





**City of Darebin** 

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**Appendix** Structural Engineer's Assessment

# 1 INTRODUCTION

## 1.1 Brief

This preliminary advice report has been prepared by RBA Architects + Conservation Consultants to review the potential heritage values of the Preston Market Site.

The heritage values of the site have already been subject to considerable review by the following authors, which are summarised in section 1.3:

- Context Pty Ltd, Preston Market Heritage Study Volume 1 and Volume 2:, 2017,
- Heritage Revival, Preston Market Heritage Study, 2017, Context P/L, Review and Recommendations, 2018,
- Paul Connor QC, Preston Market potential inclusion in a heritage overlay, 2018,
- GJM, Preston Market Peer Review of Heritage Study Documentation, 2018,
- Executive Director of Heritage Victoria, Recommendation of the Executive Director and Assessment of Cultural Heritage Significance, 2019,
- Heritage Council Registrations and Reviews Committee, Determination of the Heritage Council: Preston Market, 2019,
- Barry Pearce and David Rayson, Submission to the Heritage Council of Victoria, 2019.

# 1.2 Location

The Market site is a broadly 'rectangular lot contained in the area bound by Murray Road (north), Mary Street (east), Cramer Street (south) and the Mernda railway line (west).



Aerial photograph with the approximate boundary of the Preston Market site (Source: Nearmap, showing 11 September 2019)

# 1.3 Background

In August 2017, the Minister for Planning designated the Preston Market a strategic development site, the Victorian Planning Authority (VPA) as the relevant authority of the site and directed the VPA to review the current planning controls that apply to it.

Several reports assessing the heritage values or significance of the Preston Market or reviews of them have been prepared as outlined below.

## Context Pty Ltd, Preston Market Heritage Study Volume 1 and Volume 2, 2017

In July 2017, Darebin City Council commissioned Context 'to provide a heritage assessment of the Preston Market, with a particular emphasis on historical and social values'. The study explored the social history of the market, as both a place and as a social artefact and built on a preliminary study into the site completed by Context in 2011 as part of a project related to Victoria's post 1940s migration heritage.<sup>2</sup>

The study was published as a two-volume report published in late 2017, consisting of *Volume 1: History and Community Connections* and *Volume 2: Significance*. It was indicated in the report that the site met the threshold for significance at the local level under criteria Criterion A, (historical), Criterion D, (representative), Criterion E, (aesthetic), Criterion F, (technical) and Criterion G, (social) and recommended that Council apply the heritage overlay.<sup>3</sup>

In addition, it was recommended in the report that the place be further assessed for the potential state level significance of the space frame technology and the place's connection to post-war migration history.<sup>4</sup>

A proposed statement of significance for the site was included in the report, which reads as follows:

### What is significant

The Preston Market complex, comprising the original footprint of the market buildings, the built form, structural elements particularly the space frame, the internal pedestrian 'streets' and interior elements is of local significance. Excluded from the area of significance are the car parking areas and the former Market Hall. The specific attributes and their relative significance is indicated in the section below.

## How is it significant

Preston Market is of local historical, representative, aesthetic, creative and technical and social significance to the City of Darebin.

## Why is it significant

Preston Market is historically significance as the first post-war market to be created in Melbourne designed to support a growing local population and to offer the diversity of culturally relevant foods and social experiences desired by a post-war migrant community. (Criterion A)

Preston Market is historically significant for its ability to demonstrate key historical phases in the development of Preston, particularly development of a civic, commercial and community hub (at a precinct level) following the closure of the local tanning business Broadhurst's which made extensive areas of land available for new uses and activities. (Criterion A)

Preston Market is historically significant for its ability to demonstrate the social and cultural changes that resulted from postwar migration in terms of food and cuisine, and demonstrates a remarkable continuity in its adaptability to an ongoing process of migrant-related social change. (Criterion A)

Preston Market demonstrates, at the local level, the influence of post-war migration on the cultural and social life of Victorian communities in the latter half of the twentieth century. The market is historically significant for its ability to demonstrate cultural adaptability, diversity and inclusion, characteristics that are markers of local identity in the City of Darebin. (Criterion A) This aspect of historical significance is closely related to social significance.

Context Pty Ltd, Preston Market Heritage Study: Volume 2, 2017, vi

<sup>&</sup>lt;sup>2</sup> Context, Volume 2, vi

<sup>3</sup> Context, Volume 2, p3

<sup>4</sup> Context, Volume 2, vii

Preston Market is significant as a representative example of a post-war market form, combining the traditional elements of stalls within a pedestrian space, while also providing the car parking sought in the post-war years as car ownership expanded. The key characteristics include the market-style retailing (stalls, individual owners), the number and diversity of traders offering specific types of products (rather than a single retailer per product), pedestrian spaces, gathering and mingling spaces, open-air (although with shelter added subsequently), conceptually a 'public space' (noting that in fact it is privately owned but reads as a public place), and permeability in terms of access to and through the market area. (Criterion D)

Preston Market is of aesthetic significance based the design concept and its realisation. It reflects a contemporary industrial aesthetic through the rhythm of the structural forms and repeated web-like structure of the space frame steel trusses. (Criterion E)

Preston Market is of creative and technical significance for its adoption of new architectural concepts that espoused flexibility and adaptability in buildings as a response to rapid social change experienced in the post-war period. (Criterion F)

Preston Market has social significance for its strong and special associations with the Preston and wider communities who shop at the market, and with stallholders, many of whom have been a part of the market for many years, and sometimes are second generation traders. (Criterion G)

Preston Market has social significance to the Preston community and wider communities as important social and cultural landmark within the inner northern suburbs. It signifies the particular history of the post-war period and in serving as a focus for social exchange is intimately connected to the daily life of Preston. (Criterion G)

Preston Market has social significance as a place that sustains important community ideas about cultural diversity and inclusiveness. These form a significant element in community identity across the City of Darebin and are actively celebrated. (Criterion G)

Preston Market is of social significance as a place that creates and sustains opportunities for cultural practices and traditions associated with food and cuisine to continue. The market symbolically connects people to their own cultural pasts and those of the wider community. (Criterion G)

Preston Market is of social significance as a place where strong and special attachments have been created and continue, and that go beyond the simple utility of the market as a shopping venue. These attachments are linked to the place, the function and interpersonal relationships. (Criterion G)<sup>5</sup>

Context also prepared the following map which identified areas of built fabric significance at the site:

Preston Market - Significance of Elements



Area recommended for curtilage (8.75m around market boundary)

Built fabric - Significant

Walkways - Significant

Built fabric - Not Significant

Figure 1. Aerial image of market with areas of relative significance marked. The yeliow line represents an 8.75 m curtilage around the market buildings. (Source Aerial Photo: Near Maps 2017)

(Source: Context, Preston Market Heritage Study: Volume 2 Significance, 2017, p16)

# Heritage Revival, Preston Market Heritage Study, 2017, Context P/L, Review and Recommendations, 2018

In line with standard practice on technical and often contested issues like heritage, a peer review of the draft Context report was sought in early 2018 to understand if the integrity of the methodology and conclusions of the study were robust enough to maintain a strong argument before an independent planning panel, should a Heritage Overlay be pursued.

The report, prepared by Dale Kelly of Heritage Revival, was not confident that Context had provided sufficient justification for the significance of the built form of the market site and raised concerns over whether the social and cultural significance could be meaningfully protected by a heritage overlay. It was noted that:

Council now has an arguable case for seeking HO protection for the market on social significance grounds but, in my view, insufficient reason to assume the likely outcome would satisfy key community expectations.<sup>6</sup>

# That was because:

if only protected on the basis of social significance, it would be very difficult to retain any of the built form of Preston Market should redevelopment be proposed or its use changed.

Considering the above findings, it was concluded that:

Council ... should extend the scope of work to include assessment and documentation of other possible heritage significance especially aesthetic and technical, in order to prepare the strongest possible case for protection if it is proposed.<sup>7</sup>

Heritage Revival, Preston Market Heritage Study, 2017, Context P/L, Review and Recommendations, 2018, p2

# Paul Connor QC, Preston Market - potential inclusion in a heritage overlay, 2018

In addition to seeking a peer review from Heritage Revival, Council sought legal advice from Paul Connor, a QC experienced in heritage matters. Connor was asked to consider the Context report and address the following questions:

- Whether the Context studies establish grounds to introduce a heritage overlay on the basis of social heritage significance;
- 2) Whether there is any merit in also pursuing a heritage overlay on ground of built form significance.

Like Kelly, although Connor considered the market to have social significance, he was cognizant that because heritage controls regulate the built environment, 'if there was little or no connection (or nexus) as between the social significance of the Preston Market and its built form elements, there is nothing that a heritage overlay can preserve or protect'.8

Connor elaborated further up the limitations/constraints of the heritage overlay with relation to the site, noting:

A heritage overlay cannot protect a valued use of land into the future. If a heritage overlay is introduced over the Preston Market, the market could be closed, without planning permission. It could also be re-purposed to any section one use without planning permission.

The only elements that can be managed by a heritage control are material or tangible fabric or built form elements, such as buildings, signs and trees (if the schedule specifies that tree controls apply).

Ultimately, it was concluded that the Context study had not yet established sufficient grounds to introduce a Heritage Overlay on the basis of social significance and noted that 'more work is warranted in 'working up' the clearest and most compelling possible connection as between the built form of the market and its social significance'.<sup>10</sup>

It was Connor's opinion that to do so it would be:

critical to establish a nexus or connection as between the market's social significance and the tangible fabric that is located on-site. It will be necessary to demonstrate that the fabric assists in interpreting or understanding the social significance of the site.

With regards to the second question, Connor found that 'there was merit in pursuing a heritage overlay on the ground of built form significance' although he recommended 'that more work be conducted before a final decision is made to pursue this course'.<sup>11</sup>

## 2018 Council Officer's Report

The studies to date were then reviewed by Council officers and a report was prepared and presented to Councillors at a Council meeting on 21 May 2018. The Council officers concluded that 'on balance ... seeking a heritage overlay or interim protection at this point would not be likely to succeed, nor would it provide meaningful protection'.

This conclusion was made in part because Officers were not 'aware of any proposal by the owners of the Preston Market site to stop operating the market' as a feature like the market is often highly valued by developers. Further, Officers considered that the Heritage Revival and QC report were broadly in agreeance that the case for the market's significance had not been established beyond doubt.

Council subsequently resolved not to seek approval from the Planning Minister to apply heritage controls (whether interim or permanent) to the market site at that time. The conclusion was that if Council resolved to pursue the application of heritage controls, it would require commitment of time and resources, without guarantee of success, and it also brings risks to other work in progress, including the current review of planning controls.

Instead, Council referred the heritage study and technical reports on the same topics to the VPA and requesting that it be considered in an integrated way as part of the current review of planning controls.

- 7 Heritage Revival, p6
- 8 Connor QC, Preston Market potential inclusion in a heritage overlay, 2018, p4
- Connor QC, pp3-4
- 10 Connor QC, p7
- 11 Connor QC, p7

## GJM, Preston Market – Peer Review of Heritage Study Documentation, 2018

Accordingly, the Victorian Planning Authority engaged Gard'ner Jarmen Martin (GJM) to undertake a peer review of Context's 2017 report and Heritage Revival's 2018 review.

Specifically, they were engaged to provide advice on five key points and in respect to these points they found that:

- a) The methodology adopted for the 2017 heritage study is broadly reasonable, however we disagree with a number of the conclusions and recommendations. We do not believe that all of the recommendations will withstand testing at a planning panel hearing.
- b) It is our view that the 2017 heritage study does not provide sufficient justification for the application of the Heritage Overlay.
- c) It is our view that the Heritage Overlay is not the best tool to protect the social and historical significance of the site.
- d) The heritage overlay is a development control not a use control. It cannot be used to ensure the existing market use if retained on site.
- e) Alternative instruments are available to appropriately manage the identified historical and social significance of the site and to ensure a "market form" remains on the site. 12

GJM determined that there was *sufficient* evidence provided to support the findings that the Preston Market satisfies Criteria A (historical) and G (social) but *insufficient* evidence to support the findings in relation to Criteria D, E and F (representative, aesthetic and technical significance, respectively).<sup>13</sup>

# Executive Director of Heritage Victoria, Recommendation of the Executive Director and Assessment of Cultural Heritage Significance, 2019

Heritage Victoria accepted two nominations for the site to be included on the Victorian Heritage Register (VHR) in 2018. Accordingly, the Executive Director (ED) undertook an assessment of the cultural heritage significance of the place.

On assessing the site against the eight HERCON criteria, the ED found that the place did to satisfy any of these criteria at the State Level and recommended that the place not be included on the Victorian Heritage Register under Section 37(1)(b) of the Heritage Act 2017.<sup>14</sup>

As is sometimes the case for places assessed for inclusion on the VHR, but which are not ultimately recommended for inclusion, it was noted that the Preston Market may of potential local heritage significance rather than state level heritage significance. Accordingly, the ED suggested that the Heritage Council may wish to refer the place to the City of Darebin to undergo further assessment of its potential heritage significance at the local level. 15

# Heritage Council Registrations and Reviews Committee, *Determination of the Heritage Council: Preston Market*. 2019

The ED's decision was appealed to the Heritage Council and was heard by the Registrations and Review Committee. A number of submissions were made to the Committee, including from the Executive Director of Heritage Victoria, SALTA who own a large portion of the market site and Barry Pearce and David Rayson, the original architects of the market building/structure.

On considering the evidence, the Registrations and Reviews Committee made the determination that the place was not to be included in the Victorian Heritage Register and referred the Recommendation and submissions to the VPA for consideration for an amendment to the *Darebin Planning Scheme* to include the place in the Heritage Overlay.

GJM, Preston Market – Peer Review of Heritage Study Documentation, 2018, p2

<sup>13</sup> GJM, p4

Executive Director of Heritage Victoria, Recommendation of the Executive Director and Assessment of cultural heritage significance, pp5-24

Executive Director of Heritage Victoria, pp1-4

In conclusion, the Committee stated that:

 'The committee considers that there is sufficient evidence that the Place may have cultural heritage significance at a local level to justify the Heritage Council referring the Recommendation and submission to the VPA for consideration for an amendment to the Darebin Planning Scheme'. 16

- The Committee also gave particular consideration to the technical significance of the Place's space frame roof
  structure and load-bearing tilt frame up concrete walls. The committee was of the view 'that the technological
  achievements associated with the design and construction of the Place may strongly indicate cultural heritage
  significance at a local level, to the extent that internal controls may be warranted'.<sup>17</sup>
- Further, the Committee was 'of the view that internal controls may be required in order to conserve the Place's cultural heritage significance at a local level, and that a Heritage Overlay is the most appropriate planning mechanism to enact such controls'.<sup>18</sup>

# Barry Pearce and David Rayson, Submission to the Heritage Council of Victoria, 2019

Two of the three designers of the market building, Barry Pearce and David Rayson, submitted evidence to the Heritage Council hearing. It should be noted that this evidence presented new information that had not been considered by Context in their initial 2018 review.

The content of their submission is discussed in further detail elsewhere in the report but in summary:

- Their submission discussed the aesthetic, architectural and technological aspects of the original Preston Market building at the time of its conception and construction to assist in the evaluation of the place's potential heritage significance.
- In their submission, they state that they market was 'the first post-war retail market to be created in Melbourne' and the 'first significant market that was a private venture'. 19
- In order to achieve the desired structural aesthetic 'it was vital to ensure the structural wall and roof components did, indeed, provide a visual panorama ... the space frame provided a relatively transparent, delicate, geometrically interesting geometry'.<sup>20</sup>
- They noted that one reason for including a space-frame roof system was to capture the 'visually interesting geometries that continually interplay as the position of the observer moves'.<sup>21</sup>
- The put forward the position that:

The system based upon a strong contemporary design philosophy that had gained little academic or practical exposure locally. The design approach was to become a significant design direction much later in Australian architecture. The Preston Market design precede the analysis by computer aided design by decade. Conceptual design, detailed design, prototype-fabrication, structural testing, integration into the total building system, transport and erection all needed to be pioneered. This was a world first, developed from first principles and on a significant scale.

Heritage Council Registrations and Reviews Committee, Determination of the Heritage Council: Preston Market, 2019, p1

Heritage Council Registrations and Reviews Committee, p26

Heritage Council Registrations and Reviews Committee, p26

Barry Pearce and David Rayson, Submission to the Heritage Council of Victoria, 2019, p4

Pearce and Rayson, p4-5

Pearce and Rayson, p9

#### 1.4 Methodology

The methodology adopted in undertaking this review of the potential heritage values of the Preston Market was in accordance with the processes and criteria outlined in the Australia ICOMOS Charter for the Conservation of Places of Cultural Significance, known as the Burra Charter (Australia ICOMOS, 2013). The key tasks included:

- Site inspections,
- Review of the various reports and assessment recently prepared about the site,
- Some additional historical research,
- Analysis of the extant fabric to determine its degree of intactness,
- An assessment of the significance of the site based on the research and the extant fabric, and with reference to the relevant HERCON criteria.

### Acknowledgements 1.5

The authors are grateful for the assistance provided by City of Darebin officers.

#### **SITE DETAILS** 2

#### 2.1 **Summary History**

Considerable historical research has been undertaken about the Preston Market for the aforementioned earlier reports and a summary overview of the site development from the mid-20th century is outlined in the following table. Some additional research has been however undertaken to provide greater clarity about some aspects of its development.

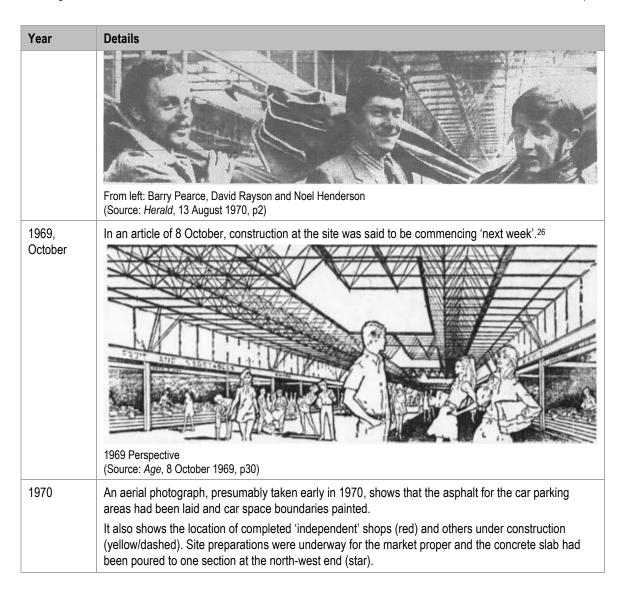
Year	Details		
1954	Preston became one of 5 district business centres in the Melbourne Metropolitan Planning Scheme that had been defined to regulate the city's urban sprawl.		
1960	The pre-existing Braodhurst Tannery, which had operated on the site since 1888, was closed.		
1964	Demolition of the pre-existing buildings on the site said to have been completed.  Real estate agents Johnson & Sons (44 Derby Street, Collingwood) bought the site. <sup>22</sup>		
1965	The land was subdivided into building 39 lots with over half of the land (outer parts) left for car parking. <sup>23</sup> Drawing prepared 'Construction of footpaths and parking areas, the Centreway Shopping Centre' by Little & Brosnan, Civil engineers & Surveyors. <sup>24</sup>		
1965-69	8 allotments sold in the northern part (nos 1, 3, 7, 8, 9, 10-11, 15). These allotments were not within the part of the market with the space frame roof.  MURRAY  89'54'  N. I. S  I. S  N. I. S  N. I. S  N. I. S  N. I. S		
1969, May	250 stalls were being advertised. <sup>25</sup> The slow take up of individual allotments possibly caused the owners of the site to take on the development of the market themselves.		
1969	Structural Consortium, a group of three recent UoM graduates – Barry Pearce (architect/engineer), Noel Henderson (quantity surveyor), and David Rayson (building designer) - were engaged to design the Preston Market (proper).		

Certificate of Title, vol. 8522/folio 117 (east of Mary St) Subdivision Plan, LP68044, approved 25.02.1965 22

<sup>23</sup> 

<sup>24</sup> Held at SLV

<sup>25</sup> 'New Preston Market', Age, 16 May 1969, p21



Year	Details	
	Aerial, 1970 <sup>27</sup> (Source: Landata, Melbourne 1970 project, run 30, frame 139)	
1970, June	'Preston Market opening soon' 'free car park – 1000 cars'. <sup>28</sup> By this time, many stalls had been let – 46 fruit, 19 butchers, 15 deli, 10 specialty foods, 8 refreshment, 4 poultry, 4 fish (106 food related) and 130 miscellaneous, with 10 available.	
1970, August	The market was officially opened on 13 August by Chief secretary and Deputy Premier, Sir Arthur Rylah. <sup>29</sup> On Saturday 15 August, a conservative estimate of the attendees was 20,000 with five police required to direct motorists all morning. <sup>30</sup>	
1973	Preston Market P/L became the proprietor of the remaining 31(?) allotments.  The company also retained the car parking areas and various streets, except Mary Street, consolidated into one title. <sup>31</sup>	
1981	The following aerial shows that the walkways remained intact at this stage that is, they had not been covered over. It shows the extent of the original linking sections of roof at the ends of each block, and the middle of some blocks.	

<sup>27</sup> The date on the aerial suggests October but it must be early in the year

<sup>28</sup> 

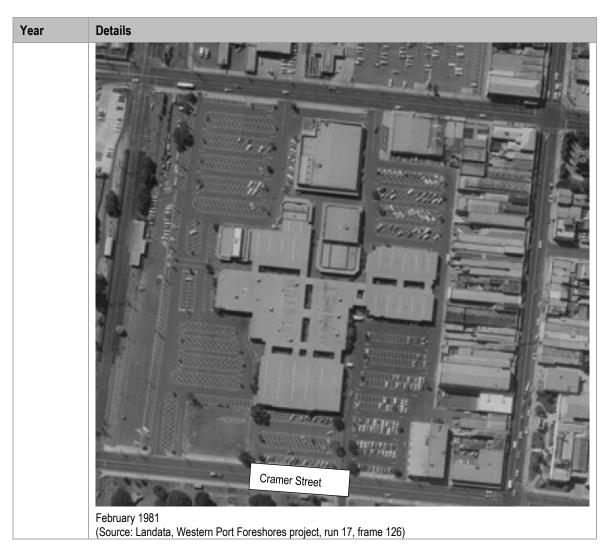
<sup>29</sup> 

Age, 20 June 1970, p47

John Sorell, 'At just \$2 mil. – a market bargain', Herald, 13 August 1970, p2

'To market, to market at Preston', Sunday Observer, 16 August 1970, p4. At that time, Saturday trading would have stopped about 30

<sup>31</sup> Certificate of Title, vol. 8981/folio 583



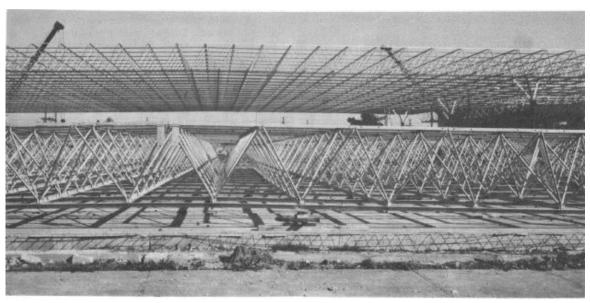
### 2.2 **Original Construction and Details**

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The following is a summary of the key construction details and materials employed according to a contemporary article:32

- Six other/separate buildings linked to the central market.
- Market proper consisted of 6 separate buildings with an area of 100,000 sq ft (0.92 ha).
- Prefabricated steel pyramid shaped units of the space frame assembled on site 1.2 metres or 4ft wide (base) and 1.07 metres or 3ft 6ins (high), designed and supplied by Structural Steel P/L, pyramid module had recently (previous 18 mo.) been developed by Bruce Young at the Sunshine factory. 220 tons of steel, another 116 tons (columns, etc.?). Inverted pyramids (4' x 4' x 3'6" deep or 122 x 122 x 107 cm) attached at base between a structural angle bottom chord system forming a two way grid structure. 6,631 modules at 160 module produced per day (41.5 days), 105 delivered at a time. Assembly into sections easily performed by unskilled labour at ground level to create units measuring 124' x 132' (37.8 x 40.2 metres), lifted by cranes into place.

<sup>&#</sup>x27;Preston Market', Foundations: The Journal of Architecture, Engineering and Building, issue no. 70 (1970, pp2-19)



A completed roof section on ground prior to erection into roofing frame (Source: 'Preston Market', Foundations, no. 70, p14)

- Steel hot dip galvanised frame units by Johns & Waygood, after fabrication by Structural Steel, said to be 'a distinct advantage' to being undertaken before fabrication.
- All concrete work undertaken by E Corsi, East Kew.
- Pre-cast external concrete panels, cast on site, tilted into slot foundation 5 (or 5½) inches thick (12.7cm), a third of walls (10,000 sq. ft or 930 sq. metres). Lifted by crane.



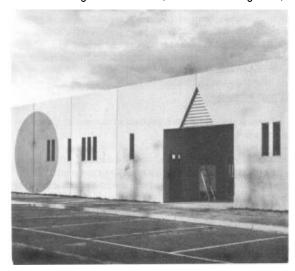
Socket/slot foundation for cantilevered walls (Source: 'Preston Market', Foundations, no. 70, p10)



Lifting wall panels into position (Source: Preston Market', Foundations, no. 70, p11)

> Internal partition walls – 2 inches (about 5cm) of thick polyurethane between two sheets of asbestos cellulose board with galvanised steel sections moulded onto all edges about 5-51/2 (about 16,000 sq. ft or about 1500 sg. metres). Panel walls lifted into place after the roof had been erected on bearing walls and steel columns. They were fixed by an in-situ concrete tie to the floor slab and bolted back to the roof structure. Foundations to these walls is a continuous strip footing. Brownbuilt U-Form load bearing building panels were employed as lighter and could be installed by two men.

> Triangular door heads, cantilevered wing walls, and slotted vent openings (for toilets) formed in the concrete.



Section of completed western wall With slot windows, painted circle (Source: 'Preston Market', Foundations, no. 70, p12)



Brownbuilt internal partition walls (Source: 'Preston Market', Foundations, no. 70, p19)

- ½ inch tolerance gap between panels sealed with Mastic on a flexible backing material.
- Conduits and ducts cast into external and internal walls.
- 70 tons of Kliplok galvanised steel roof sheeting, manufactured by Lysaght and installed by Woodroffe Roofing P/L.
- Fascia Lysaght Trimdeck, Zenith blue, a special colour run manufactured in Port Kembla.
- Suspended ceilings, pre-painted 4' x 2' (122 x 61 cm) Victor Plaster Board Panels on Rondo system.
- 'Conditionaire' air curtains, installed in the meat (and deli?) halls.



Earle Street in foreground, along The Strand (Source: 'Preston Market', Foundations, no. 70, p9)

#### 3 **ANALYSIS**

#### 3.1 **Extant Fabric**

The Preston Market is a large complex of inter-related parts at the centre of a large site and surrounded by open car parking. Whilst much of the market has the metal space frame to support the roof cladding, there are also some parts to the northern end without the space frame which consist of groups of independent shops, both single and two storey (shaded red on the following aerial). These sections presumably have timber-framed roofs and were built at the same time, 1969-70.

## **Market Proper**

The space frame sections are single storey with a flat roof clad in the original profile sheet metal (Kliplok). The space frame extends/cantilevers over the walkways (streets) such that no posts were initially required in these areas. As was noted by the architects ... 'All the stalls are under cover, but the walkways between are open to the sky'.33 The space frame is supported by steel posts with four struts (two of which are visible along the walkway). Along the walkways the space frame is boxed-in (canted to follow the line of the spaceframe over the shops) with metal sheeting.



East end of the Centreway Gutters and some down pipes have been introduced to this section along the walkway Non-original tensile membrane canopy

John Sorell, 'At just \$2 mil. - a market bargain', Herald, 13 August 1970, p2



Original presentation Space frame with corner post and three visible struts Boxed-in above shops



Original fabric Post with two struts Highlight glass panes painted green

The open walkways (the Centreway, the Strand, Earle Street, part of Mary Street) have been filled in with two types of canopies - either tensile membrane or Perspex sheeting or the like, both evident in the following aerial. The supporting steel structure associated with each type of canopy, while separate to the original, interrupts its uncluttered, clear span format. The connecting sections of space frame (across the walkways) have been removed to accommodate these alterations. Screens have also been introduced at the end of most of the walkways.



Current aerial showing infilling of the walkways - two types (membrane and sheeting [checkerboard]) readily identified Original, non-spaceframe sections (red) Spaceframe sections (unshaded) Recent additions (yellow, dashed) (Source: Nearmap, 11.09.19)

Gutters and PVC downpipes have been introduced to most inner edges of the cantilevered sections of the space frame. It is not confirmed where the downpipes were initially located but changes to the flow may have been required when the connecting sections of spaceframe (across the walkways) were removed and the open sections of the walkways were infilled. The more concealed, rectangular profile downpipes may be original.

Beneath the space frame, the market includes open sections (fresh produce at east end of the Centreway and ancillary items south of Earle Street), enclosed food halls (meat and delicatessen), and other premises (especially along the Centreway). The highlight glazing is intact but has been overpainted (green, blue). The food halls have full height glazing and recessed entries with some louvred panels. The original square pattern concrete paving is largely intact though has been affected by the introduction of walkway canopies, etc. To the food halls, the original suspended ceiling at least partly survives as do some of the original air conditioning units (curtains). The original colour scheme was red to the steel-framing, a version of which at least survives in part of the meat hall.



Meat hall with suspended ceiling



Original air conditioning curtains



Full height glazing to food hall, highlights painted blue Note original concrete, square pattern



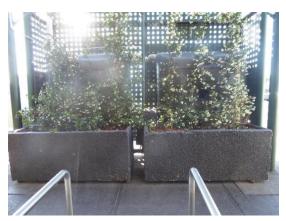
Section of original unpainted, sand-blasted concrete Adjacent is the original metal fascia

The outer tilt slab concrete walls, originally with a sandblasted finish which survives in part to its upper reaches, has been mostly painted purple with multi-coloured/mural sections at the southern end (either end of Earle Street). The original pattern of openings in the external wall survives - large with triangular heads and slots for the toilets - though one of the former has been infilled (Mary Street, south end).

A garden bed with two original (relocated) conical planters exists along Mary Street, either side of the east end of Earle Street. Two rectangular planter boxes of the same material (pebble mix finish to concrete) survive at the west end of The Centreway.



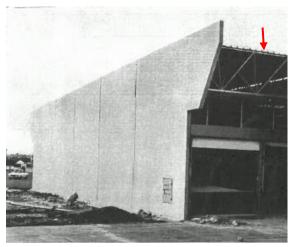
Original conical planters and garden bed to Mary Street



Two likely original planter boxes at west end of the Centreway



Garden beds, Mary Street Note painted circles (Source: B Crisp, 'Tilt-up Construction in Australia', Constructional Review, Nov.1970, p58)



A section under construction Profile of Kliplok roof cladding evident (Source: B Crisp, 'Tilt-up Construction in Australia', Constructional Review, Nov.1970, p60)

# **Independent Shops**

The original remaining independent shops at the north end are a combination of single storey (typically adjacent to the space frame sections) and two storey. Externally they probably all had face brick finish originally but most sections have been either painted and/or rendered. These sections have cantilevered awnings and parapet sections with Kliplok sheeting (as for the roofing to the space frame areas). These sections are generally less distinctive and/or more altered than the market proper.



Original shops, north-east, now rendered with Kliplok to parapet



West, original shops with some infill (arrow)

There are also some non-original sections, either replacement fabric (Centrelink building at northern end/Murray Road) or additions (Aldi supermarket at southern end/Cramer Street and a few ancillary smaller areas).

#### 3.2 Intactness

The following, iconic photograph taken along the Strand (looking west from the Centreway towards Earle Street) soon after the market was opened captures the original design, most elements of which survive. Some more ephemeral components have been removed. Whilst the intactness is high, the integrity (or presentation) has been reduced by various changes, but many of which are readily reversible.



'Preston Market with people located in Courtyard surrounded by shops' (Laurie Richards Studio, 1970) (Source: Museum Victoria, MM55441)

# Original Elements which generally survive:

Most of the key significant elements of the Preston Market survive as follows, (in addition to the Independent Shops which are contributory):

- Layout,
- Space frame,
- Steel supports with struts some sections retain a red painted finish, though most are painted green or blue,
- Tilt slab concrete walls though only a few sections of the original sandblasted finish at height survive,
- Roof cladding with translucent strips to some enclosed areas,
- Wide, angled metal bulkhead/fascias (below roof, above windows)
- Highlights (now painted over) and original window framing,
- Spandrel/band (some red painted sections survive) separating highlights from lower windows (cover over beams).

Window and door framing to enclosed areas (meat hall, delicatessen), some vents,

- Metal fascias to cantilevered sections of space frame,
- Concrete paving in square format.



A contemporary photograph in approximately the same location December 2019

## Elements which have been removed/altered:

- Connecting sections of space frame across the walkways (possibly affecting roof drainage),
- Large painted circles to the concrete walls, generally either side of entry to walkways/streets,
- External signage identifying the place has been replaced,
- Freestanding light fixtures cuboid heads with coloured circle and 'Preston Market' labelling,
- Most tapered cylindrical concrete planters,
- Timber slatted bench seating and rubbish bins,
- Triangular signage for sections,
- Red bunting flags to space frame square or triangular (alternating in some sections).

# Infill/additional elements:

- Some service areas,
- Entry screens at ends of most streets,
- Walkways with tensile/membrane roof (circa late 1980s),
- Walkways with flat translucent sheeting (recent),
- Gutters to edge of space frame roof along some walkways,

PVC downpipes in front of steel posts which extend through space frame to eave gutters,

- Metal downpipes usually partly concealed,
- Cable trays and wiring.

#### 3.3 **Comparative Analysis & Precedents**

Much has been said in the earlier reports about the development of the new typology of the suburban shopping centres at this time such as Chadstone in 1960 and Northland in 1966, the latter being the first fully air conditioned environment in the manner of contemporary American precedents. The original iteration of Chadstone however is best defined as a (suburban) shopping mall, a typology that was first introduced into Victoria during the mid-1950s.

Both Chadstone and Northland shopping centres were designed by the prominent and long-standing architectural practice of Tompkins, Shaw & Evans, which had evolved from H W & F B Tompkins and who had designed department stores and the like in central Melbourne.34 By inference, the subject site has been said to be a throwback to an earlier type - the traditional market. It however can be thought of as a hybrid that combines aspects of the then modern shopping centre format (centralised location on a large site surrounded by car parking to the periphery and airconditioned sections [food halls]) and the traditional market (open stalls). The use of the space frame, a new/progressive technology in Australia, however provided a column-free, flexible environment which distinguished the Preston Market from historic market precedents.

#### 3.3.1 Contemporary Shopping Complexes – Victoria

## **Shopping Malls**

The (suburban) shopping mall is a pedestrian only zone with car parking displaced to rear/periphery as compared to traditional shopping strip with kerbside car parking.

In Melbourne, the Housing Commission of Victoria was responsible for the first shopping mall at Bell Street, Heidelberg West of 1954-56 and another soon after in 1958 at Olsen Place, Broadmeadows, 35 The Bell Street Mall has a wide pedestrian zone flanked by single and two storey buildings with wide cantilevered canopies providing weather protection. The mall is remarkably intact although is presented poorly and is in a forlorn state.

The northern/non-space frame part of the Preston Market site, where there are various independent shops, broadly conforms to this format, though in part directly faces the car parking area.







Bell Street, December 2019

## Chadstone

When completed, Chadstone originally was a combination of a large department store (Myer) anchoring the site with an extensive mall section attached. It was built by the Myer Emporium, who added a third storey in 1963 with no other

J Beeston, 'Tompkins, H W & F B', in P Goad & J Willis, The Encyclopedia of Australian Architecture, pp707-708

<sup>35</sup> Heritage Alliance, Survey of Post-War Built Heritage in Victoria, 2008, items 028-005 and 028-006.

major changes said to have occurred until 1984, when the open-air mall was enclosed. The year prior, ownership had been taken over by the Gandel Group.36



'Chadstone Shopping Centre' (W Sievers, 1962) (Source: SLV, H2003.100/561)

Early photographs depict the extent and detail of the long open air mall. In part it was two levelled, also with exposed galvanised steel deck roofing employed to the covered walkways in front of the shops. The wide walkway roofs were supported by concrete framing and posts with various planters and other elements to the central areas rather than the unencumbered, support-free walkways of the Preston Market built ten years later.

Shopping Malls, eMelbourne website, http://www.emelbourne.net.au/biogs/EM01369b.htm, accessed 13.12.2019



'Lysaght KLIP-LOK galvanised steel deck used as ceilings at Chadstone Shopping Centre' (Wolfgang Sievers, 1963) (Source: SLV, H88.40/1005)

# **Northland**

When completed in 1966, Northland was said to be 'unique with its completely covered malls radiating from a central hub.' It was also developed by the Myer Emporium and later acquired by the Gandel Asset Management group. Major alterations and additions were undertaken during the early 1980s and mid-1990s.<sup>37</sup> Initially natural lighting to the malls was limited to clerestory/highlights above the shops but skylights were subsequently introduced. Covered walkways were used to link the bus stop to the shopping centre.38



Northland under construction J Patyens, 08.11.65 (Source: Museum Victoria, mm 137204)



Northland Shopping Centre, Murray Road, East Preston Wolfgang Sievers, 1967 (Source: SLV, H88.40/1017)

Allom Lovell & Assoc., 'Northland Shopping Centre', City of Darebin Heritage Review: Preston, pp21-23 38 Evident in a 1967 image by Wolfgang Sievers - SLV, H88.40/1019.

#### 3.3.2 **Shopping Complexes - International Precedents**

# Lijnbann, Rotterdam

The most famous European precedent for a Modernist shopping mall was the Lijnbann shopping centre, opened in 1953 in Rotterdam, whose historic centre was substantially destroyed during WWII. Designed by Jo van den Broek of the firm Van den Broaek en Bakema, it was the first purpose-built car-free, pedestrian street in Europe.39

Lijnbann was comprised of consistent two storey buildings in regular blocks with wide pedestrian canopies, which were only supported by poles at the connecting sections. Like the Preston Market, a series of open courtyards with some plantings were created to the wide pedestrian zones. The paving was laid out in a decidedly geometric manner with a rectangular pattern.



Lijnbaan shopping mall, Rotterdam

(Source: https://wederopbouwrotterdam.nl/en/articles/lijnbaan-shopping-precinct)

https://wederopbouwrotterdam.nl/en/articles/lijnbaan-shopping-precinct, accessed 13.12.2019

## Southdale Centre, USA

The first suburban, enclosed shopping centre was the Southdale Centre in Edina, Minnesota, which opened in 1956 'A pair of department stores anchored each end of the climate controlled complex surrounded by thousands of car parking spaces.'40 It was designed by the Austrian-born architect Victor Gruen who sought to liberate American cities from 'the terror of the automobile', however although he envisaged such shopping centres being the core of vibrant communities, the format encouraged the type of sprawl he wanted to avoid.41



Southdale Centre Daytons, Edina, MN 1956 (Source: http://mallsofamerica.blogspot.com/2007/02/southdale-center-daytons.html)

#### 3.3.3 **Space Frame**

Space frame technology was employed in large, often high end, commercial or public International style buildings during the late 20th century where large open spans were required. At that time, it had strong associations with progressive, computer-generated design which was in its infancy as a medium.

The Triodetic system was the first proprietary system available in Australia, which was developed in 1953 by the Royal Canadian Air Force. The employment of the technology at the Preston Market is an early usage in Melbourne and Victoria.

<sup>40</sup> Leanna Garfield, '25 incredible photos revealing the history of America's first modern shopping mall,' '20.08.17 (via www.businessinsider.com.au, accessed 13.12.2019)

<sup>41</sup> https://interactive.wttw.com/tenbuildings/southdale-center, accessed 09.01.20

## **Collins Place**

Space frame technology was employed to the retail section at Collins Place, Melbourne, which was designed by Harry Cobb of internationally renowned, New York based firm of I M Pei & Partners, in association with Melbourne based firm of Bates Smart McCutcheon. The complex had a long gestation in that it was designed in 1970 but not completed until 1981.<sup>42</sup> The Mero proprietary system, developed in Germany in 1943, was employed. It consists of individual tubular members connected at ball shaped node joints.43



Collins Place

(Source: https://www.collinsplace.com.au/our-place, accessed 09.01.2020)

# **Other Sites**

Other known buildings in Melbourne where space frame technology has been employed include:

- Arts Centre tower, Southbank or Theatres building designed by Roy Grounds, opened in 1984.
- Forecourt about the Melbourne Central Office tower at the southern end of Melbourne Central complex along Elizabeth Street. This complex was designed by renowned Japanese architect Kisho Kurokawa 1986-1991.
- Betting ring at the Caulfield Racecourse (1990s).

<sup>42</sup> https://en.wikipedia.org/wiki/Collins\_Place, accessed 09.01.2020

<sup>43</sup> https://en.wikipedia.org/wiki/Space\_frame, accessed 09.01.2020

#### 3.3.4 Markets

The Preston Market relates to traditional markets in that it has four distinct zones - fruit and vegetable, meat, delicatessen, and other (non-foodstuffs). Earlier markets were typically established and managed by the local council.

In Melbourne, the most famous example is the Queen Victoria Market (HO7), which has origins dating back to 1859. It was one of three established in the city area during the 19th century, with the other two (Eastern and Western) demolished during the late 20th century.44 The facilities at the Queen Victoria market primarily evolved and expanded over seven decades, from 1869 to the late 1930s. The Meat Hall on Elizabeth Street, is the earliest of the remnant buildings though its extant façade dates to 1884. The sheds, 1878 to 1930s, follow a consistent format of elongated gable roof forms, open to all sides with metal trusses and timber posts. The dedicated Dairy Produce Hall (delicatessen) dates to Interwar period and has a sawtooth roof. The complex is also defined by several groups of row shops to its perimeter along Elizabeth and Victoria streets, dating to either the Victorian or Interwar period.<sup>45</sup>



Meat Hall, Elizabeth Street - body 1869, façade 1884





Typical market shed – late 19th century

44



Shops, Elizabeth Street - late 19th century

The Eastern Market was replaced by the Southern Cross Hotel, also subsequently demolished. The Western Market was replaced by the MLC building, currently being replaced.

<sup>45</sup> RBA Architects, City North Heritage Review, Melbourne (vol.3), 2014, app. E, Citation for HO7 (Queen Victoria Market Precinct)

Summary details about the other major markets in Melbourne.

Dandenong - (no HO) established in 1866 but relocated to current site in 1926. It was redeveloped in 1975 and again in 1996.46 There are dedicated delicatessen and meat areas, with a large open area for other produce under gable roofs with steel portal frames and the like.

- South Melbourne (no HO) although established in 1867, the fabric mainly dates to late 20th century. Car park added above in 1972, and roofed in 2012.47 The southern, single storey section may be older and has a verandah with 19th century style cast iron elements.
- Prahran (HO24) erected in 1891, has a part two/part three storey Queen Anne style entry building. It was extensively redeveloped between 1976 and 1982.48 The main area has a sawtooth roof with posts. There are dedicated, air-conditioned delicatessen and meat areas, with a large open area for other produce.
- Camberwell (no HO) early 1930s, previously the site of a horse carriage factory. A fire in 1992 damaged most of the market.<sup>49</sup> Two storey Interwar period frontage to Riversdale Road, single storey sheds to rear. It has less defined zones due to its smaller scale.
- Footscray (no HO) 1980, three storey, concrete building with car parking levels above the ground floor market zone.

It is apparent that although five markets were established much earlier than the Preston Market, by virtue or remaining intact to its period of development, where others have been extensively redeveloped during the late 20th century, Preston is probably the second oldest market in terms of constituent fabric, after the Queen Victoria.

The Preston Market has a distinct design with the wide walkways – partly covered by open centrally (now enclosed) – so that there are generous circulation spaces. Most of the other markets have a rudimentary design, especially those with upper level car parking such that they are undistinguished. Preston Market, along with Queen Victoria market, have a distinct character, imparted by their constituent fabric, which sets them apart from the others and designates them more as 'destinations'.

## Conclusion

Overall, the design of the Preston Market, especially the planning with wide, part protected walkways with no interruptions achieved by use of the progressive space frame, which allowed for extensive cantilevering imparts a distinct character, is unique. The layout of the site reflected late 20th century, suburban shopping centre design and the need to accommodate extensive car parking zones so that its is centrally located on a large site. Commensurate with contemporary shopping centre design, air conditioned areas were provided where necessary – meat and delicatessen halls – but a traditional market format was retained elsewhere though with a relative abundance of space and light – essential considerations in late 20th century Modernist design.

<sup>46</sup> https://dandenongmarket.com.au/market-history/, accessed 31.01.2020

<sup>47</sup> https://southmelbournemarket.com.au/150-years/history/, accessed 31.01.2020

<sup>48</sup> VHD. Prahran Market

<sup>49</sup> https://www.camberwellfreshfoodmarket.com.au/about-us/, accessed 31.01.2020

# FINDINGS & RECOMMENDATIONS

#### 4.1 Introduction

This section of the report relates to the assessment of significance and some preliminary recommended approaches to potential change, which is likely in the near future, to retain the main aspects of significance if substantial change were to occur.

#### 4.2 **Assessing Significance**

For heritage professionals generally in Australia dealing with post-contact cultural heritage, the process outlined in the Burra Charter underpins the approach to heritage assessment and conservation adopted by the authors of this report.

### **Burra Charter**

The methodology adopted in the assessment of the significance (or heritage values) has been in accordance with the process outlined in the Burra Charter (or The Australia ICOMOS Charter for Places of Cultural Significance). As outlined in the Burra Charter, the criteria considered include aesthetic (including architectural), historical, scientific (or technical), social and spiritual values. These values have been translated into the HERCON Criteria, discussed below.

#### 4.3 Applying the Heritage Overlay

'Applying the Heritage Overlay' August 2018 (Planning Practice Note 1) provides guidance about the use of the Heritage Overlay, including the following:

- What places should be included in the Heritage Overlay?
- What are recognised heritage criteria?
- Writing statements of significance.

The practice note indicates that the HERCON criteria are to be employed when assessing heritage significance.

# **HERCON Criteria**

These widely used criteria were adopted at the 1998 Conference on Heritage (HERCON) and are based on the earlier, and much used, Australian Heritage Commission (now Australian Heritage Council, AHC) criteria for the Register of the National Estate (RNE).

The HERCON criteria are essentially a rationalised (more user-friendly) version of the AHC Criteria (which included different sub-criteria for cultural or natural heritage). It is also noted in the aforementioned practice note that: 'The adoption of the above criteria does not diminish heritage assessment work undertaken before 2012 using older versions of criteria.' The criteria are outlined in the following table.

Criterion	Definition
А	Importance to the course, or pattern, of our cultural or natural history (historical significance).
В	Possession of uncommon, rare or endangered aspects of our cultural or natural history (rarity).
С	Potential to yield information that will contribute to an understanding of our cultural or natural history (research potential)
D	Importance in demonstrating the principal characteristics of a class of cultural or natural places or environments (representativeness)
Е	Importance in exhibiting particular aesthetic characteristics (aesthetic significance).

Criterion	Definition
F	Importance in demonstrating a high degree of creative or technical achievement at a particular period (technical significance).
G	Strong or special association with a particular community or cultural group for social, cultural or spiritual reasons. This includes the significance of a place to Indigenous peoples as part of their continuing and developing cultural traditions (social significance)
Н	Special association with the life or works of a person, or group of persons, of importance in our history (associative significance).

#### 4.4 **Assessment of Significance**

Having reviewed the earlier assessments and undertaken further research and analysis as outlined in this report, the Preston Market has been confirmed as being of local significance to the City of Darebin. The Preston Market has been determined to be of local historical, aesthetic, technical and social significance. As such, it is recommended that the appropriate level of heritage protection for the site is sought/enacted.

The historical and social significance of the Preston Market has hitherto been widely accepted and is not contested. In the following summary the authors have mainly relied upon earlier research, especially by Context, in relation to these aspects of the significance. However, there has been some uncertainty about the significance associated with the actual fabric of the place. As the site is a largely intact and good example of a market and/or shopping mall influenced by contemporary Modernist design and employed the latest technology (space frame and tilt slab concrete construction), it is clear that the site is of aesthetic and technical significance, and the review by the structural engineer Mark Hodkinson has confirmed this. Furthermore, the progressive approach was adopted in order to achieve a stated aesthetic (flexible and unconstrained) and to meet the budgetary constraints of this ambitious project being undertaken by a new private developer, as compared to a much larger operation such as the Myer Emporium (for Chadstone and Northland).

Criterion E (aesthetic significance) has been adopted primarily in regard to the fabric/design, in conjunction with Criterion F (technical significance), rather than Criterion D (representative significance). Although the significance of a place can relate to both Criteria D and E such places tend to be complex (and develop over a period of time) or be a precinct. As the Preston Market is a distinctive design it is more appropriately attributed with aesthetic significance. It is representative of some aspects of traditional market design (such as the open-air sections), however the format was re-interpreted/updated in a contemporary manner and combined with other aspects of current approaches to shopping mall/centre design (peripheral car parking areas, some air-conditioned areas [food halls]).

## Historical Significance – Criterion A

- Earlier phases of development on the site, in particular grazing/farming and Broadhurst Tannery (late 19th century to 1960) relate to broader development in the Preston area, although no fabric from these phases survives.
- Reflects the growth of Preston in the post-WWII period when many immigrants were attracted to the area, and different waves have continued to be. The market was effectively a microcosm of the community as it reflected the cultural diversity of the area in the range of stallholders, etc., and provided economic opportunities for migrants to establish small businesses.
- Opened in 1970, it was the first market to have been constructed in Melbourne since the Interwar period (Camberwell Market circa 1933). Unusually it was established as a private venture, whereas earlier markets were generally established by the local council. The short-lived Brunswick Market (1930-33) was another private operation.

# **Aesthetic Significance – Criterion E**

Designed in 1969 by the Structural Consortium, a group of three recent university graduates, the Preston Market reflects the tenets of Modernism to create well-planned, free flowing, uncluttered and functional spaces that were highly flexible by comparison with traditional shopping complexes. It is a distinctive design especially in the extensive use of space frame technology.

The original design of the Preston Market is largely intact, and although partly obscured by later alterations (painting of the glazing and concrete walls) and additions (the supports used for the canopies to the walkways), it remains legible. Key aspects that remain largely intact are the planning, space frame and steel supports used to support the roof, glazing to the stalls/food halls, and the outer concrete walls. Contemporary colour photographs emphasise the strong use of colour, especially red, which remains (though possibly varied) to a few areas. Some ancillary items, relating to the landscaping, also remain intact.

## **Technical Significance - Criterion F**

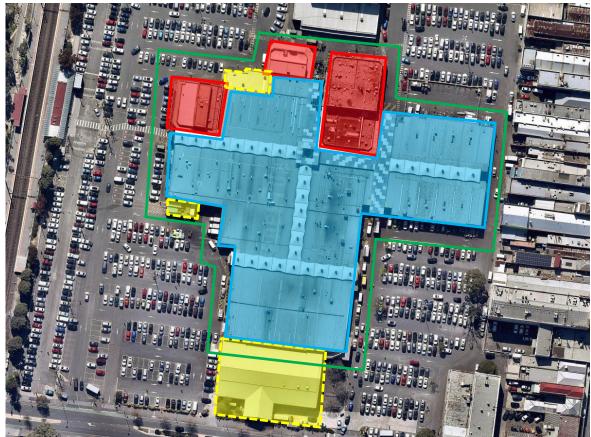
- The Preston Market is the first instance, and probably most extensive use, of space frame technology in the State. It is also an early example of computer-aided design, necessary to space frame technology. With the brief to create an unencumbered space, the designers settled on the space frame to achieve this end as it could be extensively cantilevered and need relatively few supports. With no affordable proprietary system available, a local company Structural Steel consortium were engaged who had been experimenting with/developing a pyramid module. Local ingenuity was thus employed to develop this system utilising readily available and inexpensive components, though nonetheless with a high quality control (for instance, the steel was hot dip galvanised after assembly of the pyramidal units to achieve a long lasting finish - and the steel remains in good condition 50 years later).
- At the Preston Market, (pre-cast) concrete tilt-slab construction was employed for the outer walls, which was an early use of the system in Victoria. Whilst it had been used in USA and New Zealand, tilt-slab construction had limited application in Australia. Its benefits related to labour saving costs and the potential to relocate panels.

## Social significance - Criterion G

- The Preston Market is strongly identified with the municipality in particular, and the northern suburbs more broadly, and its communities of shoppers and stallholders, especially migrants (from various waves), many of whom have long associations with the place. The market is mainly used by people living in the nearby area, and is defined as a local 'secret', as compared to other markets with a higher profile and which attract tourists/shoppers from areas further afield.
- The Preston Market has become an informal and inclusive/welcoming community space and allows for the sharing of cultural traditions and practices, especially those associated with cuisine. The generous open spaces/walkways allow for extensive social interaction and are well used as meeting places so that a vibrant atmosphere is created (within the bustling shopping context) and there is a strong sense of ownership by the community. The stallholders themselves form a closely knit sub-community and the market provides opportunities for them to proudly express their cultural identity and values – as such it is a safe haven.
- The Preston Market has continued to be a locally popular destination for nearly half a century and strong relationships between shoppers and stallholders across generations have formed over this period. The traditional, largely open air format of the market has been well supported from the outset in contrast to the evolving trend during the late 20th century for new suburban shopping centres to fully enclosed/airconditioned.

# **Extent of Heritage Overlay**

A heritage overlay should cover the remaining original sections of the Preston Market with a nominal curtilage of 10 metres. It would not be necessary to include all the car parking areas.



Significant - blue Contributory - red Non-contributory –yellow Nominal extent of overlay - green (Source: Nearmap, 11.09.19)

#### 4.5 **Potential Change**

The following general guidance for potential change should be considered preliminary as it is constrained by the lack of detailed assessment that such consideration should rely upon. The detailed assessments and/or documents relating to development options would likely include the following documents which could be undertaken in a staged manner.

- Conservation management plan (CMP),
- Structural analysis and/or modelling,
- Master plan.

On the basis of its significance as outlined above, it would be crucial to largely retain the significant elements and key aspects of the design and planning. The principal elements are discussed in the following table

Element	Discussion	Level of significance
Space frame	Generally retain	Significant
Layout – wide walkways	Retain sense of open air walkways	Significant
Concrete walls (outer)	Generally retain	Significant
Independent shops at the north end	Potential to remove the independent shop buildings but replacement sections should be integrated in a similar manner with the space frame sections (for instance, employing some of the same material palette as is the currently case)	Contributory

There might be scope to reduce its extent of the Preston Market as its footprint is large. As such, a preliminary, cautionary estimate would be that removing up to about 25% of the significant section (with space frame roof) might not dramatically affect the significance of the place. All parts of the space frame are significant even those sections that have not been visible from the outset as they have had a suspended ceiling concealing them, that is the air-conditioned food halls (meat and delicatessen).

In any retained/altered version of the Preston Market, it is recommended that distinctive elements of the design which reflect its Modernist ethos and that which have been removed/altered or obscured are reinstated. In particular, several alterations have reduced the open and light-filled format of the original design. As such, the following are recommended:

- Review the design of the now fully enclosed walkways. Although the advantages of enclosing the walkways are self-evident, more sympathetic options should be explored to remove, at least partly, but preferably fully, the extent/need for vertical supports along the middle of the walkways. Furthermore the sections with tensile membrane canopies are relatively dark and so are at odds with the light-filled original design.
- Reinstate the connecting sections of space frame as part of the aforementioned review of the walkways.
- Remove paint from the highlight windows.
- Reinstate original (red) or consistent sympathetic colour scheme to posts, struts, etc.
- Review stormwater drainage system remove PVC downpipes below the space frame and introduce a more sympathetic, partly concealed system.
- Reinstate original sandblasted concrete finish, and painted circles, to at least some sections of the external walls.
- Rationalise services and conduits in to a less, ad hoc configuration/system.
- Consider reinstating sympathetic free-standing light fittings, similar to the original.

Consider reinstating a similar planting regime/format to the original.

In order to accommodate more development at the site and integrate the market better with its context, the option of potential relocation closer to the periphery of the site, for example along Cramer Street, has been considered. It might be possible to relocate the market buildings on the broader site whilst (largely) retaining its significance. In order to achieve this outcome, it would be necessary to retain as much of the original fabric as possible. Some comment is provided to this possibility especially in relation to the principal elements:

- Given the space frame construction type, it should be relocatable (to be confirmed by a detailed analysis by a structural engineer) along with the steel supports (posts/I-beams) and struts. Similarly, remaining sections of the original metal fascia should be able to be re-used.
- The outer concrete walls are early examples of tilt slab technology and are of technical significance. The original sand-blasted finish has been painted over except for some sections at height. It might be possible to relocate the existing panels (as is meant to be the case with this technology) or to build new sections with similar specifications (dimensions, aggregate, etc.) in a different location and largely retain the integrity of the original design, especially if the finish was mostly reinstated with the distinctive large circle (in charcoal).
- Other detailing or elements that should be re-used or reinstated are the sheeting to the canted bulkheads, glazing and entry formats to the food halls, etc.

#### 4.6 Conclusions

In conclusion, the following are recommended to be undertaken in this order but depending on the negotiations with the responsible authority, a different approach could be taken.

## Introduce Heritage Overlay

The Preston Market has been determined to be of local historical, aesthetic, technical and social significance to the City of Darebin. As such, it is recommended that heritage protection for the site is sought by applying the Heritage Overlay an including it in the Schedule to the Heritage Overlay.

In order for a Heritage Overlay to be introduced a citation would need to be prepared that included a Statement of Significance, which according to current practice would be included within an Incorporated Document in the Darebin Planning Scheme.

## Prepare Conservation Management Plan (CMP)

Given the Victorian Planning Authority is preparing a Planning Scheme Amendment that will include a Heritage Overlay and the application of the Activity Centre Zone on the site, a Conservation Management Plan (CMP) should be prepared to be included in the Schedule to the Activity Centre Zone. While the future development scenario is not known at this stage, the CMP would focus on guiding principles and guidelines for development that would take account of the identified heritage elements of the Preston Market.

CMPs are useful documents at large and/or complex sites in guiding change. Whilst they are often commissioned to assist with a current development proposal at a site, they typically provide general policies and/or guidelines which can be applied in a variety of potential change scenarios. The Activity Centre Zone could also provide the mechanism to ensure any future planning permit application is accompanied by a detailed response to the CMP in a report from a heritage architect.

An information guide is provided on the Heritage Victoria website about CMPs, including a standard brief.

### **Prepare Structural Analysis**

In order to understand the potential for re-using part/all of the existing fabric if the Preston Market was to be adapted or relocated, a full structural analysis would need to be undertaken, involving some computer modelling. This would require accurate measured drawings. The computer modelling would need to be undertaken to determine the various loads and review whether the existing fabric meets contemporary standards. These standards would need to be met (in relation to the concrete walls and roof/space frame) if considerable change/redevelopment were to occur at the site.

# **Prepare Master Plan**

As a master plan is being prepared by the VPA, guidelines should be included for any redevelopment options for the protection of the significant elements identified in the Statement of Significance for the Preston Market.

# **APPENDIX – Structural Engineer's Assessment**

Prepared by Mark Hodkinson, Consulting Structural Engineer

MARK HODKINSON PTY LTD

Consulting Structural Engineers

22<sup>nd</sup> January 2020

### Mr Sebastian Dewhurst

RBA Architects and Conservation Consultants Suite 4C / 171 Fitzroy Street St Kilda 3182

## Dear Sebastian,

Re: Preliminary Comments

Preston Market Space-Frame Roof Structure

Preston

We are writing to provide a summary of our preliminary comments pertaining to the construction of the space-frame roof structure at the Preston Market.

We have reviewed the documentation that you have provided and searched the Australian Steel Institute's (ASI) web site, and provide the following preliminary comments:-

- 1 'Foundations, The Journal of Architecture Engineering & Building' (Issue '70 1970 page 13) states that the space-frame was designed and developed by Standard Steel Pty Ltd using their IME 186 computer, in conjunction with the University of Melbourne's s IBM computer. The use of a computer in 1967 (?) was at the forefront of analysis refer to paragraph 2, page 5 of the Australian Institute of Steel Construction (AISC) 'Wide Span Structures' paper (V16M2 1982 printing).
- 2 In our opinion the space-frame construction is very unusual, simple, ingenious and has resulted in a very 'fine' (slender) structure
- 3 The construction of the space-frame is possibly unique.
- 4 There is no mention of the Preston Market space-frame roof in the AISC paper 'Space Frames' (V7N4 1973 printing).
- 5 The ASI Library have a number of books on space-frame structures that are available for loan which might provide further information on the development of space-frames.

With respect to the relocation of the Preston Market super-structure, it is our understanding that a Building Approval would be required to re-erect the structure and therefore the structure would need to comply with the loadings prescribed by the Building Code of Australia (BCA). In order to determine whether the structure does comply with the BCA a high level structural analysis of the structure will need to be undertaken by a Structural Engineer. With respect to the modification of the Preston Market super-structure, the proposed modifications would also need to be assessed by a Structural Engineer. It should be noted that whilst we are Consulting Structural Engineers, the brief to provide preliminary comments pertaining to the construction of the space-frame roof structure did not include a structural analysis and investigation of the structure, which could take hundreds of hours.

With respect to the possible relocation of the tilt-up concrete wall panels, the 'Foundations, The Journal of Architecture Engineering & Building' (Issue '70 1970 page 11) states that "The majority of the wind loads on the buildings are carried by these cantilevered panels". It is therefore likely that the bases of the wall panels have been rigidly connected to the concrete footing structure and as such not easily disconnected and moved.

We trust that the above is explanatory for your purposes and please do not hesitate to contact us on 9381 1239 or 0417 36 34 32 if you have any queries or require further information.

Yours faithfully,

Mark Hodkinson Pty Ltd

Mark Hodkinson

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