for the successful International Flower and Garden Show.*

## 2.6 Heritage management framework

The Royal Exhibition Building and Carlton Gardens are subject to the ‘Australian World Heritage management principles’ and ‘National Heritage Management Principles’ as set out in Schedules 5, 5A and 5B of the EPBC Act Regulations. The Victorian Heritage Act 2017, at Part 9, also addresses ‘World Heritage’.

The World Heritage Management Plan (WHMP) for the site was approved by the Minister for Planning on 17 April 2025. The WHMP 2025 provides information on the World Heritage, National Heritage, State Heritage and Local Heritage values of the place, as well as details on the statutory framework that protects and manages these heritage values. The WHMP 2025 was prepared under the EPBC Act for the purposes of a bilateral agreement between the Australian Government and the State of Victoria. Approval of works and actions in relation to the place may only be made in accordance with the WHMP.

### 2.6.1 Heritage management plan

Part 3 of the WHMP contains the Heritage Management Plan (HMP) prepared by Lovell Chen in August 2022, which includes a number of policies related to continued and ongoing use of the place along with the conservation of significant fabric.

The HMP identifies the whole of the interior of the REB to be significant fabric, which contributes to the understanding the Outstanding Universal Values attributed to the inclusion of the place on the World Heritage listing.

Policy 3.3.1 relates to the management of the REB as a building, identifying the importance of conserving, protecting and retaining the building, and that this is to be undertaken in accordance with UNESCO Operational Guidelines for the Implementation of World Heritage Conservation.

*The REB will be managed to retain and conserve its world, national and state heritage values.*

*Management of the place will be in accord with the UNESCO Operational Guidelines for the Implementation of the World Heritage Convention, the principles of the Burra Charter and relevant Federal and state statutes; and will ensure that the historical exhibition use is retained; the significant fabric of the place is conserved; the heritage values are promoted; and public use and access are continued.*

Policy 3.4.1 relates to the Use of the REB and supports the use of the building for performance and large public gatherings; however, it is cautious in stating that the impact of frequent and intense events needs to be monitored and ensure that significant fabric is not compromised. The policy states:

*Continue the use of the REB and Carlton Gardens for exhibitions, trade fairs and the like, public performances and gatherings, in accord with the original raison d'être of the site and the conservation of the values for which it was inscribed on the WHL.*

*Continue the ongoing use of the Carlton Gardens as a venue for outdoor exhibitions associated with the use of the REB.*

*Balance the requirement to make changes to the building, as may be required from time to time to maintain the exhibition operations, with minimising physical or visual impacts on the place.*

*Monitor the nature, frequency and intensity of exhibition uses, to ensure significant fabric is not compromised.*

*Support appropriate recognition of Traditional Owner and First Peoples cultural values as part of the exhibition use of the REB and Carlton Gardens.*

# 3. Assessment of impacts

## 3.1 Description of proposed works

The proposed works includes an inflatable installation, together with some low-impact activities and performances for the Now or Never festival occurring over 21 August to 24 August 2025. The performance space will have minimal setup, just a small riser stage with speakers placed on the floor. The focus is on the artwork rather than the performances. Each event and performance will have a maximum capacity of 300 guests.

Event	Duration	Description
MATRIA (Exhibition Only)	21 – 24 Aug, 10am – 7pm	Inflatable installation with breath-like ambient soundscape playing throughout the day.
Alex Zhang Hungtai x MATRIA	21 Aug, 8.30pm – 9.30pm	Solo performance – Avant-free jazz and mystical expressionism combining saxophone, synthesiser, and percussion.
rRoxymore x MATRIA	22 Aug, 8.30pm – 9.30pm	Experimental and expansive music, sonic tapestry.
Amber McCartney x Shapednoise x MATRIA	23 Aug, 8.30pm – 9.30pm	Sensory journey with sound designs featuring choreographer and dancer Amber McCartney performing alongside Sicilian producer Shapednoise.
The Breath Haus x MATRIA	23 & 24 Aug, 8am – 9am	Immersive soundscape with a live radio mic element – intimate morning sessions.

### 3.1.1 MATRIA installation

The installation is a pink plastic (low density polyethylene (LDPE) plus 15% fire-retardant additive), 65 micron thickness, balloon like inflatable that will fill the interior of the REB. The inflatable has been custom produced and made specific for the REB and will not extend beyond the bottom cords of the trusses.

Lights will be mounted on stands inside the bubble, while the speakers for the ambient soundscape will be located on the floor in the centre of the bubble. A small riser stage will also be erected inside the bubble for the three evening performances.

The installation is inflated using a 120-watt high-velocity floor fan, which steadily fills the space with air, causing the plastic to expand and tightly conform to the contours of the interior—walls, ceilings, and architectural details alike.<sup>1</sup>

The installation height will be constrained by the tie rods, which will just touch the base of the gasoliers. The gasoliers will be safely isolated from the installation via a padded cover fabricated from chemically

stable, supportive materials secured in a manner which is reversible. The materials and approach will be developed by the Museum Victoria’s Conservation Department.

The inflatable structure remains floor-bound due to a combination of material properties and installation technique:

- Material Weight and Flexibility: The plastic sheeting has enough weight and pliability to naturally settle on the floor and expand outward and upward, rather than lifting off the ground.
- Controlled Inflation: The 120-watt high-velocity fan inflates the space gradually and evenly, allowing the inflatable to fill the room without abrupt lifting or displacement.
- Architectural Constraints: The existing architecture guides the expansion of the inflatable, acting as physical constraints that keep it grounded while shaping its final form.

<sup>1</sup> An example of inflation can be viewed at [Making of Penique productions installation for Louis Vuitton Paris Fashion Week Show 2023](#)



It is also proposed that the plastic be taped to the floor with Tenacious Tape as approved by Museum Victoria's conservation team as it does not leave residue. The tape will be removed at the end of the event. The use of Tenacious Tape on the floor is common practice at the REB for securing cables and other elements during events.

To preserve the pressurised environment, air curtains are installed at each of the three entrances. These create an invisible barrier of high-speed air that helps maintain internal pressure and prevent rapid air loss when doors are opened, allowing for a stable and immersive inflatable structure. They comprise a truss structure which will also support the air curtains (refer **Figure 8**).

The inflatable structure remains floor-bound due to a combination of material properties and installation technique:

- **Material Weight and Flexibility:** The plastic sheeting has enough weight and pliability to naturally settle on the floor and expand outward and upward, rather than lifting off the ground.
- **Controlled Inflation:** The 120-watt high-velocity fan inflates the space gradually and evenly, allowing the inflatable to fill the room without abrupt lifting or displacement.
- **Architectural Constraints:** The existing architecture guides the expansion of the inflatable, acting as physical constraints that keep it grounded while shaping its final form.

The constant air pressure from inside the inflatable means that the installation is not affixed to the structure but remains independent.

The pendant lights hanging each side of the nave will be relocated to the lantern walls, so they are outside of the 'bubble'. The lights are electric and only plugged in, meaning they can easily be temporarily moved and reinstated at the end of the event.

### ***Penique Productions***

Penique productions was established in Barcelona, 2007, as a project focusing on the ephemeral installation.

Since 2008, Penique has also operated from Rio de Janeiro, Brazil.

Each project begins by identifying a unique location to construct a customised piece – the inflatable.

The "balloon", made from a lightweight plastic, grows and expands as the air becomes the supporting structure and forces the inflatable to grow, consuming all in its path.

Conquered by the inflatable, the space is transformed by a new light, a new texture and a new monochrome colour. The viewer is transported via sensory experience to a setting simultaneously familiar yet new.

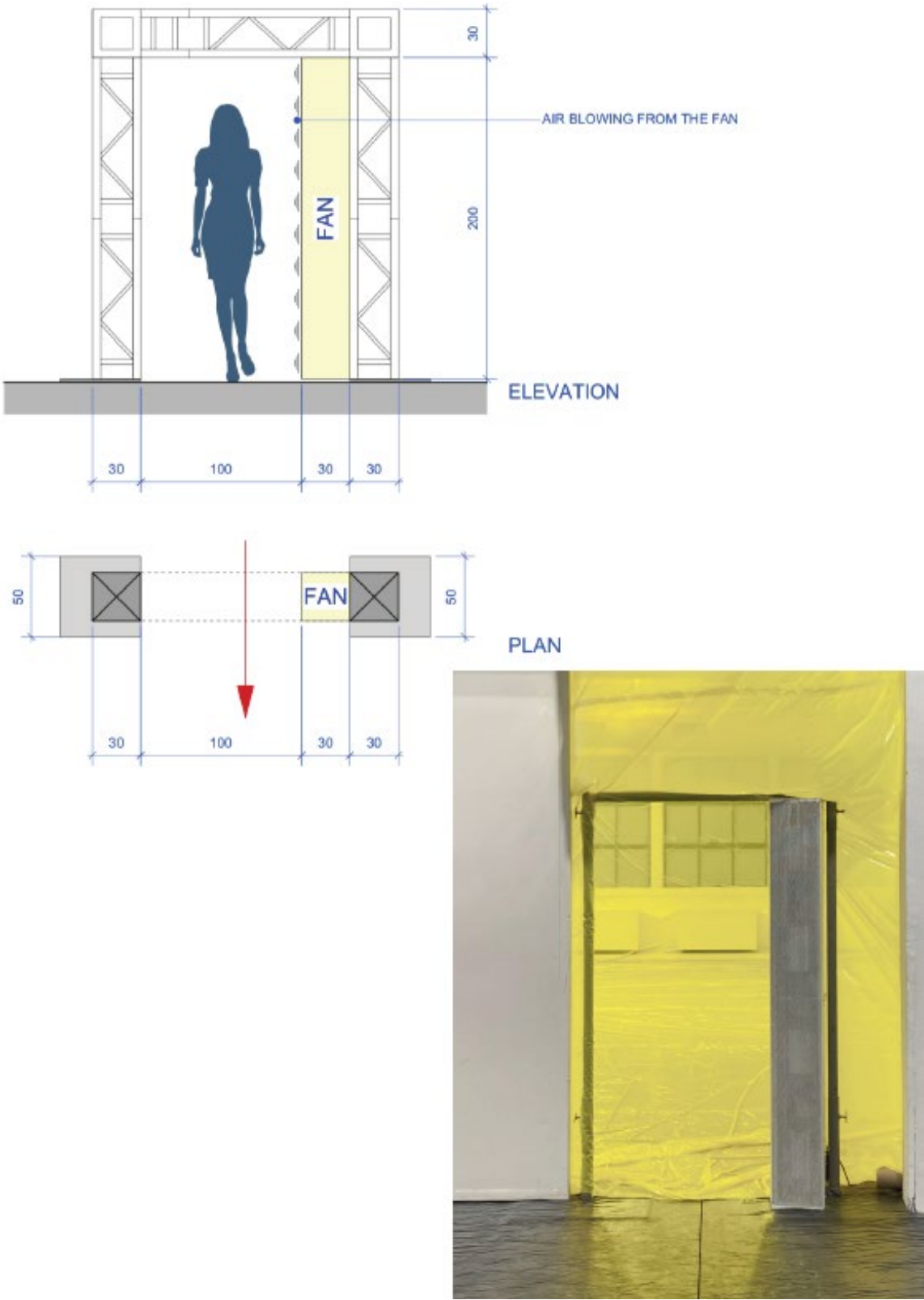
Having lost its original function the site is given a new identity. The balloon acts as a barrier from multiple realities – framing and creating a new space – as a container, it blurs the concept of the art object.

Penique offers an experience to the viewer. Through this clear and direct perceptual message, we aim to reach out to all people.

### ***Previous installations***

Since 2007, Penique has designed dozens of custom inflatable installations for historic buildings across the world, including:

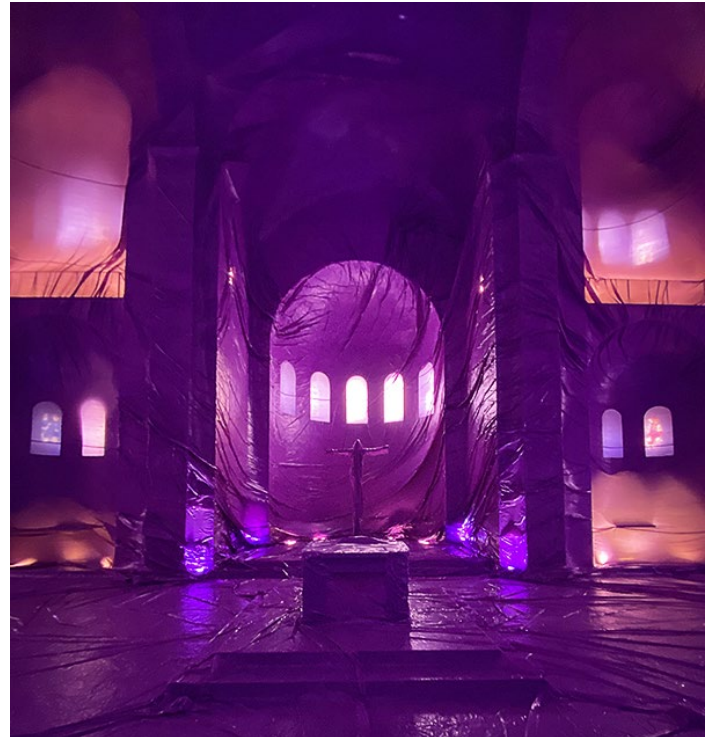
- Antes Que Se Acabe El Mundo III, Argentina, December 2024. Orange inflatable set stage with ten local dancers within, held in the hall of the national heritage listed former Spanish and Cultural Association, Buenos Aires (refer **Figure 9**).
- Purpurner, Germany, October 2022. Purple inflatable located in the alter of the World Heritage listed Saint Michael's Church in Hildesheim (refer **Figure 10**).
- Galeria del Paranimf, Spain, March 2014. Inflatable exhibited at the University of Barcelona in the Galeria Paranimf, situated on the first floor of the University's historical buildings (refer **Figure 11**).
- El Claustro, Mexico, November 2011. Inflatable in the cloister adjacent to the former convent of San José de Gracia. Dating from the late 17th century, the cloister is now part of the Museo de la Ciudad, Querétaro (refer **Figure 12**).



**Figure 8**  
Access to the inflatable.



**Figure 9**  
Antes Que Se Acabe El Mundo III, former Spanish and Cultural Association, Buenos Aires, December 2024.



**Figure 10**  
Purpurner, St Michael's Church, Hildesheim, October 2022.



**Figure 11**  
Galeria del Paranimf, University of Barcelona, March 2014.



**Figure 12**  
El Claustro, Museo de la Ciudad, Querétaro, November 2011.



## 3.2 Impact assessment

### 3.2.1 Impacts on cultural heritage significance.

The following Section makes assessment of the proposed works against Section 101 (2) (a) of the Heritage Act 2017 – the extent to which the application affects the cultural heritage significance of the place or object.

As identified in Section 2.5 of this HIS, the key cultural heritage values and the Outstanding Universal Values of the REB are related to its historic, architectural and social significance.

These values are understood and interpreted through the fabric of the building, including the decorative interior, and through the continued and ongoing use as an exhibition building that hosts large public events.

The hosting of events such as Now or Never is in accordance with the policy 3.4.1 contained within the HMP related to the use of the REB for large public gatherings which is also one of the Outstanding Universal Values for why the place is included on the World Heritage List.

#### ***Inflatable installation***

The inflatable has been specifically manufactured for the REB and will not be fixed to the interior fabric of the building, with the exception of potential Tenacious Tape on the floor. It will be inflated from the inside and the internal pressure created by the fans, and maintained by the air curtains, will sustain its shape and form.

Similar to the inflatable shown in **Figure 12**, the inflatable will not fill the space to the roof. It will not extend beyond the bottom cord of the truss and will not fill the dome space, meaning it will only lightly touch the base of the gasoliers. While the inflatable is made from soft plastic that will not harm the gasoliers, the base of the gasoliers will be wrapped as an additional protection measure to ensure no inadvertent harm occurs. Likewise, the pendant lights hanging each side of the nave will be relocated to the lantern walls so that they are outside of the ‘bubble’. The pendant lights are electric and only plugged in, therefore temporarily moving them will have no impact on the lights or the cultural heritage significance of the place.

#### ***Temporary structures***

No temporary structures associated with the event (trusses, air curtains, fans, staging, lights and speakers) will be fixed to the interior fabric of the building. To protect the timber flooring, weight loadings for the different areas of the building will be followed. As such, temporary structures will have no impact on the cultural heritage significance of the place.

#### ***Vibration***

The potential for the event, through vibration into the structure of the building, is a conservation concern and has the potential to cause or create conservation issues or compromise that fabric of the place.

However, this year’s event is very different from past Now or Never events held at the REB and is not high risk in terms of vibrations levels. Only ambient background music will be played throughout the duration of the inflatable installation, with small, short, concerts and performances played during the evenings. With the focus of the event being on the artwork rather than the performances, the performances are limited to one hour and designed to be contemplative in nature to compliment the artwork, rather than a dance party which focuses on the music.

Vibration monitoring has been in place at the REB since July 2024. During this time there have been several similar events, including Melbourne Opera performances and Melbourne Fashion Festival, during which all vibration monitor PPV data was within the project parameter threshold limits of 2mm/s. Minor project parameter PPV exceedances generally occurred during bump-in or bump-out periods for events. No exceedances were observed during the Melbourne Fashion Festival event

We understand from Museums Victoria Venues & Events team that we would anticipate the vibration readings from this event to be less than that of Melbourne Fashion Festival, which did not result in exceedances. Melbourne Fashion Festival used a combination of floor subs (located under the seating banks) and mids flown from the centre truss, while Now or Never will be a significantly smaller acoustic set up with only speakers placed directly on the floor. Also, the event is limited to 300 people, compared to 3,000 for Melbourne Fashion Festival, reducing the risk for added vibrations through patron movement.

Given the style of the event in comparison to past events and available vibration monitoring data, there is low likelihood that the event will cause vibrations in exceedance of the 2mm/s parameters set for the site.

### 3.2.1 Management of detrimental impacts

The following section makes assessment of the proposed works against Section 101 (2) (f) of the Heritage Act 2017 – measures proposed to avoid, limit or manage the detrimental impacts.

Potential impacts to pendant lights and gasoliers will be mitigated through temporary protection measures, including:

- Limiting the height of the inflatable to the bottom cord of the trusses.
- Wrapping of the base of gasoliers to protect them from inadvertent harm.
- Temporarily moving the pendant lights out of the inflation zone.

Safety concerns over the flammability of the inflatable have been managed through the use of fire retardant in the LDPE. A sample of the LDPE used for the inflatable has been sent by the City of Melbourne to Agricultural, Horticultural and Materials Testing for certification. This certification has then been reviewed by Museum Victoria's conservation team who have provided a letter of approval which is included in Appendix A.

While the potential for vibrations to exceed the 2mm/s parameters set for the building is low, Museums Victoria will follow their vibration management strategy to manage any potential vibration impact. The strategy is outlined below.

- Complete onsite trial prior to the event to establish the 2mm per second particle velocity movement and crosscheck this to other vibration monitors to ensure that they do not exceed 4mm per second for structural issues and / or 2mm per second on original decorative murals.
- The triaxial vibration sensor will be transmitting vibration data continuously wirelessly throughout the event.
- SMS triggers to be set at 2.0 mm/s Peak Particle Velocity (PPV) as warning and exceedance alerts. This strategy is aimed at providing a real time warning and exceedance system, in response to which performance levels could be appropriately managed.
- An early warning trigger level will be established prior to reaching 2.0 mm/s to provide an alert to REB personnel to observe sound emissions of potential exceedances.

While the potential risk of detachment of fabric remains, this is reduced through establishment of the upper most tolerance of 2mm particle velocity movement per second. In

addition, Museums Victoria have prepared an OH&S plan for the event, which identifies areas of the building that are of concern as a result of the condition of the building and includes works that have been undertaken in recent years, or is proposed in the near future to repair or stabilise these areas.



## 4. Conclusion

### 4.1 Conclusion

On the basis of the type of event proposed combined with a detailed understanding of the results of the past 12 months of vibration monitoring data, it is reasonable to conclude that the event will have minimal impact on the place and is not likely to result in detrimental impacts on significant fabric.

The inflatable installation will not be affixed to the interior built fabric of the place, aside from the potential use of Tenacious Tape on the floor, and will only require temporary protection and mitigation measures for the pendant lights and gasoliers. As such, the inflatable is considered to be low impact and will not result in adverse impacts on the place.

It is proposed to be located within the eastern nave, an area of the building where the paint finishes are reasonably stable and largely in moderate to good condition, such that the inflatable plastic will not result in loss or cause damage to the significant paint systems or other finishes within the building.

The use of temporary structures aligns with the guiding documents and principles typical of general events hosted in the REB, and as such are unlikely to result in adverse impacts on the place.

With regard to vibration impacts, the continued use of the 2mm particle velocity movement per second tolerance is founded in conservation best practice, testing and research and on the basis of the current condition, and original construction methods of the REB. Establishing a tolerance that is less than the normal standard for a heritage building as defined by the German Standard DIN 4150-3 and Swiss standard Swiss SN 640 31, at 3mm particle velocity movement per second is a cautious approach to the building's management and conservation and therefore allows for tolerance exceedance in certain areas of the building, such as the floor, that will still not cause detrimental impact on such fabric. Understanding the different tolerances of the various building fabric and elements through continued vibration monitoring will ensure that the event will not result in detrimental impacts to the heritage place.

The music will be played through a minor speaker set up placed on the floor in the centre of the eastern nave. We understand from Museums Victoria Venue & Events team that we would anticipate the vibration readings from this event to be less than that of Melbourne Fashion Festival events held in February 2025. This event did not exceed the PPV limit of 2.0mm per second.

As such, monitoring vibration levels throughout the event is a necessary measure to ensure that the vibration is managed appropriately.

On the basis that it can be demonstrated that this event will not cause harm to significant fabric of the Royal Exhibition Building and on the basis that the building was established as and continues to be an exhibition space that enables exhibitions and events to take place; we are of the view that this event should be supported.

### 4.2 Recommendations

#### *Recommendation 1 - Vibration monitoring*

It is essential that vibration monitoring take place as a mechanism to ensure that impact on the significant fabric is kept to minimum.

It is recommended that Museum Victoria enact its vibration management strategy as follows:

- The triaxial vibration sensor will be transmitting vibration data continuously wirelessly throughout the event.
- SMS triggers to be set at 2.0 mm/s Peak Particle Velocity (PPV) as warning and exceedance alerts. This strategy is aimed at providing a real time warning and exceedance system, in response to which performance levels could be appropriately managed.
- An early warning trigger level will be established prior to reaching 2.0 mm/s to provide an alert to REB personnel to observe sound emissions of potential exceedances.

# Appendix A – LPDE material testing certification

