REUSING HERITAGE BUILDINGS FOR AFFORDABLE HOUSING

THE APPROACH TO INCREASE QUANTITY AND QUALITY OF AFFORDABLE HOUSING WITHIN FISHERMANS BEND

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## CONTENTS

1. Exclusive summary
2. Introduction
3. Context analysis
4. Mechanism: redeveloping heritage as affordable housing
5. Implementation analysis in Fishermans Bend
6. Achieving higher cost saving and efficiency: Risk management opinions and recommendations
7. Conclusion
8. Recommendations summary
9. Reference
1. Exclusive Summary

This report provides an accessible approach of reusing heritage buildings to increase the supplement of affordable housing in Fishermans Bend, in order to contribute to the 8000 units affordable housing target of the project. Rather than purely concentrated on the quantity of affordable housing target, the report makes the classifications on the method and benefits to developing heritage buildings into residential purposed housing at the affordable cost, with the purpose of achieving quality housing outcomes.

By reviewing the context of Fishermans Bend and affordable housing shortage, the report illustrates experience from the successful precedents in Melbourne and Sydney, and discusses the possible relations between the affordable housing, heritage sites and cost saving. In the purpose of analysing the feasibility of reusing heritage buildings to achieve affordable housing target, the report starts with a small implementation assessment to a sample site in Fishermans Bend to discuss the possible outcomes and site impacts, and further assesses the availability of heritage buildings and proposed amount of units. Based on the assessment, 80449 m² of heritage site in Fishermans Bend is possible to be redeveloped into affordable housing, which may be further expanding as working with other mechanisms.

The last section of the report focuses on the risk management of this approach, and make recommendation on the way of reducing project risk by implementing this approach. From this research report, heritage buildings in Fishermans Bend have high potential value for redeveloping into residential purpose site especially affordable units, because this approach is cost efficient, energy efficient and community benefit. Finally, the report will provide funding suggestions and recommendations regarding to the implementation of this approach to contribute to Fishermans Bend affordable housing shortage solutions, in a more accessible and supportive way.
2. Introduction

Affordable housing shortage is a significant issue in Australia, which leads to negative social impacts and issues for the economic growth and long term community stability. Melbourne as one of the largest cities in Australia, also faces the issues of shortage on affordable housing especially in inner Melbourne locations (ABS 2011). Very low to moderate income groups have increasing difficulties to access to inner and middle ring locations’ private market housing in affordable rental, due to the high land price and increasing demand such as students from university and workers in CBD. However, inner Melbourne is the location with high employment density and rich facilities with functions, which are the first choice for people do need affordable housing supports to sustain their living condition such as key workers. According to this issue, the value of Fishermans Bend renew area are highlighted, because it has large potential residential developments proposal and affects the inner Melbourne housing choices in both affordable and unaffordable housing market. The purpose of this report, is to provide an overview of reaching more affordable housing in Fishermans Bend by redeveloping the heritage buildings, under detailed analysis of mechanism’s feasibility in Fishermans Bend. Also, the report advocates for achieving affordable housing quality and quantity at the same time, in order to offer the possibility of evaluation for future developments.
3. Context analysis

3.1 Homeless and affordable housing shortage

Comparing the data from Department of Human Service (2016) and MAC (2015), the applications on the public housing waiting list in Victoria, changed from 34,000 in 2013 to 32,282 in 2016, which only reduced by 1718 in two-year period. Also, 21,258 people were enumerated as homeless in 2011 census, especially for Victoria the homeless rate increased more than 20% from 2006 (ABS 2011). From these statistics, the shortage of affordable housing is a significant issue for Victoria, which typically impact Melbourne as the largest city in Victoria.

Shortage of affordable housing, becomes the strong concern of the proposed Melbourne plan, because homeless leads to more negative social impacts and supporting affordable housing is the most accessible solution for this issue for long term benefit. Supply shortage of affordable housing is the largest reason, as only 3.5% of the housing stock in Victoria is affordable housing and 15% of the residents pay more than 30% of their gross income for housing (MAC 2015). Responding to this fact, Plan Melbourne refresh discussion paper demonstrates that, increasing the supply of affordable housing to meet the housing shortage will be the next step for planning authorities (Victoria State Government 2015).

3.2 Context of Fishermans Bend

As the project site for this affordable housing study task, Fishermans Bend renewal area is one of the largest urban renewal project sites within Australia. Fishermans Bend locates in the southwest side of Melbourne CBD and approximately 3 km away from Southern Cross Station (MPA 2015). The site area is 250ha under the governance of City of Melbourne and City of Port Phillip, which currently used as brownfield site for manufacturing industries with small amount of retails. Due to the industrial site use, there is no existing local residents’ community and the key commercial functions within the site focuses on car business as well as industrial transportation. Private transport is highly used within the site, as the existing public transport is lacking in both frequency and service amount.

However, based on the strategy of redeveloping Fishermans Bend as the Capital City Zone, the site is proposed for the mixed use of residential and commercial developments, including public infrastructures such as new public transport to be implemented (Port Phillip City Council, 2016). New residential development in Fishermans Bend, aims in providing 40,000 dwellings to sustain the 80,000 population in the future, as the solution to city centre expansion and growing needs of housing for inner Melbourne locations. Also, new local community will be formed with the residential developments, which will be expected to establish with new community facilities and supportive services. The future of Fishermans Bend will carry potential value to maintain both locational advantages as close of CBD, as well as better managed structure of social and functional context.
4. Mechanism: redeveloping heritage as affordable housing

4.1 Vision and definitions of key words

Vision:
This report advocates for redeveloping heritage buildings in Fishermans Bend into affordable housing, as a cost efficient and society beneficial approach to supply more affordable housing with high quality, in order to achieve the housing diversity and affordability within the site.

For the purpose of supplying quality affordable housing with heritage value, this approach will individually contribute and also work with other mechanisms to the aim of providing 20% affordable housing in Fishermans Bend, as well as positive influences Fishermans Bend in providing historical value to the site.

Affordable housing:
Affordable housing is the housing provided to people with difficulty to sustain their rental housing in private market with 30% of their gross income, which are considered as very low, low to moderate income groups’ housing needs (NSW Government 2016). Also, affordable housing may be required from some special groups due to the higher average price in their working locations such as key workers within inner Melbourne.

Heritage:
Heritage is defined as ‘any feature belonging to the culture of a particular society, such as traditions, languages, or buildings, that were created in the past and still have historical importance in the future’ (Cambridge University Press 2016).
4.2 Policy brief

Plan Melbourne Refresh Discussion Paper (State of Victoria 2015)

**Housing:** Plan Melbourne states that new developing area like Fishermans Bend, need to make contribution to 70% of the new residential developments due to the location. By 2040, Fishermans Bend will be a commercial and residential hub, which needs to contain affordable housing as an important target in the planning process. Affordable housing will be provided, for the purpose of creating liveability and diversity of housing choices for inner Melbourne residents. In order to achieve more supplement of affordable housing, expedited approval process for affordable housing project may be considered in the future amendment of planning scheme and policy controls.

Fishermans Bend Strategy (MPA 2015)

**Housing:** Affordable housing is encouraged in Fishermans Bend in order to engage diverse income groups of people for local community and achieve liveability.

Design guideline 7.6: Integrating energy efficiency developing process for any future facilities.

Heritage: Encouraging adaptive reuse of heritage buildings, in order to link historical memory to future developments.

Planning Scheme (City of Port Phillip 2016)

**Clause 22.04 heritage policy:** Discouraging any developments, demolition or alteration on heritage buildings that impacts the value and significances of heritage. Also, all the developments on heritage need to address the conservation and development plan of buildings, and respects the existing building façade and neighbourhood characteristics.

**Clause 21.06 Neighbourhood:** Maintaining the industrial features of Fishermans Bend under the transforming of residential dominated mixed use site context.
4.3 Precedents studies: successful cases

For this report, two precedents are chosen to highlight the benefits and outcomes of reusing heritage buildings for affordable housing, in terms of different aspects.

4.3.1 The Platform Apartment: Cost efficiency, Outstanding quality

First precedent is the Platform Apartments in Sydney, which locates at North Eveleigh and 3 km from Town Hall station in city centre (City West Housing 2015b). The Project is organized and managed by non-for-profit organization City West Housing, and the project was developed from the North Eveleigh Carriage Workshops site, which is a heritage site with high historical value (City West Housing 2015a). The site has good location as it close to University of Sydney, existing public transport services and local town centre. According to the report from City West Housing (2016c), this project aims in providing affordable housing to the key workers within the City of Sydney, which are considered as one of the priciest rental market within Australia.

By redeveloping the heritage site, under $28 million budget this project creates 88 affordable housing units that include studio, one to three bedrooms’ apartments (City West Housing 2015a). Also, the project highlights a well-performance way to reuse the existing site materials and structure, in order to achieve efficiently recycling materials and maintaining heritage significances at the same time. As the Figure 4.3.1 shows, the new water featured open space in ground floor is constructed from the original air tank, and all the benches are made from timbers in the heritage. Responding to the heritage value, the redevelopment respects the industrial buildings’ style and highly integrates industrial features into the site design. The final outcome turns the heritage buildings into a modern-designed building, which illustrates the possibility of providing high quality affordable housing to fit into the surrounding architecture style, at the same time maintain its own features.

Figure 4.3.1: The Platform Apartment (City West Housing 2015a)
Most importantly, the outstanding performance of this project is the cost saving process of recycling resources from the heritage waste. The project was constructed under the proposed budget, based on recycling existing resources and building structure within the heritage (City West Housing 2015b). Moreover, the cost saving on redeveloping this heritage building is significant comparing to a new construction in the same locations. The Exordium Apartments project, is also arranged by City West Housing as a new construction building, locating 3.8 km away from Town Hall station within City of Sydney. Comparing to the Platform Apartments, this project cost $41 million to produce 104 units of affordable housing units, while Platform Apartment only used $28 million for 88 units (City West Housing 2016). The amount of cost saving illustrated from this comparison highlights the economic benefit of reusing heritage buildings for residential purpose especially affordable housing.
4.3.2 Drill Hall: Community impacts

The second precedent is the Drill Hall is a heritage marching hall and the site locates at 2-32 Therry Street in Melbourne CBD and directly faces the Victoria Market, which is a great location to access public transport and different service (Housing Choices Australia, 2012). The project is also arranged by non-for-profit organization Housing Choices Australia, and the organization is well experienced on providing and maintaining affordable housing and involving services for disability groups (Housing Choices Australia, 2016). Different to the Platform Apartments, instead of only restructing the heritage building into new apartments, the project expands the developing a nine-storey apartment building based on the heritage, which provides 59 units of affordable housing as the final outcome (Housing Choices Australia, 2012).

The most important ideas presented by this precedent are reusing the social value and locational advantages of heritage buildings, in order to provide affordable housing with community service possibilities and access to high surrounding functions. Drill Hall is one of the landmarks for Melbourne CBD, therefore targeting the community importance of this heritage for affordable housing, can result in providing residents more sense of engaging with local community. Also, in order to integrate with local community, Drill Hall is redeveloped with community service and especially integrating disability service. According to the location of this site, disability groups will have easy access to high density health services and community facilities as the residents of this affordable housing project.

![Drill Hall](image.jpg)

*Figure 4.3.2: Drill Hall (Housing Choice Australia 2016)*
4.3.3 Discussion on the other advantages of redeveloping heritage buildings for affordable housing

4.3.3.1 Energy efficiency: embodied energy assessment for reusing heritage buildings

Besides the higher cost of constructing new buildings for affordable housing, the energy consumption gap between new construction and redeveloping heritage site is significant as well. According to Milne and Reardon (2013)'s study, the embodied energy for mainstream construction material, such as timber, brick and concrete, are all high energy consumed materials. Cabeza et. al (2013) also highlights that 75% of the energy consumed for construction spend on the offsite materials preparation. Due to these facts, heritage buildings have the advantage of existing walls and inside structure, which can reduce the material used in redevelopment comparing to new construction, and achieve energy saving as the final benefit of reusing heritage buildings. Also, responding to the Platform Apartment case study, recycling materials from existing buildings also contribute to the energy saving outcome, because 95% of the embodied energy can be saved from reusing process instead of demolishing or reprocessing (Milne & Reardon 2013). Additionally, Heritage Council of Victoria (2013) demonstrates that energy consumption of redeveloping existing buildings, will require new construction of energy efficient buildings to use more than 100 years to meet the energy consumed during the construction process. Therefore, reusing heritage buildings, can make the most out of existing building materials and structure, which means reusing heritage buildings is more energy efficient comparing to new construction for affordable housing target.

![Energy requirement for materials](Source:Cabeza et. al. 2013)
4.3.3.2 Social benefit

Heritage Council of Victoria (2013) states that heritage site has positive impacts on building quality neighbourhood and contributing to social sustainability. As heritage site is the significant asset of local community, it positively influences the surrounding locations by creating local identity for both existing and new residents, in order to achieve social integration and cultural diversity. According to this advantage of heritage site, redeveloping heritage building into affordable housing, will help the new residents fit in the local community and environment by providing sense of belonging, or even help new residents to form new local community in the new developing area. Rypkema (2016) also suggests that heritage buildings can contribute to affordable housing market, as the main way to achieve historic buildings’ contribution to the society.
5. Implementation analysis in Fishermans Bend

5.1 Heritage redevelopment relating to Fishermans Bend context

According to the context of Fishermans Bend, there are several leading reasons of reusing heritage buildings existing within the site area to increase affordable housing stock. Based on the heritage study from Biosis (2013), as the Figure 5.1 shows, significant amount of heritage buildings locates within Fishermans Bend. Additionally, majority of the heritage buildings within the subject area are industrial heritage sites, which are well structured with brick or concrete materials and have good access to existing roads due to the needs of transporting goods in industrial period. Responding to the amount of heritage site, it is a large opportunity to offer more affordable housing with heritage redevelopment for inner Melbourne residents, which are also considered as unaffordable price for most of the low-moderate income groups.

Figure 5.1: Heritage site within Fishermans Bend (sourced from Biosis 2013)
Also, Fishermans Bend as a new proposed high level residential development site with no existing local community, heritage buildings are important for establishing new community, because it helps the new community to seek their local identity as discussed before. Heritage sites may become the leader for local economic regenerating from the declined industries, due to the close relationship between heritage and creative functions (Heritage Council of Victoria 2013).

Furthermore, it is the most cost efficient way of providing sustainable housing and heritage protection at the same time. Heritage Council of Victoria (2013) highlights that, even though heritage buildings are highly maintained by local council, industrial heritage is more likely to fall into lacking of maintenance due to the features and difficulty of using for other purpose. Using heritage buildings to develop affordable housing in Fishermans Bend, has availability of buildings, advantages on building local community, and providing cost efficiency with high quality housing for new residents, in order to change the perception of original affordable housing in Melbourne inner locations.
5.2 Small scale: a sample site implementation overview

As proposing this approach to Fishermans Bend, the first implementation section will be narrowed down to focus on one sample site, in order to illustrate the impacts of redeveloping heritage buildings for the affordable housing on the site and surrounding environment. The sample site locates in 223/229 Normanby Road within Montague, which is the Dunlop Rubber Company and currently is used as self storage site with additional two floors of residential dwellings setback in recent years (Port Phillip City Council 2016b).

![Sample site location map](image)

**Figure 5.2.1**: Sample site location (sourced from MPA 2015)

**Site assessment and implementation outcomes:**

**Locational advantage:**

There are several significant reasons to choose this sample site for implementation analysis. Firstly, the site locates in the corner of two main roads (Normanby Road and Montague Street) and close to the existing tram line 109 and two bus services, as well as the proposed Montague train station in the future, which meets the requirements of close to the public transport for affordable housing. The site is only two blocks away from Melbourne Exhibition Centre cluster, which contains large amount of social services and recreational functions.
Heritage value:
Comparing to the other heritage buildings, this site maintains higher level of historical value as it is the only multistorey daylight industry in Victoria, which illustrate the importance of industrialization for inner Melbourne (Port Phillip City Council 2016b). Also, this site is one of the largest surviving industrial buildings, heritage protection is required for site operation (Biosis 2015).

Site condition:
According to the site visit findings, the material used for this building’s walls are brick and concrete, and maintained in good condition for future development. Also, the site structure is well enough for restructuring into residential uses, the major inner space is wide open space for storage, which is easier to redevelopment into any structure of apartments based on the future development plan.

Site function and surrounding environment improvements:
Most importantly, the site has a low level of activation in good location, because self storage function does not have high level of use and interactions with the surrounding environment. According to the site visit, surrounding environment is also low level activation functions, such as industrial sites, car sale and other business sites, which shows the whole area is single functioned and requires diversity. If this site can be redevelopment into affordable housing with additional commercial-residential mixed use, new improvements on site usage will highly increase the surrounding density and functions’ diversity, in order to link with South Bank.
Proposed contribution:

Based on the site size, the floor area is approximately 6656 m². Considering the needs of public space and service space, by applying the standard size of apartments in Melbourne, the final outcome may produce 86-120 units of affordable housing without any further expanding. The cost saving and energy saving on redeveloping this site will be significant due to the good site condition and used material. Also, sample site may produce more units of affordable housing, on the basis of working with other design approach and policy controls, such as minimize apartment size requirements and air rights for high rise to be build above the buildings, similarly to the Drill Hall case study.
5.3 Large scale: overall site size and outcome

Expand the approach to the overall Fishermans Bend area, the total available area for redevelopment into affordable housing from heritage buildings as showed in Figure 5.3 is 80,449 m$^2$. The data was collected from the document of MPA (2013) and Google Earth. Based on this data, the final result may contribute 1,609 units of affordable housing to the goal, according to standard apartment size in Melbourne. According to MPA (2013)’s document, the listed heritage sites in Figure 5.3 all maintain good site condition and used high embodied energy materials, which meets the cost saving and energy saving benefit as used for redevelopment.

Future contribution of reusing heritage site for affordable housing, may be built by working with other approaches. For example, more units of affordable housing may be produced from an integrated design guideline for affordable housing referring to sharing space and apartment size reduction permit from policy. Also, following the case study of Drill Hall, opportunity of expanding air rights of heritage site for more construction is considerable as well. Some heritage buildings such as Disco Manufacturing corporation site, are single storey heritage with large land basis, which are possible for future development to maintain the heritage facade and explore the air rights.

<table>
<thead>
<tr>
<th>Site name</th>
<th>Total area (square meter)</th>
<th>outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Union Can Company, Vulcan engineering</td>
<td>1800</td>
<td>3600</td>
</tr>
<tr>
<td>Ballarat Brewing Company</td>
<td>660</td>
<td>660</td>
</tr>
<tr>
<td>Kellow-Faulkner Pty Ltd</td>
<td>1444</td>
<td>2888</td>
</tr>
<tr>
<td>Johns &amp; Waygood</td>
<td>3358</td>
<td>5410</td>
</tr>
<tr>
<td>Wayside Inn Hotel</td>
<td>480</td>
<td>960</td>
</tr>
<tr>
<td>Former J. Kitchen and Sons Pty Ltd offices</td>
<td>734</td>
<td>2202</td>
</tr>
<tr>
<td>Felton Grimwade &amp; co</td>
<td>1260</td>
<td>2520</td>
</tr>
<tr>
<td>Golden Fleece Hotel</td>
<td>249</td>
<td>498</td>
</tr>
<tr>
<td>Former Talbot Inn</td>
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<td>218</td>
</tr>
<tr>
<td>Former Laycock Son and Co. Laconia Blanket Mills</td>
<td>537</td>
<td>2685</td>
</tr>
<tr>
<td>Former Dunlop Pneumatic Tyre Co. mill</td>
<td>1664</td>
<td>6656</td>
</tr>
<tr>
<td>Gunnersens Pty. Ltd.</td>
<td>769</td>
<td>1538</td>
</tr>
<tr>
<td>Former residence and shop Interwar bakery 1938</td>
<td>172</td>
<td>344</td>
</tr>
<tr>
<td>Fire Station complex</td>
<td>328</td>
<td>656</td>
</tr>
<tr>
<td>Disco Manufacturing corporation P.L. factory</td>
<td>2770</td>
<td>5540</td>
</tr>
<tr>
<td>Petrol Station 1938</td>
<td>278</td>
<td>556</td>
</tr>
<tr>
<td>B.A.M. Points 1937</td>
<td>2546</td>
<td>5092</td>
</tr>
<tr>
<td>524 City Rd Mount Montague St</td>
<td>153</td>
<td>306</td>
</tr>
<tr>
<td>Bengal Tiger (hotel)</td>
<td>256</td>
<td>512</td>
</tr>
<tr>
<td>Port Melbourne Cricket Ground</td>
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<tr>
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<td>4047</td>
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<tr>
<td>Roots/Chrysler factory</td>
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<td>16823</td>
</tr>
<tr>
<td>Timber warehouse</td>
<td>1870</td>
<td>1870</td>
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<tr>
<td>CRB stores and workshops</td>
<td>1111</td>
<td>1111</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>80449</strong></td>
<td><strong>1608.98</strong></td>
</tr>
</tbody>
</table>

*Figure 5.3: Calculation of total available heritage area for redevelopment (sourced from Google Earth 2016, Biosis 2013)*
6. Achieving higher cost saving and efficiency: Risk management opinions and recommendations

Rather than going into deep of development plan to discuss site budget, outcome and design details, which are mostly depending to each site development proposal, this section will focus on risk management plan that is applicable to every heritage site development in general, in order to improve the approach's feasibility in Fishermans Bend. Management plan will concentrate on the risk management of removing existing barriers and reducing risk of developing heritage site, in the purpose of sustain developers’ interest on reusing heritage buildings for affordable housing development due to the cost saving benefit. Recommendations will be provided through the discussion of existing risk and barriers.

6.1 Quality controls: Asbestos in industrial buildings

Asbestos is highly used as building materials, manufacturing and industrial production between the 1940s and 1980s, because asbestos has advantages in electricity insulation and fire resistance (WorkSafe Victoria, 2008). According to Biosis (2013), most of the heritage in Fishermans Bend are industrial heritage buildings and constructed after the 1930s due to government supporting policy and industrial expansion, which means these buildings are likely to contain asbestos materials. Therefore, the redevelopment of heritage buildings for residential purpose, asbestos within these buildings needs to be assessed under the health requirements of residential buildings. Also, removing the asbestos within the industrial heritage is the largest barrier for developers to overcome, due to the high expense and complicated process (WorkSafe Victoria, 2010).

Based on these facts, this risk may be reduced by providing government support to the assessment and removing process of asbestos on heritage redevelopment project. Government support may act on providing assistance of asbestos assessment and subsidy to remove the necessary asbestos, in order to reduce the risk effects on the developers of taking this approach to supply affordable housing in Fishermans Bend.
6.2 Government contribution on application process

Another risk in redeveloping heritage buildings for affordable housing, is the time consumed for site permit application, which caused low efficiency on site development process and leading to resource wasting and risk growth on developer. For example, State of Victoria (2015) and MPC (2015) both highlight that existing planning scheme and other legislation fall to provide supports for affordable housing developments and clear encouragement on increase the supplement. Built on these discussion, simplified procedures for affordable housing development application should be highly concerned in Victoria.

As mentioned before, industrial heritage buildings are inefficient used heritage features comparing to other heritage, and redeveloping these buildings will positively illustrate their original value for local community and functions (Heritage Council of Victoria 2013). Especially for this approach, redeveloping buildings under heritage overlay requires permit application as the first step for developing, which always consumed long time for approval permit. Both of reusing heritage site and affordable housing development, need support from planning authorities and legislations to reduce the time consumption in application stage. Combining these two requirements, as the largest urban renew project in Australia, it is an opportunity to introduce simplified application process by the government sector, in order reduce the resource waste and uncertainty risk on the application process. Simplified application process for reusing heritage buildings as affordable housing, will attract developers for efficient developing process.
Besides the risk in time consumption of permit application, construction time of the project directly relates to the project variable costs such as holding the land before construction and interest on project loan, which impacts the risk level of site development. Instead of the fixed cost of project, variable costs are the most significant issue for developers to concerns in reusing heritage buildings for affordable housing. High efficiency in construction process and shorter construction period will be highly attractive for developers, which requires the close working partnership between different sectors.

For this risk, the two precedent studies mentioned before may provide a guideline for managing construction period of the whole process. Both of the precedents, suggest that the partnership between different agencies and organizations based on their advantage of skills and resource basis, can produce a significant reduction in development’s time consumption. For example, Drill Hall project works with government agencies (Department of Human Services, City of Melbourne, Heritage Victoria), financial institutions (Sidney Myer Centenary Fund, National Australia Bank), Constructor (Icon Construction), Designing business (MGS Architects) and service provide (Cohealth), to make a collaborative working environment, in order to sharing resource basis and contribute to project outcome (Housing Choices Australia, 2015). The project is constructed under 13 months, which highlight an efficient use of partnership’s resource to reduce construction risk on time management and issues solution.

According to the precedent experience, this report suggests local government agencies to build a close partnership for redeveloping heritage buildings for affordable housing, which including manager organizations, service providers, financial institutions, constructors, designers and operators. This partnership will be built to help each development project to access required information and make the most efficient process of construction.
6.4 Financial risk: funding suggestions for the approach

Funding is the basis for each project, which is complicated in this approach due to the engagement of two main features, affordable housing and heritage buildings. It is obvious that Victoria government does not have sufficient funding for all affordable housing projects, and lacking of funding will negative influence the outcome of this approach. But expanding the approach’s features to funding, instead of focusing on the traditional affordable housing funds, reusing heritage buildings may create the opportunities to have wider based funding system. Next section will discuss the possible elements of funding system for this approach.

6.4.1 Traditional funding:

Traditional funding for affordable housing focuses on applying financial support from existing affordable housing fund, which are mainly government arranged funds. It is also possible to use government fund or guarantee as the platform to applying project loans from financial institutions such as banks. In the case of Drill Hall, the fund majority comes from Commonwealth Government program for affordable housing ($19.3 million), and the other small amount of fund comes from private fund and organization’s contribution (Housing Choices Australia, 2015). Considering the case study, this approach may apply funds from City of Melbourne and Victoria Government, from the existing affordable housing programs:
Commonwealth Government Nation Building Economic Stimulus Plan (DHHS 2016)
Victorian Property Fund grants (Consumer Affairs Victoria 2016)
Melbourne Heritage Restoration Fund (VHRF 2016)

6.4.2 Development/ Community Contribution:

As the largest renewal project in Victoria, Fishermans Bend need public infrastructures and community identity to form new local community to promote other functions. Reusing heritage buildings as affordable housing, provides community benefit and regenerate local commercial activities. There is no existing value capture in the planning controls to force new developments make certain level of contribution to public facilities. However, during 1980s to 1990s, value capture was successfully used for many heritage restorations and other facilities construction (MPC 2015). MPA also suggests that reintroducing this policy will relieve the budget limitation of local government, and financing affordable housing as a public facility.
It is inefficiency and unjust to require these community facilities such as affordable housing only from government funding. Due to the large amount of proposed residential and commercial developments in Fishermans Bend, the importance of having new local community and facilities are remarkable. The responsibility of these new developments can be achieved by introducing community contribution as a value capture policy, which provides a large opportunity to rise a significant amount of fund for public facilities and financing heritage buildings’ redevelopment.

6.4.3 Heritage tourism and district marketing:

According to Biosis’ study (2013), the heritage sites in Fishermans Bend have remarkable historical value as the representative of Melbourne manufacture period. Also, considering Melbourne’s context, there is a shortage of leading heritage tourism attraction, because heritage sites are mainly distributed in individual spots. Comparing to other states in Australia, Victoria has the lowest heritage tourism attraction (Department of Environment 2005). These facts build the opportunities for Fishermans Bend to develop special heritage tourism, as an industrial heritage rich area.

Furthermore, heritage protection and reusing is required for marketing new heritage tourism in Fishermans Bend, which creates the reason for advocating fund from state and local government to redevelop heritage sites into efficient use such as affordable housing. Advertising and marketing the new heritage tourism will be attractive for state government to invest on maintaining heritage, which result in part of the funding in this approach.

Also, heritage tourism will attract private investment due to the potential profit created by this tourism (MPC 2015). Funding may also be collected from private investment as the interchange resource for commercial operation rights of redeveloped heritage site, such as ground floor commercial uses.
6.4.4 Provident fund (Superannuation based)

Also, superannuation is considerable to be engaged in this funding system, as this investment proposes for social value with long term stable returns. But instead of directly advocating superannuation fund for this approach, this report introduces provident fund to support affordable housing projects.

This fund is successfully implemented in other countries such as China and result in outstanding performance for financing the construction of affordable housing (Liu 2013). Provident fund rises money from workers’ income and the fund is directly managed by the central government to provide low interest rate loan for organizations to developing affordable housing. The advantage of this fund is the population basis for funding, and citizens will receive the total savings after retirement, which may be considered as separating part of superannuation into housing fund saving (Liu 2013). Also, to make this fund operating in a positive way, the central government arranges partnership with banks to make profit out of the fund.

For Australia, provident fund will high activate the spendable wealth from superannuation as well as wealth groups with low requirement on future housing purchase. Also, the amount may be raised from working population will significantly advance the construction of all affordable housing projects which requires financial support. This fund will contribute to the whole affordable housing market rather than only contributing to redevelop heritage site for affordable housing.
7. Conclusion

To conclude, reusing heritage buildings to increase the stock of affordable housing, has been analysed as cost efficient, energy efficient, social benefit approach to achieve high quality, remarkable affordable housing with less required budget in Fishermans Bend. By using this approach, the final outcome may produce 1609 units of affordable housing for Fishermans Bend, and may be further expanded under the partnership with other approaches. The report makes a judgement on using heritage buildings to provide quality affordable housing, instead of focusing on quantity and ignoring the needs of future residents. Also, the report suggests that to increase the performance of cost saving and project outcome by reducing existing risk and removing barriers. As developers will be attracted by the low project risk and supported by government policy and wider basis of resources from different organizations’ partnership, the project will produce affordable housing in a more stable and efficient management, which may be implemented to other approaches to help achieve the final target of 8,000 affordable housing units.
City of Port Phillip and City of Melbourne need to provide industrial heritage asbestos removing assistance for developers to promote the affordable housing quality.

Amending Port Phillip Planning Scheme and relevant policies to offer simplified application for redeveloping heritage buildings as affordable housing, on the purpose of presenting approval process time guarantee.

Advocating a new heritage affordable housing development partnership, formed by organizations from constructing, designing, government agencies, local community and financial institution to work with leading developer, in order to forward shorter construction period and cost efficiency.

Creating Fishermans Bend heritage tourism guideline and marketing for private investment as well as government funding support to achieve heritage redevelopment support for affordable housing.

Reintroducing value capture policy to Fishermans Bend new development to rise fund for heritage affordable housing as public facilities.

Advocating provident fund as the new element of funding system to efficiently use public superannuation savings to support the development of affordable housing.
9. REFERENCES


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