



Guidelines - managing noise impacts in urban development

Guidance for planning permit and related decisions under the Yarra Planning Scheme

October 2019 April 2022



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1 Purpose

This document provides guidance for planning scheme related decisions when considering noise impacts from urban development and activity. [Acoustic assessment reports issued to Council should consider the various matters discussed in this document as relevant to the application.](#)

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1.1 Scope

These guidelines deal with noise (and in some cases vibration) impacts from:

- Road traffic
- Rail and tram
- Commercial and industrial plant and equipment
- Music
- Patrons
 - New outdoor patron areas
 - New residential development near existing outdoor patron areas
- Apartments
 - Noise from apartment developments to existing dwellings
 - Noise from apartment common areas to apartments within the development

1.2 Introduction – technical advice

This document was prepared by Yarra City Council based on the City of Yarra - Noise and Vibration Considerations Discussion Report – October 2019 ([updated March 2022](#)) by SLR Consulting Australia Pty Ltd.

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2 Building siting and internal layout

Noise sensitive rooms (in particular bedrooms) and private open spaces are to be located away from existing and potential noise sources wherever practical. Siting and orientation to minimise noise exposure of these spaces will reduce requirements for onerous façade upgrade treatments and will result in an improved level of acoustic amenity generally.

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23 Road traffic noise

2.13.1 Background information

Road traffic is a significant source of noise impacts to dwellings on and near main roads. The issue has been acknowledged and addressed in recently introduced Apartment Developments provisions at Clause 58 and specifically at 58.04-3 Noise impacts objectives and Standard D16. [Planning Practice Note PPN83](#) [Assessing external noise impacts for apartments provides further guidance to these Clauses.](#) These provisions include [decibel targets criteria](#), for day and night average road traffic noise levels, and apply to apartment developments on roads carrying more than 40,000 vehicles, within 300 m from the nearest lane. The [design targets criteria](#) are 40 dBA Leq,16h for all habitable rooms and 35 dBA Leq,8h for bedrooms.

The time classifications used in Apartment Developments provisions place the 6 am to 7 am period in the 'day' rather than the 'night' category. This classification is not consistent with recent planning scheme practice in the City of Yarra, and is not consistent with the classifications commonly used in Victoria ([SEPP N-4 Victorian EPA Environment Protection Regulations 2021, Part 5.3-Night](#), and the Victorian EPA Noise Control Guidelines (Publication 1254)).

The Apartment Developments provisions should be adjusted to better address local conditions:

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- the 6am to 7am period should be included in the 'night' period rather than the 'day' period
considered as a night period impact
- application of the targets criteria should be extended to all developments affected by road traffic noise (not just those near freeways or on roads carrying more than 40,000 vehicles), and
- the targets criteria should be applied to all residential developments, not just apartments.

2.23.2 Other standards and guidelines

AS/NZS2107:2016 Acoustics – Recommended design sound levels and reverberation times for building interiors, provides recommended noise level ranges for dwellings near major and minor roads. This standard has commonly been referred to in planning permit decisions to address road traffic noise impacts. The provision in the standard of a decibel range rather than a specific design target recommended maximum noise level has led to uncertainty about actual design targets levels (with proponents designing to meet the upper end of the range). The assessment methodology is not defined; it is unclear whether traffic noise should be quantified as an average or worst case level, such as the loudest hour of traffic noise.

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The NSW Road Noise Policy, 2011 provides [recommended maximum noise levels internal targets](#) for road traffic noise of 35 dBA for bedrooms at night and 40 dBA in all habitable rooms during the day period (NSW Road Noise Policy, 2011, C10). These [targets criteria](#) are elaborated in the NSW guideline document Development Near Rail Corridors and Busy Roads - Interim Guideline, 2008. The NSW [targets criteria](#) are generally consistent with the Clause 58, Apartment Developments, Design Standard D16 (with the exception that the 6 am to 7 am period is classified as 'night' in the NSW Road Noise Policy).

The NSW Development Near Rail Corridors and Busy Roads - Interim Guideline also provides clear and practical guidance for measuring and reporting. This information is missing from the Victorian policy and guideline documents for road and rail noise.

2.33.3 Guideline

New residential development should be designed to [comply with](#) the following [targets recommended maximum noise levels](#) for road traffic noise:

- [Apply](#) Clause 58, Apartment Developments, Standard D16 of 40 dBA Leq,16h [\(6 am to 10 pm\)](#) in habitable rooms and 35dBA Leq,8h [\(10 pm 6 am\)](#) in bedrooms and
- Loudest hour of road traffic noise not to exceed 45 dBA Leq,1h in habitable rooms from 7 am to 10 pm, and 40 dBA Leq,1h in bedrooms from 10 pm to 7 am. The basis for the loudest hour [targets recommended maximum levels](#) is AS/NZS2107:2016, with the day and night periods defined in accordance with Victorian EPA legislation and guidelines rather than in accordance with the Clause 58 Apartment Developments Standard D16 (58.04-3 Noise impacts objectives).
- These [targets recommended maximum noise levels](#) should [be applied apply](#) to all residential development where there is a reasonable expectation that traffic noise may impact the land.

Where night period internal amenity is achieved via building façade upgrades, the building must be designed to ensure adequate fresh air provision in accordance with the National Construction Code and other relevant standards, without compromising the acoustic amenity outcome (i.e. with windows to the affected room closed).

34 Rail noise

3.14.1 Background information

The Victorian Government Passenger Rail Infrastructure Noise Policy, 2013 provides screening levels for rail noise. The policy is a high level document and it is designed for transport bodies and planning authorities. Where existing rail noise exceeds the threshold levels specific consideration of rail noise is required before the project proceeds. If the threshold levels are not exceeded, rail noise impacts may still be considered as a 'secondary matter'. In the context of a proposed residential development, this can be interpreted to mean that the issue of rail noise should be dealt with by proponents and local planning authorities.

Until recently there was no government guidance about how to assess rail noise impacts on apartment developments. The Clause 58, Apartment Developments, objectives and Standard D16 [\(and associated guidance provided in Planning Practice Note PPN83\)](#) address both rail and road traffic noise. Standard D16 requires that all apartment developments within 80 m of a passenger line or 135 m of a freight rail line, are designed to internal [targets criteria](#). The design [targets levels](#) to be met are the same as those for road traffic noise: 40 dBA Leq,16h and 35 dBA Leq,8h.

Prior to the introduction of the Apartment Developments, Standard D16, a common approach was to assess rail noise to [Lmax targets recommended maximum noise levels](#) of 60 dBA [Lmax](#) in living rooms and either 50 or 55 dBA [Lmax](#) in bedrooms. These design levels broadly align with:

- The minimum acoustic standard (2-3 star) for external noise intrusion provided in the Association of Australasian Acoustical Consultants (AAAC) Guideline for Apartment and Townhouse Acoustic Ratings, [V1\(2016\)2017](#)
- Aircraft noise design levels provided in Australian Standard AS 2021:2015 Acoustics – Aircraft noise intrusion – Building siting and construction
- General sleep disturbance criteria provided in the NSW Road Traffic Policy and sleep disturbance studies. The levels of 60 dBA (living rooms) and 55 dBA (bedrooms) have been accepted at VCAT [and Planning Panel hearings](#) on some projects, and are cited by acoustical consultants on those grounds.

The use of long term day and night average [targets criteria](#) for rail noise, in the Apartment Developments Standard D16 provides a clear standard. There is, however, benefit in also incorporating [Lmax targets criteria](#) for rail noise for the following reasons:

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- Leq is primarily a noise descriptor used to quantify steady or quasi-steady state noise. This is appropriate for sources such as mechanical plant noise, and reasonably applied to traffic noise which has a fairly regular and consistent noise level. Train noise is not as constant or regular as traffic noise. While there are no trains passing, the occupant experiences little or no noise, but when the train passes, there is a short term high noise event which can only be quantified using an Lmax descriptor (or a very short Leq measurement potentially). The Lmax is the highest noise level that someone experiences as the train goes past. In contrast, the long term Leqs are not related to the actual objective experience of an occupant when the train passes by.
- Lmax levels are often used to address sleep disturbance targets.
- On suburban rail corridors where there may only be one line in each direction, with relatively infrequent trains and no trains during some of the night period, the Lmax targets-criteria become more important and are likely to drive the assessment. If these targets-criteria are not in place it is possible for the Leq targets-criteria to be met, and rail noise to exceed sleep disturbance Lmax targets-levels by appreciable amounts.
- Very short term noise events, such as train horns, are not well quantified using long term Leq targets-criteria.

3.24.2 Other standards and guidelines

The NSW guideline document Development Near Rail Corridors and Busy Roads - Interim Guideline, 2008 provides average day and night targets-criteria for road and rail noise that are similar to the levels included in the Apartment Developments, Standard D16.

The Association of Australasian Acoustical Consultants (AAAC) Guideline for Apartment and Townhouse Acoustic Ratings provides acoustic quality ratings for external noise intrusion. A 3 star rating is considered an appropriate minimum standard for developments during the planning stage.

3.34.3 Guideline

New residential development should be designed to meet the following levels foreseen that rail traffic noise does not exceed:

- Clause 58, Apartment Developments, Standard D16 - 40 dBA Leq, 16h (6 am to 10 pm) in habitable rooms and 35 dBA Leq, 8h (10 pm to 6 am) in bedrooms, and
- Train generated Lmax levels from rail and trams, including horn noise, should not exceed no greater than 60 dBA Lmax in living rooms or 55dBA Lmax in bedrooms. Lmax levels to be achieved for 95% of train pass-by events (a minimum of 20 trains to be measured).

Where night period internal amenity is achieved via building façade upgrades, the building must be designed to ensure adequate fresh air provision in accordance with the National Construction Code and other relevant standards, without compromising the acoustic amenity outcome (i.e. with windows to the affected room closed).

45 Commercial and Industrial Plant and Equipment Noise

Commercial and industrial noise assessable to SEPP N-1 -the Victorian EPA Noise limit and assessment protocol for the control of noise from commercial, industrial and trade premises and entertainment venues, Part I: Commercial, industrial and trade premises (Noise Protocol, Part I), is considered in the following section.

4.45.1 Background information

This is an important issue in the City of Yarra where there are many interfaces between residential and commercial uses or industrial precincts. Noise from existing commercial and industrial premises to residential developments needs to be addressed to ensure that:

- The SEPP N-1 compliance status of the business with the Noise Protocol is not changed by the residential development. If the business is forced into non-compliance by introduction of new noise receptors, it may be required to undertake significant and costly noise control works.
- The amenity of future residential occupants is addressed.

The formal SEPP N-1 assessment location under the Noise Protocol is typically outside residential dwellings; the measurement location for assessment is in an outdoor private space, or outside any openable window. As such, it is not often possible to design a new building to achieve formal SEPP N-1 compliance externally where there are existing high levels of commercial noise impacting the site.

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This has been a significant challenge in the City of Yarra where many apartment developments are built in mixed use zones in close proximity to existing roof mounted commercial mechanical plant.

While [SEPP N-1the Noise Protocol, Part I](#) requires commercial noise to be assessed externally, the City of Yarra (and other Councils) has often allowed for an internal assessment location. This is seen as a reasonable amenity compromise in an inner city environment, where insisting on an external assessment location would effectively make many sites impossible to develop.

Where formal compliance [to SEPP N-1with the Noise Protocol, Part I](#) cannot be achieved, and commercial noise is to be assessed internally, the recommended [targets maximum noise levels](#) are the lower of:

- The effective [SEPP N-1Noise Protocol](#) internal noise limit, and
- 35 dBA in habitable rooms and 30 dBA in bedrooms at night.

The 35 dBA and 30 dBA [targets recommended maximum noise levels](#) can be more stringent than [SEPP N-1the Noise Protocol](#) internal [targets recommended maximum noise levels](#). This is considered appropriate to further protect the existing commercial uses from complaint.

In addition to the above, there still needs to be some consideration of maximum acceptable external noise levels to apartments, even if good internal amenity [targets recommended maximum noise levels](#) can be met. Extremely high noise levels outside a building could still raise complaints, and will limit the ability for occupants to open their windows or use external private spaces.

4.25.2 Other standards and guidelines

[Planning Scheme Clause 58, Apartment Developments, Standard D16 \(and associated guidance provided in Planning Practice Note PPN83\)](#) Standard D16 also applies to commercial noise however the [targets criteria](#) provided in Standard D16 are likely to be less stringent than [SEPP N-1the Noise Protocol](#) indoor limits, and the averaging intervals (16 h and 8 h) are considered too long to address commercial plant noise impacts.

The WHO 1996 Guidelines for Community Noise recommend 30 dBA within bedrooms during the night.

The Association of Australasian Acoustical Consultants (AAAC) *Guideline for Acoustical Star Ratings for Apartments and Townhouses* provides indoor [design targets recommended maximum noise levels](#) for commercial noise. Assuming 'three star' standard, internal [targets recommended maximum noise levels](#) would be:

- Bedrooms [at night](#): 35 dBA Leq and 50 dBA Lmax
- Living rooms: 40 dBA Leq and 55 dBA Lmax

4.45.3 Guideline

All residential developments should be designed to ensure that existing commercial uses formally comply with [SEPP N-1the EPA Noise Protocol, Part I](#) external to the development wherever possible. Where it is demonstrated that external compliance cannot practically be achieved, including treatment of the source of noise in consultation with the commercial operator, an internal assessment may be considered. The following [recommended maximum noise levels internal targets](#) for commercial / industrial noise (windows closed) are to be met if noise is assessed internally:

- [SEPP N-1Noise Protocol, Part I](#) indoor limits, being the outdoor limits less [15-20 dB](#), and
- Not more than 30 dBA Leq in bedrooms at night and 35 dBA Leq in living rooms (30 min.).
- Not more than 45 dBA Lmax in bedrooms at night and 50 dBA Lmax in living rooms.

In addition to the above, commercial plant and equipment noise levels should not exceed the following levels externally:

- Not more than 10 dBA above any [SEPP N-1Noise Protocol, Part I](#) period noise limits, outside any openable windows or doors, and
- For balconies and other private open spaces:
 - Not more than 65 dBA during the day
 - Not more than 55 dBA during the evening and night

All assessment methodologies should apply corrections for character in accordance with [SEPP N-4the Noise Protocol, Part I](#) procedure.

Where night period internal amenity is achieved via building façade upgrades, the building must be designed to ensure adequate fresh air provision in accordance with the National Construction Code and other relevant standards, without compromising the acoustic amenity outcome (i.e. with windows to the affected room closed).

The above is aimed at providing a reduced risk of complaint from new sensitive receivers in the City of Yarra. The above does not represent a formal compliance outcome to the requirements of [SEPP N-1the Noise Protocol, Part I](#).

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56 Music noise

This section considers the issue of music noise impacts from existing venues to new dwellings only. The issue of music from proposed new venues to existing dwellings is a straightforward one, and is not revisited here. Consistent with the [SEPP N-2 policy Noise Protocol, Part II](#), all new venues need to comply with [SEPP N-2 external noise limits at existing dwellings](#).

5.16.1 Background information

This is a critical planning issue for acoustics, with existing music venues risking [SEPP N-2 non-compliance with the Noise Protocol, Part II](#) due to residential encroachment. Yarra City Council has, in recent times, adopted an 'Agent of Change' approach to new dwellings in the vicinity of existing music venues. This approach is both supported and complicated by the planning scheme amendment [VC120 VC183.4 September 2014 28/09/2020 Clause 52.4353.06 – Live Music and Entertainment Noise \(previously VC120 / Clause 52.43\)](#) and the Planning Practice Note PPN81 [Live Music and Entertainment Noise 2016](#) which provides further technical guidance on the Clause. The Explanatory Report for [Amendment VC120 this the original Amendment states:](#)

The Amendment implements the 'agent of change principle' for live music entertainment venues and noise sensitive residential use in their vicinity. It requires an applicant for a live music entertainment venue or a noise sensitive residential use near a venue to include appropriate noise attenuation measures as part of an application for use or buildings and works that requires a planning permit under any zone of a planning scheme.

The amendment provides support for the assessment of music to indoor locations. Prior to the amendment, there was no formal recognition that building upgrades to control music noise would protect existing venues from residential encroachment (upgrades could be adopted, but the assessment location was still formally outdoors).

The issue of music noise impacts to new residential development is complicated by:

- Clause [52.4353.06](#) applies to live music venues only. Many existing music venues are not live music venues, and these are explicitly excluded from consideration under Clause [52.4353.06](#).
- Clause [52.4353.06](#) only applies to venues within 50 m from a proposed residential development.
- [The amendment requires new dwellings at which a SEPP N-2 excess is established, and which cannot be managed in any other way, to be constructed such that SEPP N-2 noise limits are met indoors. However, the means by which compliance is to be achieved indoors has not been formally implemented in these provisions or the associated SEPP N-2.](#)

5.1.16.1.1 [SEPP N-2 eCompliance with the Noise Protocol, Part II indoors](#)

[SEPP N-2 eCompliance with the Noise Protocol, Part II](#) is achieved by either designing for a 'background + margin' [target recommended maximum noise level](#) (as defined in the [Policy Noise Protocol](#)), or the [SEPP N-2 'base noise limits' \(as defined in the Environment Noise Regulations 2021, Part 5.3, paragraph 125, subregulation \(2\)\)](#). The 'background + margin' [level target](#) can, however, rarely be reached when a dwelling façade is upgraded – the same upgrades that control music noise ingress also work to reduce the ambient noise and effectively lower the [indoor noise targets limit](#).

The 'base noise limits' are fixed [targets levels](#). They are very low, and can in practice be extremely difficult to achieve. Most high performance acoustic glazing, for example, performs poorly in the region of the acoustic spectrum where music noise is most likely to exceed the base noise limits (i.e. in the 63 Hz and 125 Hz octave bands).

The Planning Practice Note [PPN81](#), May 2016, Live Music and Entertainment Noise, provides options for upgrading a noise sensitive dwelling on page 3, however the options are inadequate in the context of controlling significant levels of bass music noise.

In practice, to achieve compliance with [the SEPP N-2 Noise Protocol, Part II](#) indoors when music levels are 10 dB or more above the [SEPP N-2 external limit](#), the following methods [or combinations of them can be required: should be considered](#):

- Design the dwelling so that there are no windows or lightweight walls or roof exposed to high levels of music noise. This can represent significant architectural constraints on a site.
- Include winter-gardens (enclosed glazed spaces) to all balconies and windows – this is effectively a very large cavity double glazing (e.g. 10 mm glass, 1.2 m airgap, 12 mm glass).
- Incorporate controlled noise masking into the design (relying on air conditioning systems to provide masking is not sufficient as the masking noise provided in this way will vary with the weather). [The](#)

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[masking should preferably not be controlled or varied by the user.](#)

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5.26.2 Other standards and guidelines

Acoustic rating curves (NR, RC or NC) are often used for quantifying ambient noise. The curves define acceptable levels of noise in octave measurement bands. Octave bands are also used in [SEPP N-2 the Noise Protocol, Part II](#) night period assessments.

Based on review of all ratings curves, the use of 'Noise Criteria' or NC curves is considered the most appropriate for domestic use.

5.36.3 Guideline

Compliance with [SEPP N-2 the Noise Protocol, Part II](#) noise limits should be demonstrated, using any of the methods described above. This means achieving:

- [SEPP N-2](#) base noise limits within apartment habitable rooms with doors and windows closed, OR
- [SEPP N-2](#) 'background + margin' noise limits with continuous noise masking installed in habitable rooms of all apartments. The masking system should be set to no more than NC20 L₉₀ and the Leq of the masking to no greater than NC20 L₉₀ + 5 dB.
- [Where noise masking is used to achieve compliance:](#)
 - The masking system is to be designed to enable masking levels in all rooms to be individually controlled.
 - Future occupants are to be informed that compliance with the relevant music noise limits relies on the masking system operating at the pre-determined level.
 - Commissioning testing is to be conducted to demonstrate that the masking system meets the above requirements and is deemed acceptable for domestic use by the acoustical consultant.

Note: Noise masking must not be relied on as the sole measure to address music noise exceedances. It can, however, be implemented on a project in conjunction with other reasonable and practical façade upgrades.

- These indoor [targets criteria](#) for music noise should be applied to all existing sources of music, not just live music.
- The requirements should be met at apartments where any significant music noise impacts are identified, not just due to venues within 50 m of the proposed residential use.
- Where night period internal amenity is achieved via building façade upgrades, the building must be designed to ensure adequate fresh air provision in accordance with the National Construction Code and other relevant standards, without compromising the acoustic amenity outcome (i.e. with windows to the affected room closed).

67 Patron noise

This section deals with:

- New outdoor patron areas
- New residential development near existing outdoor patron areas

6.17.1 Patron noise – new outdoor patron areas

6.1.47.1.1 Background

[SEPP N-1 and SEPP N-2 The Noise Protocol](#) specifically excludes voice noise, but with the significant increase in outdoor patron [area area](#) applications, there have been major noise issues associated with this source.

While there are still no policy requirements for patron noise, there is general acknowledgement that this source of noise needs to be considered in the context of proposed dwellings near existing outdoor patron areas, and in the context of proposed new outdoor patron areas near existing dwellings. New outdoor patron areas are considered in this section.

6.1.27.1.2 Noise targets Recommended maximum noise levels

As part of any planning application for an outdoor patron area an assessment of patron noise to 'Leq' and L_{max} [targets criteria](#) should be considered. The Leq descriptor quantifies the average level of patron noise over an interval, and is particularly important for outdoor areas that are proposed to accommodate

[Guidelines 32231996_1](#) managing noise impacts in urban development

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appreciable numbers of people (say more than 10). The Lmax ~~targets-criteria~~ are useful for quantifying impacts from smaller outdoor areas, where the steady state noise emissions may be low, or variable, and the most intrusive impacts are due to isolated loud voices.

The following noise criteria are typically used in assessments:

- ~~[SEPP N-1 Noise Protocol, Part 1]~~ – while the ~~[SEPP N-1 poliNoise Protocol ey]~~ does not strictly apply to patron noise, ~~the policy~~ nevertheless provides a useful assessment methodology and is considered a good tool for assessing patron noise impacts.
- 'Background + 5 dB' – this is a standard basis for quantifying the intrusiveness of noise. It is a useful assessment tool for patron noise although day and evening limits can be impractically low.

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- Sleep disturbance recommended maximum noise leveltargets of 55 dBA Lmax in bedrooms with windows open (usually assessed as 65 dBALmax externally, outside openable windows).
- Marshall Day Acoustics (MDA) have developed their own patron noise targets-criteria based on background noise levels plus a variable margin:
 - Background + 10 dB during the day and evening period (including weekends)
 - Background + 5 dB at night (after 10 pm)
 - Minimum targets-noise limits are also provided for each of these time periods. The MDA approach is generally supported however the following is noted:
- The evening noise targetrecommended maximum noise level of 'background + 10 dB' can be too high in some circumstances where there is little other ambient noise (for example for dwellings that back onto an outdoor patron area, but are not exposed to general street noise).
- MDA are careful to emphasise that these levels are not 'noise limits', and that modelling or predictions that show targets the recommended maximum levels will be exceeded represent a risk of nuisance rather than grounds for stopping a project from going ahead.
- The MDA approach appears to allow for long term averaging of background levels. This can lead to a misrepresentation of the impact during, for example, the last hour of operation of a venue when background levels in an area are at their minimum.

6.1.37.1.3 Predicting patron noise levels

Unless the proposal is for the expansion of an existing outdoor patron area, patron noise levels need to be predicted to the nearest receivers. The prediction involves two steps:

- Quantification of the amount of noise produced in the outdoor area. This should take into consideration both the level of noise in the outdoor area, the size of the outdoor area and the number of patrons. Ideally the overall noise level should be expressed as a sound power level. It is critical that appropriate sound emission levels are used for the specific type of crowd.
- Prediction of acoustic attenuation or losses, between the outdoor patron area and the receiver location due to distance, shielding and the like. For complicated built environments it is often appropriate to use a 3D computer noise modelling program to predict noise to receiver locations.

7.1.4 Policy Requirements

Policy requirements

There are no policy requirements for patron noise.

7.1.4 Other standards and guidelines

None.

6.1.47.1.5 Guideline

Assessment of patron noise areas is to be based on:

- Noise P-Protocol SEPP N-4 or
- MDA Background noise based assessment approach of:
 - 'night' targets (background + 5 dB) for the night period
 - 'background + 10 dB' for the 'evening' and 'day' targets (background + 10 dB) periods where they these criteria can be demonstrated to be reasonable, and where they align with the SEPP N-4 with definitions of 'evening' in accordance with the Environment Noise Regulations 2021, Part 5.3, paragraph 125 Division 3, subregulation (2) paragraph 116 evening (that is, including all day Saturday afternoon and Sunday as evening daytimes)
- Background levels to be based on the minimum 15 minute to 1 hour interval and conducted during a time that is representative of potential worst case noise impacts (long term averaging of background levels is not appropriate).

and

- Sleep disturbance targets-criteria of 55 dBA Lmax in bedrooms with windows open (65 dBA Lmax externally, outside openable windows).

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7.1.4 Policy Requirements

Policy requirements

There are no policy requirements for patron noise.

7.1.4 Other standards and guidelines

None.

6.1.47.1.5 Guideline

Assessment of patron noise areas is to be based on:

- Noise P-Protocol SEPP N-4 or
- MDA Background noise based assessment approach of:
 - 'night' targets (background + 5 dB) for the night period
 - 'background + 10 dB' for the 'evening' and 'day' targets (background + 10 dB) periods where they these criteria can be demonstrated to be reasonable, and where they align with the SEPP N-4 with definitions of 'evening' in accordance with the Environment Noise Regulations 2021, Part 5.3, paragraph 125 Division 3, subregulation (2) paragraph 116 evening (that is, including all day Saturday afternoon and Sunday as evening daytimes)
- Background levels to be based on the minimum 15 minute to 1 hour interval and conducted during a time that is representative of potential worst case noise impacts (long term averaging of background levels is not appropriate).

and

- Sleep disturbance targets-criteria of 55 dBA Lmax in bedrooms with windows open (65 dBA Lmax externally, outside openable windows).

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6.27.2 Patron noise – new residential development near existing outdoor patron areas

6.2.47.2.1 Background

The issue of noise from existing outdoor patron areas to new developments should be assessed in any planning application to protect future residents from noise. There are no explicit policy requirements for patron noise. In these circumstances the proponent should design to meet appropriate patron noise **targets criteria** indoors with windows closed. Some consideration should also be given to the impacts of patron noise to balconies.

6.2.47.2.1.1 Noise targetsRecommended Mmaximum noise levels

Patron noise is a very distinctive, potentially annoying and variable noise source. For this reason, conservative indoor **targets recommended maximum noise levels** are proposed, based on consideration of AS/NZS2107, WHO Guidelines and the AAAC Acoustic Star Rating design **targets recommendations**.

Determining acceptable patron noise level impacts for external balcony areas and private open spaces, is a complicated issue:

- Adopting indoor **targets criteria** effectively means accepting high levels of noise in these external locations, and in many cases this will occur on balconies.
- It may be difficult to avoid locating balconies on facades exposed to the noise source (the external façades for many apartment developments may be restricted to one or two orientations).
- Unavoidably high levels of noise on balconies can occur as a result of road traffic noise.
- Patron noise levels on balconies above approximately 60-65 dBA Leq would make the outdoor space unusable for many residents.
- Options for controlling noise to balconies are limited to:
 - Wintergardens (high level of control but effectively an enclosed space), OR
 - Solid balcony balustrades in combination with sound absorption to the underside of the balcony ceiling (providing a small reduction in noise level to seated position on balcony).

6.2.47.2.1.2 Predicting patron noise levels

Patron noise from existing venues should ideally be measured for the most exposed new dwelling. Where this is not practical, for example where a proposed multi-level residential development will overlook an existing outdoor area, it may be necessary to predict patron noise to the new façade. The predictions should take into consideration the actual patron noise levels at the venue during worst case operating conditions. This would likely involve monitoring noise over a busy weekend period, with a logger located above the outdoor patron area. Real rather than theoretical patron noise data should be used, where possible, to predict patron levels from an existing outdoor area.

6.2.27.2.2 Policy requirements

There are no policy requirements for patron noise.

6.2.37.2.3 Other standards and guidelines

The Apartment Developments provisions at Clause 58 of Planning Schemes, and specifically at 58.04-3 Noise impacts objectives and Standard D16 provides indoor **targets criteria** of 40 LAeq,16h and 35 LAeq,8h. These levels are too high and the long term averaging (16h and 8h) is not appropriate for patron noise.

The **SEPP N-1 Noise Protocol, Part I** effective indoor limits (external **SEPP N-1** noise limit less **15-20 dB**) can be used as **indoortargetsrecommended maximum noise levels indoors** for patron noise but there is a risk that the resulting limits will be unreasonably high in some instances.

6.2.47.2.4 Guideline

New residential developments exposed to noise from outdoor patron areas should be designed to achieve the following **targetsrecommended maximum noise levels**:

- 35 dBA Leq,15 mins in habitable rooms
- 30 dBA Leq,15 mins in bedrooms at night
- 45 dBA, Lmax in bedrooms at night
- 65 LAeq, 15 mins to balconies, 1.2 m above balcony floor level

Noise from existing outdoor patron areas should be measured in order to quantify the worst case impacts to the subject site. Where measurements cannot be undertaken at a location representative of the proposed

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new receptors, they should be made closer to the venue. The measured levels should be adjusted for the size of the outdoor patron area, and for the distance to the development façade.

Where night period internal amenity is achieved via building façade upgrades, the building must be designed to ensure adequate fresh air provision in accordance with the National Construction Code and other relevant standards, without compromising the acoustic amenity outcome (i.e. with windows to the affected room closed).

78 Apartments

This section deals with:

- Noise from apartment developments to existing dwellings
- Noise from apartment common areas to apartments within the development
- Acoustic star ratings for apartments and townhouses - Association of Australasian Acoustical Consultants (AAAC)

7.18.1 Noise from apartment developments to existing dwellings

7.18.1.1 SEPP-N-1 Noise Protocol, Part I assessable noise

Communal mechanical plant, car stackers, carpark entrance gates and the like should comply with [SEPP-N-4](#) the Noise Protocol, Part I at existing and proposed dwellings.

Expert advice on managing noise should be sought early in the planning stage, particularly with regard to items that have structural implications for the project, such as carpark entrance doors and car stackers. Effective control of noise and vibration can, for example, require full enclosure of the carpark and/or set-downs to accommodate vibration isolation mounts.

Noise from mechanical plant cannot be fully addressed during the planning stage because equipment is rarely specified at this time, and equipment location may not be finalised. On larger projects, where an acoustical consultant is retained during the detailed design, it is reasonable for the consultant to state that these issues will be addressed during the detailed design.

On smaller projects, where it is unlikely that a consultant will be retained after the planning phase, more guidance should be provided for achieving [SEPP-N-1](#) compliance [with the Noise Protocol, Part I](#). This could entail providing a maximum overall sound power level for any mechanical plant proposed to be installed on a roof top plant deck, and / or maximum rating for air conditioning condenser units.

7.18.1.2 Sleep Disturbance

Noise from operation of car-park equipment should be designed to comply with sleep disturbance [criteria](#) targets outside openable windows [of bedrooms](#) of nearby dwellings. Noise levels should not be in excess of 65 dBA Lmax.

7.18.1.3 Apartment Common Areas

There are no mandatory limits for voice noise from apartment common areas such as communal decks, gardens, pools and spas. These should be assessed similarly to any other patron noise (see Section 7 of this document).

7.28.2 Noise from apartment common areas to apartments within the development

Noise to apartments from common areas within and outside the development buildings has the potential to cause nuisance. This is a lower tier planning issue because such issues within the development are not normally assessable to any noise policy or guideline, and can be addressed by the Body Corporate. However, these are still amenity quality issues and it is preferable to address these items during the planning stage particularly because they can be costly and difficult to rectify after construction. In addition, the Body Corporate approach is usually to limit times of usage of such areas, which can lead to a poor outcome for other areas of amenity.

The following is a summary of the relevant potential impacts.

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7.2.18.2.1 Communal outdoor areas, including decks, outdoor pools, gardens, carpark entrance

Facade upgrades should be provided to apartments within the development that are potentially impacted by noise from voice in communal outdoor areas, carpark entry areas and outdoor pools and the like. A practical approach to addressing these sources would be to adopt moderate glazing upgrades.

Appropriate moderate upgrades may include, for example, calling up double glazing to achieve an R_w 39 dB rating (eg. 10.38 mm thick laminated glass, 12 mm airgap, 6 mm glass) to the most affected windows.

If, after reasonable upgrades, occupants are still annoyed by voice noise, the Body Corporate should manage impacts through restricted access to or use of, the communal facilities.

7.2.28.2.2 Communal enclosed areas, including cinemas, gyms, indoor pools.

Pools and gyms in particular can generate vibration and structure-borne noise in apartment buildings.

Appropriate siting or treatments to control adverse amenity impacts from these uses should be considered in the planning acoustic report.

The degree of noise and vibration control will depend on the size and proximity of the gym / pool relative to the closest apartments, and the equipment proposed for use. For small gyms, it may be sufficient to install a 25-50 mm thick rubber/foam isolation matt throughout the gym and to restrict the use of free weights and running machines. For larger gyms a full acoustic floating floor may be required. Pools can also be vibration isolated with rubber or spring mounts.

Cinemas also require some care if they are directly adjacent or above / below an apartment. Upgrades to the walls and floor / ceiling systems would typically be necessary. The National Construction Code (NCC) minimum requirements for walls and floors is not sufficient to address cinema noise transfer.

7.2.38.2.3 Noise transfer between apartments via light-wells

Noise transfer between apartments that share a light-well should be addressed in the acoustic report because this issue is not covered under the National Construction Code (NCC).

Noise transfer can be a particular problem in instances where the light-well is enclosed on all sides, because the ambient noise within the light-well is low, and sound attenuation within the light-well is minimal. Sound emanating from one apartment (which may have their windows open) will reflect off the walls and windows of the light-well, potentially causing nuisance to other occupants.

There are two basic scenarios:

- Light-wells that contain non-openable windows to habitable rooms, and openable windows to bathrooms / toilets only
- Light-wells that have openable windows from habitable room

Scenario A is not a major concern, because, provided reasonably well sealed glazing is fitted to all windows of habitable rooms, noise between apartments will typically travel through two widely spaced panes of glass. We recommend that glazing to habitable rooms in this situation be not less than $R_w = 30$ dB (typically 6 mm thick glass to windows of all habitable rooms onto the light-well).

Scenario B is the greater concern because the noise generating apartment may have their window open. In that instance, there is only one window separating affected apartments from the noise source. Glazing to habitable rooms should be rated not less than $R_w = 39$ dB in this situation (typically double glazing comprising 10.38 mm thick laminated glass, 12 mm airgap, 6 mm glass).

This approach will not be optimum for all situations – very large light-wells or light courts, for example, may be less critical because more sound attenuation will take place between apartments. A lesser upgrade may be reasonable in these areas.

7.2.48.2.4 Carpark entrance gates and car stackers

These items are potential sources of airborne noise, structure-borne noise and vibration.

7.2.4.18.2.4.1 Airborne Noise

Carpark entrance gates and car-stackers need to comply with [SEPP N-1 the Noise Protocol, Part I](#) outdoor limits as well as indoor limits (where noise is transmitted through the building structure) and should also be designed to achieve appropriate Lmax levels indoors for sleep disturbance and general annoyance.

The [SEPP N-1 Noise Protocol](#) assessment should take into consideration typical frequency of use during various times of day and night; the duration of the event, and any relevant corrections for impulse, tonality and intermittency. Recent acoustic assessments of car stackers suggest that impulsive, tonality and intermittency corrections can apply.

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When assessing sleep disturbance, as a minimum, the 3 star AAAC Acoustic Star Rating design targets levels for L_{max} levels should be met with windows closed (45 dBA L_{max} in living rooms and 40 dBA L_{max} in bedrooms). Lower noise levels should be targeted by the proponent if they classify the apartment as moderately high to high quality.

Requirements for apartments potentially affected by noise from the carpark typically include glazing upgrades and / or floor ceiling upgrades (particularly for lightweight/non-masonry floor construction).

7.2.4.28.2.4.2 Structure-borne sound and vibration

Car stackers and carpark entrance gates should be vibration isolated to ensure that the recommended maximum noise targets levels are met in potentially affected apartments.

7.38.3 AAAC Guideline for acoustical star ratings for apartments and townhouses

The AAAC Acoustic Star Rating design targets levels (*Association of Australasian Acoustical Consultants Guideline for Apartment and Townhouse Acoustic Rating*) provide a useful tool for assessment because they address many sources of noise in apartments that are not captured or assessable under existing guidelines, standards and policies.

The AAAC recommended indoor targets levels for internal and external noise, for discrete events, (quantified using the 'L_{max}' acoustical descriptor) and steady state noise are provided in the sections below. Assessments should be to at least 3 stars in an inner urban setting. If a development is advertised or promoted as moderately high to high quality, a higher star rating should be targeted by the proponent.

The AAAC recommended maximum noise levels should not be used for noise from outdoor patron areas or noise from commercial / industrial operations.

7.3.18.3.1 External noise intrusion

Examples of external L_{max} sources of noise include: individual truck movements, crashing and banging due to deliveries or rubbish collection.

Table 1 External Noise Intrusion Design Targets Levels (AAAC Star Rating Guide), L_{max} levels

External noise intrusion	2 star	3 Star	4 Star	5 Star	6 Star
Bedrooms	50	50	45	40	35
Other habitable rooms	55	55	50	45	40

Examples of external L_{eq} sources of noise include: road traffic

Table 2 External Noise Intrusion Design Targets Levels (AAAC Star Rating Guide), Leg day and night levels

External noise intrusion	2 star	3 Star	4 Star	5 Star	6 Star
Bedrooms	36	35	32	30	27
Other habitable rooms	41	40	35	30	27

7.3.28.3.2 Internal Noise Intrusion

Examples of internal L_{max} sources of noise include: mechanical plant and equipment serving the building or commercial tenancies and hydraulic noise.

Table 3 Internal Noise Intrusion Design Targets Levels (AAAC Star Rating Guide), L_{max} day and night levels

Internal noise intrusion	2 star	3 Star	4 Star	5 Star	6 Star
Bedrooms	45	40	35	30	27
Other habitable rooms	55	45	40	35	32

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Terminology

Term	Description
'A' weighted	A frequency <u>adjustment which represents how humans hear sounds</u> , <u>weighting representing the human response to sound and its variation with frequency</u> .
dB	Decibel
dBA	'A' weighted decibel
Hz	Hertz
Impulsive noise	Noise with a high peak of short duration, or sequence of peaks.
Intermittent noise	Noise which varies in level with the change in level being clearly audible
L ₉₀ , L ₁₀ , etc.	Statistical exceedance levels, where LN is the sound pressure level exceeded for N% of a given measurement period.
L _{Aeq} (dB) or L _a (dBA)	The 'A' weighted equivalent noise level, <u>measured in decibels</u> . It ^{is} The equivalent noise <u>noise level</u> is defined as the steady sound level that contains the same amount of acoustical energy as the corresponding time-varying sound.
L _{Amax} (dB) or L _{max} (dBA)	The 'A' weighted maximum sound pressure level of an event.
Low frequency	Noise containing energy in the low frequency range.
L _P or SPL	Sound Pressure Level
L _w or SWL	Sound Power Level
Noise Curves - NR, NC, RC Noise rating curve, NR, NC or RC	<u>A set of reference curves used to rate the noise level taking into account the frequency content of the noise across the audible spectrum. The curves allow for the determination of a single number rating. The most commonly used curves are the Noise Rating (NR), Noise Criterion (NC), and Room Criteria (RC). Single number evaluation of the background noise level in a space. The NR, NC and RC overall level is typically around 5 to 6 dB below the 'A' weighted noise level. There are small differences in the three curves however they can be used interchangeably.</u>
Octave-band	<u>An octave is the interval between one frequency and its double or its half. Octave-band analysis is implemented in sound level measurements and assessment to allow for division of the audible frequency range into smaller defined regions or 'bands'. This provides for a more detailed and targeted analysis that is more effective in capturing the spectral characteristics of a sound source than the overall A-weighted level. Division of the frequency range used for the purpose of acoustic design and noise assessment, allowing for a more targeted control of sound as it varies in frequency. A frequency band where the highest frequency is twice the lowest frequency.</u>
Sound Insulation	A reference to the degree of acoustical separation between any two areas.
Steady state noise	Noise which remains relatively constant in level over time, as opposed to time-varying noise which fluctuates over time.
Speech privacy	<u>The privacy achieved between two spaces, being a combination of source strength (vocal effort), sound insulation (D_{st}) between the spaces and the background noise levels in the receiving location.</u>
Tonality	Noise containing a prominent frequency.
Transmission loss (or sound transmission loss or sound reduction index)	<u>A test which rates the sound transmission properties of a wall, floor or roof construction.</u>

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APPENDIX B

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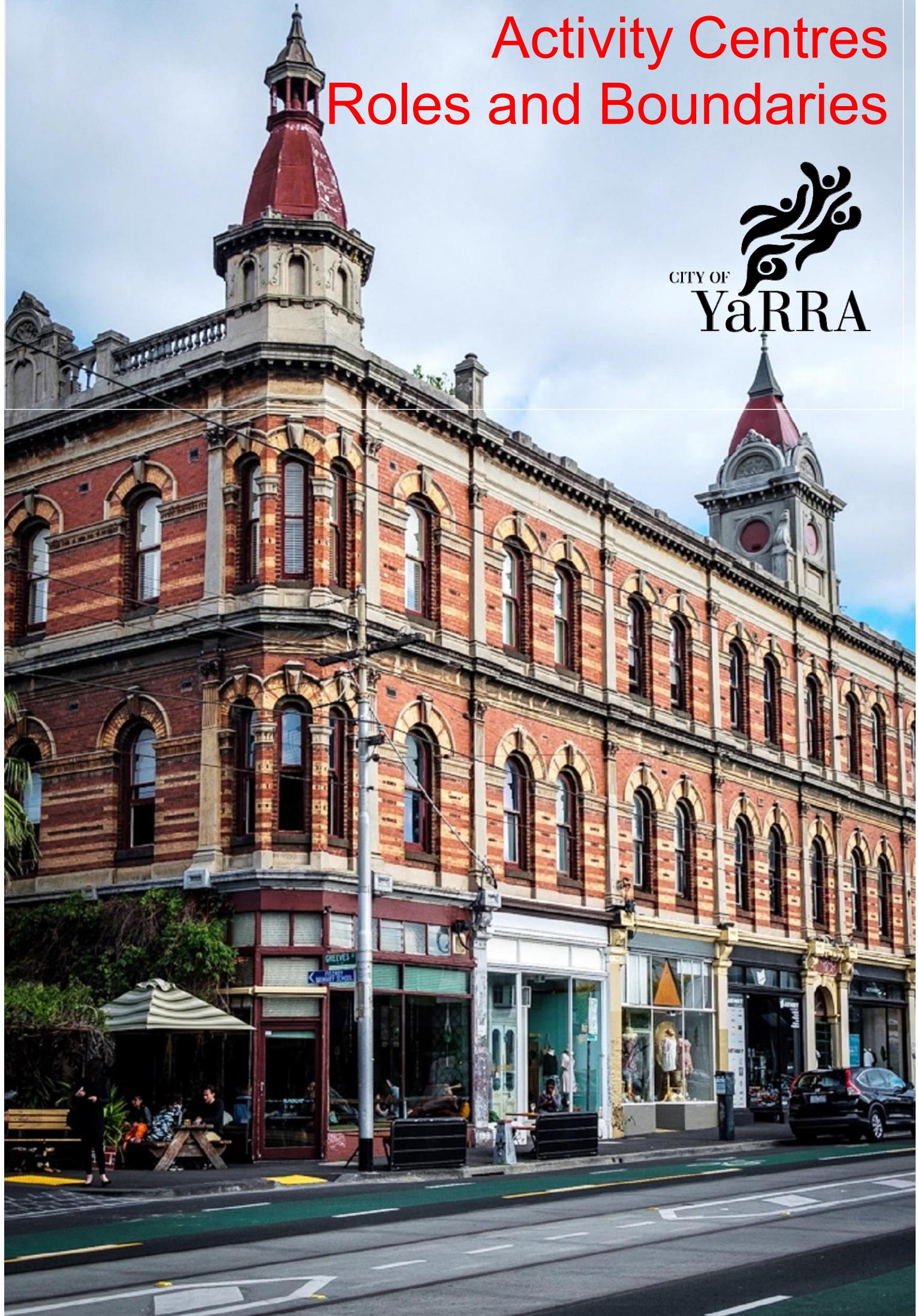
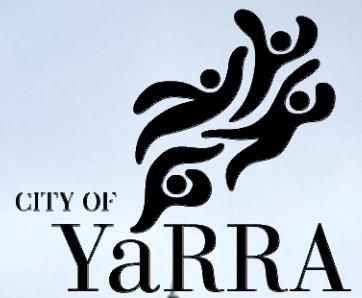
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Activity Centres Roles and Boundaries



Abstract

This report assesses the policy context for the system of activity centres in the City of Yarra. It reviews the current planning scheme provisions and analyses the roles, extent and boundaries of all the activity centres. It provides the basis for revisions in the Planning Scheme re-write and adds explicit boundaries to local policy. The report also addresses the level of change and new development anticipated in the Major, Neighborhood and Local activity centres.

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1. Introduction

1.1 Purpose

Yarra has a network of activity centres, each with their own role and function, including:

- Major activity centres (MACs): these centres are identified in Plan Melbourne 2017-2050 and provide access to a wide range of goods and services, some serving larger subregional catchments;
- Neighbourhood activity centres (NACs): these centres are in the existing Yarra Planning Scheme and provide access to local goods, services and employment opportunities and serve the needs of the surrounding community.
- Local centre (LCs): these centres provide a limited range of goods, services and employment to adjoining communities. They are identified in the existing Yarra Planning Scheme (YPS).

Yarra's major and neighbourhood activity centres are predominantly along and around the main retail shopping streets (Yarra's high streets). They feature highly intact heritage streetscapes and heritage places, key landmark signs and buildings, larger commercial sites, and vibrant communities. Activity centres have been the focus of Yarra's growth in recent years, and have seen the addition of mid-rise commercial development and apartments. They will continue to accommodate most of the city's growth because their transport infrastructure, shops and services make them the most suitable locations for development.

Managing growth and change in activity centres aligns with the State Government's vision for a network of major activity centres that are critical to metropolitan economic performance and provide a focal point for services, employment, housing, public transport and social interaction.

The purpose of this report is to define the network of activity centres in the City of Yarra. In particular, it provides a rationale for the boundaries and role for Major and Neighbourhood activity centres and the smaller Local centres. This report also includes clearer mapping of the activity centre boundaries and identifies the categories of precincts in each centre.

This report is structured as follows:

- Section 2 lists Yarra's activity centres
- Section 3 sets out the method and approach used to define the activity centres
- Section 4 sets out the planning policy context
- Section 5 sets out the characteristics of the major activity centres
- Section 6 describes the role and function of the activity centres in delivering housing and employment growth
- Section 7 categorises the land that is included and excluded from the activity centres.

1.2 Yarra's Activity Centres

Yarra's activity centres host a vibrant and constantly evolving range of retail, entertainment, hospitality and commercial services.

Our major activity centres listed in Plan Melbourne are:

- Swan Street – Richmond
- Bridge Road – Richmond
- Victoria Street – Richmond
- Smith Street – Collingwood/Fitzroy
- Brunswick Street – Fitzroy

Our neighbourhood centres that provide access to local goods, services and employment opportunities and serve the needs of the surrounding community, include:

- Johnston Street – Collingwood/Abbotsford
- Queens Parade – Fitzroy North/ Clifton Hill
- Gertrude Street - Fitzroy
- Heidelberg Road – Alphington
- St Georges Road – Fitzroy North
- Nicholson Street – Carlton North and Fitzroy North

Yarra also has smaller, local centres which serve the adjoining local community. They are also appropriate locations for employment growth however the scope and opportunities for growth are more nuanced and constrained in these smaller centres.

Our local centres:

- Berry Street/Ramsden Street – Clifton Hill
- Lygon Street – Carlton North/Princes Hill
- Nicholson Street (south) – Carlton North
- Rathdowne Street – Carlton North
- Spensley Street – Clifton Hill

1.3 Approach and Method

Population and economic growth and housing diversity can be facilitated by establishing a boundary for each centre based on a consistent set of criteria. The capacity to accommodate growth is determined by land area, potential development densities and other factors including the amount of land available for redevelopment in each centre. The approach in establishing boundaries in Yarra is based on the *Activity Centres Boundary Criteria* in Planning Practice Note 58 (PN58). An assessment against each criteria is included for each activity centre in this report.

The method undertaken to define the boundaries is set out below.

1. Background research

- Desktop review of the Yarra Planning Scheme – zones; overlays; amendments
- Desktop review of land ownership; lot size; main road frontage; uses; permits; public transport routes
- Review of planning strategies – Housing Strategy; Spatial Economic and Employment Strategy

- Site visits to understand existing built form, land uses, pedestrian connections and open space.

2. Categories defined

Council defined categories to order land that is to be included in a boundary. It is based on Planning Practice Note 58 *Structure Planning for Activity Centres* (PPN58), which discusses the role and nature of activity centres in the opening paragraphs of the Practice Note:

Activity centres are a focus for housing, commercial, retailing, community, employment, transport, leisure, open space, entertainment and other services and are places where people shop, work, meet, relax and live.

State planning policy directs the further expansion of these services into activity centres, and recognises that activity centres are ideally placed to provide for growth in household numbers. As such, activity centres will be a major focus for change in metropolitan Melbourne.

PPN58 includes a set of criteria / issues to consider *in determining the potential location of an activity centre boundary*:

- *the location of existing commercial areas and land uses*
- *the location of existing government and institutional areas and land uses*
- *the location of existing areas of public open space*
- *commercial and residential needs*
- *environmental and flooding constraints*
- *heritage constraints*
- *availability of strategic redevelopment sites, both existing and potential*
- *the location of residential areas, including whether they provide significant redevelopment opportunities or constraints for the centre*
- *consideration of physical barriers and opportunities for their improvement*
- *proximity to public transport, especially fixed rail (train or tram)*
- *the location of existing and potential transport infrastructure including fixed rail, buses, bicycle paths, car parking areas and modal interchanges*
- *walkability – opportunities to provide for and improve walkability within 400 to 800 metres from the core of the centre (depending on topography and connectivity)*
- *consistency with State policy*
- *consistency with local policy and Municipal Strategic Statement (MSS)*
- *impacts of the boundary on other activity centre boundaries*

3. Analysis

Land along and around activity centres, included in Plan Melbourne 2017-2050 and the current YPS has been analysed to consider whether there is:

- sufficient land to provide for the commercial (retailing, office, fringe retailing and support activities such as entertainment) activities needed over a 15 to 20 year time frame and then into the 30-year horizon
- residential land that is integrated into the activity centre or surrounded by other uses that have a strong functional inter-relationship with the activity centre even where limited development opportunities exist
- key public land uses that have or are intended to have a strong functional inter-relationship with the activity centre even where there are no or limited redevelopment opportunities

- public open space areas that have or are intended to have a strong functional inter-relationship with the activity centre.

Residential land encumbered by significant constraints (such as a Heritage Overlay) was generally excluded from activity centres.

2. Policy Framework

2.1 Plan Melbourne 2017-2050

Plan Melbourne 2017-2050 maps the location of larger activity centres and includes the five major activity centres in the City of Yarra - listed in section 1.1 above. It also includes policy about neighbourhood activity centres as part of a wider network of centres. Planning policy makes these centres the best location for medium and higher density development. Activity centres provide potential to attract investment and will be a major focus for change in metropolitan Melbourne.

- Direction 1.2 *Improve access to jobs across Melbourne and closer to where people live* supports investment and job creation across the city
- Policy 1.2.1 *Support the development of a network of activity centres linked by transport* discusses activity centres which ‘fill diverse roles—including housing, retail, commercial and civic services—and are a focus for services, employment and social interaction. In recent times some activity centres have become a focus for higher-density development’.
- Direction 2.2 *Deliver more housing closer to jobs and public transport* aims to locate medium and higher density development near services, jobs and public transport supports the objectives of consolidation and housing choice.
- Policy 2.2.3 *Supports new housing in activity centres and other places that offer good access to jobs, services and public transport.*

Plan Melbourne 2017-2050 makes reference to specific major activity centres (Direction 2.2 *Deliver more housing closer to jobs and public transport* – list of activity centres) including five in Yarra and more general references to neighbourhood activity centres as locations for increased jobs and housing.

In Direction 5.1 - Create a city of 20-minute neighbourhoods Plan Melbourne 2017-2050 gives particular emphasis to neighbourhood activity centres.

Neighbourhood activity centres are an integral part of the city’s vibrant community life and critical to the creation of 20-minute neighbourhoods. These high streets and specialised strips of shops, cafes, small supermarkets, service businesses, community services and public spaces serve the needs of the surrounding community and provide a focus not only for local jobs but also for social interaction and community participation.

.....

Policy 5.1.2 *Support a network of vibrant neighbourhood activity centres*

The attributes of and opportunities for neighbourhood activity centres at the local level vary across Melbourne. That is why local communities should lead the planning of their own centres.

Where centres are well established or communities are seeking to protect the unique character of their centres (such as protecting heritage buildings or access to public land or open space to achieve community benefit), they should be assisted in determining the desired built form outcomes.

Local governments will be supported to prepare structure plans for their neighbourhood activity centres to help deliver 20-minute neighbourhoods.

In Yarra the major activity centres will play an important role as locations for additional housing and jobs. The level of change in the activity centres will be determined by the context of each centre. The neighbourhood centres will play a more nuanced role which will vary depending on the nature of each centre and the constraints or opportunities of their context. The local centres will play a limited role in providing for housing and local employment.

2.2 Yarra Planning Scheme

The Yarra Planning Scheme (YPS) sets out a number of activity centres (refer to Table 1 and Figure 1). The centres are along main road or in smaller pockets in North Carlton, Clifton Hill and Alphington. The current YPS does not distinguish between the larger neighbourhood centres which serve significant local catchments and the small local centres discussed in this report.

FIGURE 1. STRATEGIC FRAMEWORK PLAN



Source: Yarra Planning Scheme

Clause 21.04-2 of the YPS states that *Activity centres in Yarra have a retail, hospitality, and service focus. Because of the pattern of development in the municipality, almost all residents are within 400m of an activity centre. The provision of local services is therefore important for maintaining the character of activity centres as local destinations.*

Table 1: Activity Centres in the Yarra Planning Scheme

Major Activity Centre (Neighbourhood Map in YPS)	Neighbourhood Activity Centre (Neighbourhood Map in YPS)
<ul style="list-style-type: none"> • Richmond – Swan Street (Figures 7 and 23: Burnley, Cremorne, South Richmond + Central Richmond) • Richmond – Bridge Road (Figures 21 and 23: North and Central Richmond) • Richmond – Victoria Street (Figure 5: Abbotsford) • Fitzroy – Brunswick Street (Figure 17: Fitzroy) • Fitzroy – Smith Street (Figure 13: Collingwood) 	<ul style="list-style-type: none"> • Alphington – Heidelberg Road b/n Parkview Road and Como Street (Figure 15: Fairfield / Alphington) • Carlton North – Rathdowne Street, at the Richardson Street Junction (Figure 9: Carlton/ Princes Hill) • Carlton North – Lygon St, south of Pigdon Street (Figure 9: Carlton/ Princes Hill) • Carlton North / Fitzroy North – Nicholson St, north of Richardson Street, north of Curtain Street and at the junction of Lee St (Figure 9: Carlton/ Princes Hill) • Collingwood / Abbotsford – Johnston Street (Figures 5: Abbotsford and 13: Collingwood) • Fitzroy North – St Georges Road (Figure 19: North Fitzroy) • Fitzroy North / Clifton Hill – Queens Parade (Figure 11: Clifton Hill) • Fitzroy – Gertrude Street (shown as part of Brunswick MAC in Figure 13, however referred to a neighbourhood centre in policy, clause 21.08-7) • Clifton Hill – Spensely Street at the intersection with Berry Street (Figure 11: Clifton Hill) • Clifton Hill - Berry Street at the junction with Ramsden Street (Figure 11: Clifton Hill)

As part of the process to assess the boundaries and roles of the centres in the current Yarra Planning Scheme a number of the small centres designated as Neighbourhood centres were considered to play a lower order and more local role in the network. These have been recognised as local centres and include:

- Carlton North – Rathdowne Street
- Carlton North – Lygon St, south of Pigdon Street
- Carlton North / Fitzroy North – Nicholson St, , north of Curtain Street and at the junction of Lee St

- Clifton Hill – Spensely Street at the intersection with Berry Street
- Clifton Hill - Berry Street at the junction with Ramsden Street

2.3 Review of Yarra Planning Scheme 2014

A review of the Yarra Planning Scheme in 2014 suggested that the current YPS lacked an overarching, evidence-based narrative for projected housing and employment growth in the municipality. As growth of both housing and employment continues, it is expected that there will be competition for land and other assets in Yarra. The review noted that it is important to carefully manage and protect certain assets and land, and facilitate growth in locations that will provide benefit for current generations but also be sustainable into the future.

The review identified a lack of spatial plans for major activity and neighbourhood centres and further suggested that the roles and strengths of activity centres in particular need to be better defined, and strategies to meet the projected demand for retail and other facilities need to be identified.

Council has been implementing spatial plans (Swan Street Structure Plan, Johnston Street Local Area Plan) through separate amendments that introduce Design and Development Overlays. In addition Council has been implementing built form frameworks for Bridge Road, Queens Parade, Victoria Street, Brunswick Street, Smith and Gertrude Streets Activity Centres to guide decision making on built form outcomes. These have been pursued through separate amendments.

The review also identified the need for clear maps. This report will assist to clearly illustrate draft policy in the Yarra Planning Scheme.

2.4 Current Council Structure Plans and Local Area Plans

Council has previously prepared and adopted a series of structure plans and local areas plans to guide and manage growth within Yarra's key activity centres. These plans were developed to manage the future of the centres and provide direction on preferred land use, built form, movement (vehicle and pedestrian), and identify zones and other planning controls required.

There are currently five structure and local area plans in Yarra with varying status levels:

- The Smith Street Structure Plan was adopted by Council 2008 but the subsequent Design and Development Overlay was abandoned June 2012;
- The Swan Street Structure Plan was adopted by Council in December 2013 and is being implemented through Planning Scheme Amendments C191 and C236;
- The Victoria Street Structure Plan was adopted by Council in 2010; and
- The Johnston Street Local Area Plan was adopted in December 2015 and is being implemented through a Planning Scheme Amendment C220.

2.5 Built form Frameworks

As outline earlier, Plan Melbourne and State policy seek directs the growth of Melbourne in sustainable manner in locations that has strong access to existing public transport and services. This however, needs to be at a scale appropriate to the role and capacity of each centre and support each centre's unique character. To ensure the values of Yarra's retail strips and adjoining mixed use / commercial areas are protected, Council has commenced a programme of preparing built form frameworks. The frameworks guide the future form and

design of development and have (or will) inform planning controls in the Yarra Planning Scheme through the Design and Development Overlay.

Built form Frameworks have been prepared for:

- Smith and Brunswick Streets
- Gertrude St and Johnston St (east)
- Queens Parade
- Heidelberg Road
- Bridge Road
- Victoria Streets

3. . Yarra's Activity Centre Network

3.1 Major Activity centres

The Major Activity Centres have their own distinct character and mix of activity. Future growth of the centres would have regard for these characteristics.

The Major Activity Centres are:

- Bridge Road – Richmond
- Victoria Street – Richmond
- Smith Street – Collingwood/Fitzroy
- Brunswick Street – Fitzroy
- Swan Street – Richmond

[Brunswick and Smith Streets](#)

Brunswick and Smith Streets (along with the neighbourhood centres of Gertrude and Johnston Streets) function as a single highly accessible network. This network includes the major north-south retail strip centres connected by the neighbourhood centres of Gertrude Street and Johnston Street which is categorised, east of Smith Street.

Local streets play a significant role as walking and cycle routes or connections in this network. This area has a strong hospitality focus and night-time economy, drawing from a metropolitan catchment. It has historically been a place that attracts artists and alternative lifestyle creative types.

The urban characteristics vary throughout these Activity centres, which includes:

- Retail spines with fine grain shop fronts with distinct heritage character
- More moderate grain shop fronts with a mix of contemporary and heritage character along the northern and southern ends of Smith Street, the northern end of Brunswick Street, Johnston Street between Brunswick and Smith Streets and a portion along Nicholson Street
- Older industrial sites, such as the MacRobertson industrial buildings in Fitzroy and Foy and Gibson in Collingwood, which are defined by the original industrial forms and factories and were the cornerstone for the development of Collingwood and Fitzroy at that time
- Small pockets of traditional residential precincts with heritage terrace housing behind the retail strips.
- Opulent heritage homes

- A variety of industrial and contemporary built form with pockets of traditional residential scattered within mixed use areas behind the retail strips.

These retail strips are associated with substantial areas of Mixed Use Zone land which covers former mixed industrial / residential areas behind the retail strips. They include large former industrial buildings and warehouses and nineteenth century housing.

These centres also include the health and education precincts around St Vincent's Hospital and Australian Catholic University on Victoria Parade. This is likely to see growth as part of a wider inner city trend for growth in health and education services.

These centres also connect to major cultural nodes and open space at the Exhibition Building / Melbourne Museum at the west end of Gertrude Street and Collingwood Arts Precinct on Johnston Street.

[Victoria Street](#)

Victoria Street includes contrasting components. The western end between Hoddle Street and Church Street is characterised by Chinese and Vietnamese goods and food with a wide range of cafes and restaurants, specialty shops and a more recent supermarket. This serves a significant local Vietnamese / Chinese community and adjoining public housing. The main shopping strip is predominantly fine grained low rise shops.

The eastern end of Victoria Street is dominated by the Victoria Gardens enclosed shopping centre and recent higher density housing along the northern end of Burnley Street and along Victoria Street east of Grosvenor Street. Victoria Gardens serves a substantial local and regional catchment. This end of Victoria Street also connects to the Yarra River with recent major redevelopment along the south bank of the River. Redevelopment of former industrial land has been on larger scale lots and in the range of four to eight storeys. On some larger sites apartment buildings have approached or exceeded ten storeys.

The central section of Victoria Street includes a mix of retail, service business and industry. It adjoins the Carlton and United Breweries complex and associated industrial area. The scale of development is generally low rise but buildings in the CUB complex are bulkier and taller. Redevelopment of this area constrained by and linked to the future of the CUB complex. If CUB was redeveloped it could become a major node for activity, as has happened with the Alphington paper-mill site.

The Skipping Girl sign at 651 Victoria Street is a valued Yarra landmark.

A large proportion of floor space in Victoria Street is accounted for within the Victoria Gardens and Hive shopping centres, which accommodate 52,000 and 8,000 square metres of floor space respectively. Victoria Gardens is more like a traditional suburban shopping centre with a large car park and minimal activation at ground level to the main road frontages. Conversely, the Hive, which was developed more recently, provides opportunities for centre retailers to engage at the street level, providing a focus for local retail activity on this part of Victoria Street. The remainder of the precinct hosts a mix of retail types with a focus on food and hospitality, and is home to one of Melbourne's most renowned Vietnamese food precincts. There is significant capacity for the precinct to further develop and provide additional employment opportunities.

Bridge Road

Bridge Road is changing from an outlet, fashion oriented retailing strip, particular west of Church St. Recently, the south side of the strip between Church and Burnley Streets, has begun to develop a vibrant hospitality offer.

Epworth Hospital is a regional health facility with an associated precinct of medical specialists and other health services around Erin Street. The hospital and associated health sector businesses is a dominant feature of the Bridge Road employment market. Epworth Hospital is designated as a health precinct in Plan Melbourne 2017-2050. Future expansion of the hospital and related health uses is constrained by a lack of capacity, and it is unclear how expansion of medical activities can be accommodated in the precinct. One option may be to identify opportunities to provide capacity at the western end of Bridge Road as part of broader work to define the health precinct. Expansion of health-related activities on Bridge Road would also generate demand for associated commercial services and support the local retail sector.

Buildings in Bridge Road are predominantly low rise but recent development at Epworth Hospital and apartment buildings on the north side of Bridge Road, between Lennox Street and Church Street, have been in the range of four to six storeys.

The Pelaco sign at 21 Goodwood Street, Richmond is a Yarra landmark visible from Bridge Road.

The eastern end of Bridge Road has developed as a mix of discount furniture, homewares, office supplies, other larger floor-space outlets with café and other food outlets in finer grained shops. The centre adjoins the Yarra River but has very limited orientation to the River corridor and the Main Yarra Trail.

The centre section of Bridge Road has a civic, recreational and educational focus near Gleadell Street with the Richmond Town Hall, a new high school and Citizens Park adjoining Highett Street.

Swan Street

Swan Street's diverse range of entertainment and retail activities, public transport options and close proximity to Melbourne's Central Business District and Sports and Entertainment Precinct have attracted residents, visitors and workers to the Activity Centre for well over a 100 years.

The character of the Swan Street varies significantly along the length of Swan Street, moving from a cohesive and highly intact, turn of the century 'High Street' with a prominent fine grain subdivision pattern, to larger bulky goods retailing (furniture and high end vehicles), to a diverse and less historically intact retail and residential area towards the eastern end. It contains a number of landmark heritage commercial buildings, including the Dimmey's Clock Tower and prominent corner hotels.

The western end of Swan Street is home to a vibrant mix of retail activities including hospitality, entertainment, and a new full line supermarket. Redevelopment of the former Dimmey's site, which includes an expanded Coles supermarket, has helped to revitalise the convenience retail offer. The eastern end of the strip is partly zoned C2Z and supports restricted retail and commercial functions. Based on capacity analysis, Swan Street was identified as having a latent capacity under the current zoning provisions. Amendment C191 implements the directions in the Swan Street Structure Plan to re zone land to allow for residential and commercial development. This allows for intensification of development around Burnley Station, potentially leading to further growth in capacity at the street's eastern end.

3.2 Neighbourhood Centres

The neighbourhood centres vary considerably in the range of shopping and services provided and in the capacity for growth. Johnston Street for example has some characteristics similar to a Major Activity Centre, including major road frontages and capacity for growth and redevelopment. Gertrude Street, unlike Johnston Street however has limited capacity for growth based on the heritage significance of buildings and the streetscape. Johnston Street and Gertrude Street centres are connected to Brunswick Street and Smith Street forming a network of retail precincts.

Most of Yarra's neighbourhood centres are constrained by their context, including: small land parcels close to low scale residential areas; landscape character; zoning restrictions; and intact heritage streetscapes and places covered by the heritage overlay. Rathdowne Street, North Carlton centre is a good example of these limitations with parts of the centre in the Neighbourhood Residential Zone and most of it covered by the heritage overlay. It is surrounded by low scale residential area. The character of this centre is also influenced by the strong landscape character in Rathdowne Street defined by mature deciduous street trees.

Queens Parade includes a retail node east of Wellington Street / Delbridge Street, which is a highly valued high street with heritage significance. There is potential for a new node of activity and redevelopment associated with the former gasworks site and other former industrial and commercial areas along the south side of Queens Parade.

Queens Parade (west of Grant and Smith Streets) is characterised by the double avenue street trees including the heritage listed Dutch Elms, framing views along Queens Parade between Brunswick Street and Smith Street. Key heritage places along Queens Parade includes St John's Church, former ANZ Bank at 370 Queens Parade, and the former United Kingdom Hotel located at the junction of Queens Parade and Dummett Crescent / Heidelberg Road. The full width of Queens Parade (60m) and views to the St John's Church spire can be appreciated west of Grant and Smith Streets.

The redevelopment of the Alphington paper mill will see the existing Heidelberg Road retail centre play a somewhat different role in the future. The paper mill redevelopment will see substantial growth in commercial, retail and community facility floor-space, west of the existing small centre, thereby moving its focal point. There will also be significant higher and medium density housing adjoining this new centre.

4. The Role of the Activity Centre Network

Yarra's activity centres operate as a significant element of the economic and social functioning of the municipality. The activity centre network plays an important role as a focus for retail activity, employment and increasingly for growth in higher density housing. Projected growth in the number of jobs and population means the activity centres must have the capacity to accommodate new commercial and apartment development at a scale which meets projections.

4.1 Employment Land Capacity

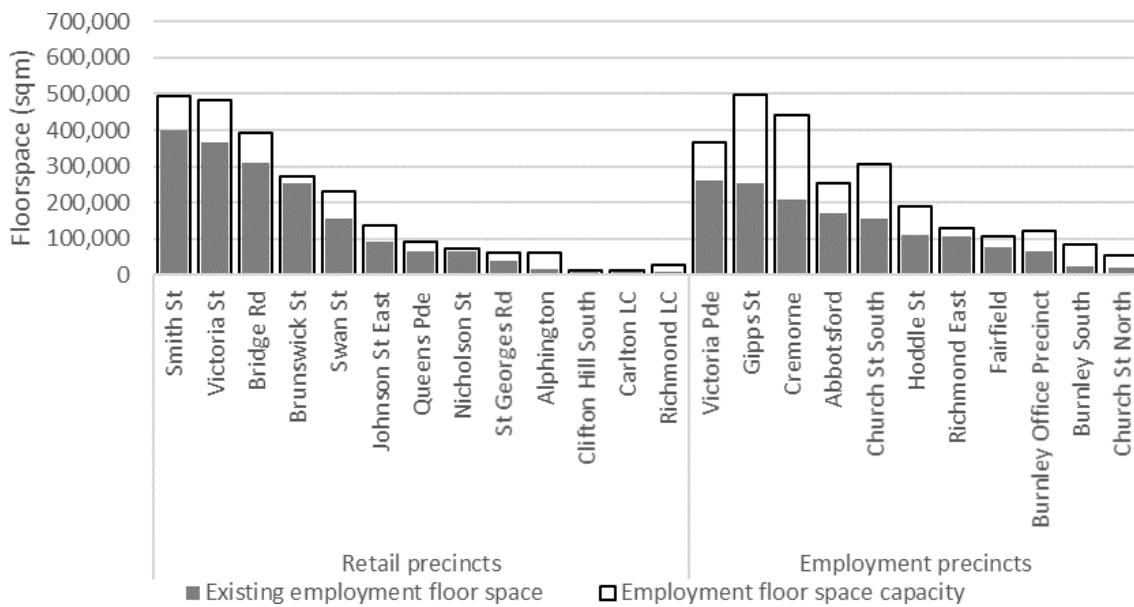
Council's adopted Yarra Spatial Economic and Employment Strategy (SEES), 2018, provides guidance on managing growth and change in employment and economic activity.

In Yarra, economic activity is arranged spatially in different types of employment precincts: activity centres, specialised medical facilities, industrial precincts, mixed employment precincts, educational institutions, and areas where the Comprehensive Development and Priority Development zones have been applied.

Across Yarra's employment precincts, there is sufficient aggregate opportunity to accommodate projected growth to 2031. Employment in Yarra is projected to increase by 50,000 jobs to 2031. Analysis in the SEES indicates that there is around 3.6 million square metres of employment floor space in Yarra. To meet forecasts, Yarra will require an additional 270,000 square metres of employment floor space by 2031. Based on a series of assumptions on development potential under current planning zones there is theoretical capacity for about 4.9 million square metres of employment floor space. This suggests the current commercial / industrial zoned land in Yarra has capacity for additional floor space of around 1.31 million square metres, exceeding the forecast demand for employment floor space.

Figure 2 illustrates employment floor space estimates. It suggests that of the retail precincts, Smith Street, Victoria Street, Bridge Road and Swan Street have the most potential for growth. Brunswick Street appears to have limited capacity, which suggests there might be constraints to realising additional floor space. Alphington on the other hand has significant capacity which will be realised through the redevelopment of the former AMCOR Papermill site.

Figure 2: Employment Floor Space Estimates; Existing vs Capacity



Source: SEES, 2018

4.2 Retail floor-space

Yarra currently supports 910,000sqm of retail floor space. The SEES estimates demand for a further 89,000sqm of additional retail floor space within Yarra to 2031. The majority of retail floor space growth in Yarra can be seen to come from small scale retail developments with 95% of new retail developments between 50sqm and 300sqm.

4.3 Supporting employment growth in activity centres

The SEES includes 6 directions to manage Yarra's employment land over the next 10-15 years, which includes:

Support employment growth in Yarra's Activity Centres: Activity Centres are areas that provide a focus for services, employment, housing, transport and social interaction. In Yarra, major activity centres set out in Plan Melbourne include: Bridge Road, Brunswick, Smith, Swan and Victoria Streets. Neighbourhood activity centres include: Johnston Street (east), Queens Parade, Nicholson Street St Georges Road and Alphington. Yarra's local centres, such as Rathdowne Village and Lygon Street will support modest growth

Yarra's activity centres are likely to accommodate significant growth in retail, commercial and institutional floor space. It is anticipated that an estimated 134,000 sqm of additional floor space will be added to Yarra's larger activity centres between 2016 and 2031 for commercial, retail and institutional uses (an increase of around 10%). Based on the capacity assessment set out earlier, the extent of Yarra's activity centres currently zoned for employment is likely to be sufficient to accommodate this growth. A diverse cross section of employment activities should be supported in centres, including health related businesses in centres that overlap with and adjoin the designated health precincts (Plan Melbourne 2017 – 2050).

Yarra's smaller neighbourhood and local centres are likely to accommodate modest growth in retail and commercial floor-space largely linked to local population growth. The land

currently zoned for employment within these smaller centres is considered sufficient to accommodate projected growth to 2031.

The SEES also proposes to accommodate projected residential growth in activity centres and mixed use precincts to help relieve pressure for residential redevelopment in employment precincts.

4.4 Housing capacity and population change

Analysis for the Yarra Housing Strategy indicated that in 2016 the resident population of Yarra was approximately 91,300. Yarra has experienced rapid population and housing growth in the past 5 years with an increase of 17,208 people between 2011 and 2016. This represents a 3.7% yearly increase and corresponds with a peak in housing development completions. This is an unprecedented growth rate for Yarra but is forecast to reduce to a yearly growth rate of approximately 2.1%. Over the next 15 years Yarra will need to accommodate a growing and diverse population.

The Victoria in Future 2019 (VIF2019) population and housing projections indicate there will be 32,970 new residents and 16,540 new dwellings required in Yarra, by 2031.

The additional 32,970 new residents will likely form households that are:

- 31% Family households (including single parent families): This proportion translates to 5,093 new households of this type
- 25% Couples households: This proportion translates to 4,177 new households of this type
- 38% lone person households: This proportion translates to 6,242 new households of this type

Source Victoria in the Future 2019

The Yarra Housing Strategy proposes that residential growth should be directed to the Major activity centres and parts of the Neighbourhood activity centres which can accommodate growth. This approach, directing growth to activity centres; is consistent with state policy, provides housing close to employment, transport and services and is generally consistent with concepts such as the 20 minute city proposed in Plan Melbourne 2017 – 2050. This approach also helps to protect the neighbourhood character of established residential areas in the municipality, in particular those areas with heritage significance.

Recent capacity monitoring for Yarra by SGS Economics as part of expert evidence for Amendment C231 (August 2019) found there is ample dwelling capacity in Yarra's activity centres. Based on planning controls proposed in current amendments there is a total potential capacity of 32,730 dwellings across Yarra's activity centres. This far exceeds the predicted dwelling demand for 16,540 dwellings in all of Yarra to 2031 (VIF2019).

The level of housing growth in these areas will need to vary depending on the individual context and suitability for accommodating housing growth. Directions for guiding future residential growth in these areas will be informed by the current heritage significance, detailed heritage reviews and urban design analysis being undertaken for Yarra's activity centres and will provide guidance on the levels of growth appropriate in each precinct. (Yarra Housing Strategy, 2018).

6.5 Implications of employment and population growth for activity centres

The analysis in the Housing Strategy and the SEES confirms the role of activity centres as a location for commercial and residential development to accommodate jobs and population

growth. The combined analysis as well as capacity monitoring by SGS Economics indicates that the centres have sufficient capacity to accommodate growth within the areas of currently zoned land.

The role played by each centre and by the different types of centres can be summarised as follows:

Employment

- The Major activity centres will play an important role in accommodating employment floor-space growth.
- The retail precincts of, Smith Street, Victoria Street, Bridge Road and Swan Street all have potential for growth in commercial space with the largest employment floor space capacities.
- Brunswick Street appears to have limited capacity and less scope for growth.
- The former Alphington Paper Mill redevelopment will accommodate substantial new commercial and retail floor space.
- The neighbourhood and local centres are likely to accommodate only modest growth in retail and commercial floor-space.
- The activity centres will be part of a mix of locations and precincts which accommodate growth in employment, with other locations including employment precincts at Gipps Street precinct and in Cremorne and other former industrial areas.

Housing

- The majority of housing growth will be accommodated in activity centres or mixed use areas adjoining the activity centres.
- The Major activity centres will see the most significant growth and major change, particularly in those precincts less constrained by heritage or other design constraints.
- Some of the Neighbourhood activity centres have capacity to accommodate growth in identified precincts.
- The activity centre network will play an important role by accommodating housing development relieving pressure for encroachment into other employment areas.

Building form and scale

The location, design and scale of development in each activity centre will be influenced by and in some cases constrained by heritage and local character considerations. This will be addressed by existing structure plans or local area plans and proposed building form analysis and associated Planning Scheme provisions such as the Design and Development Overlay.

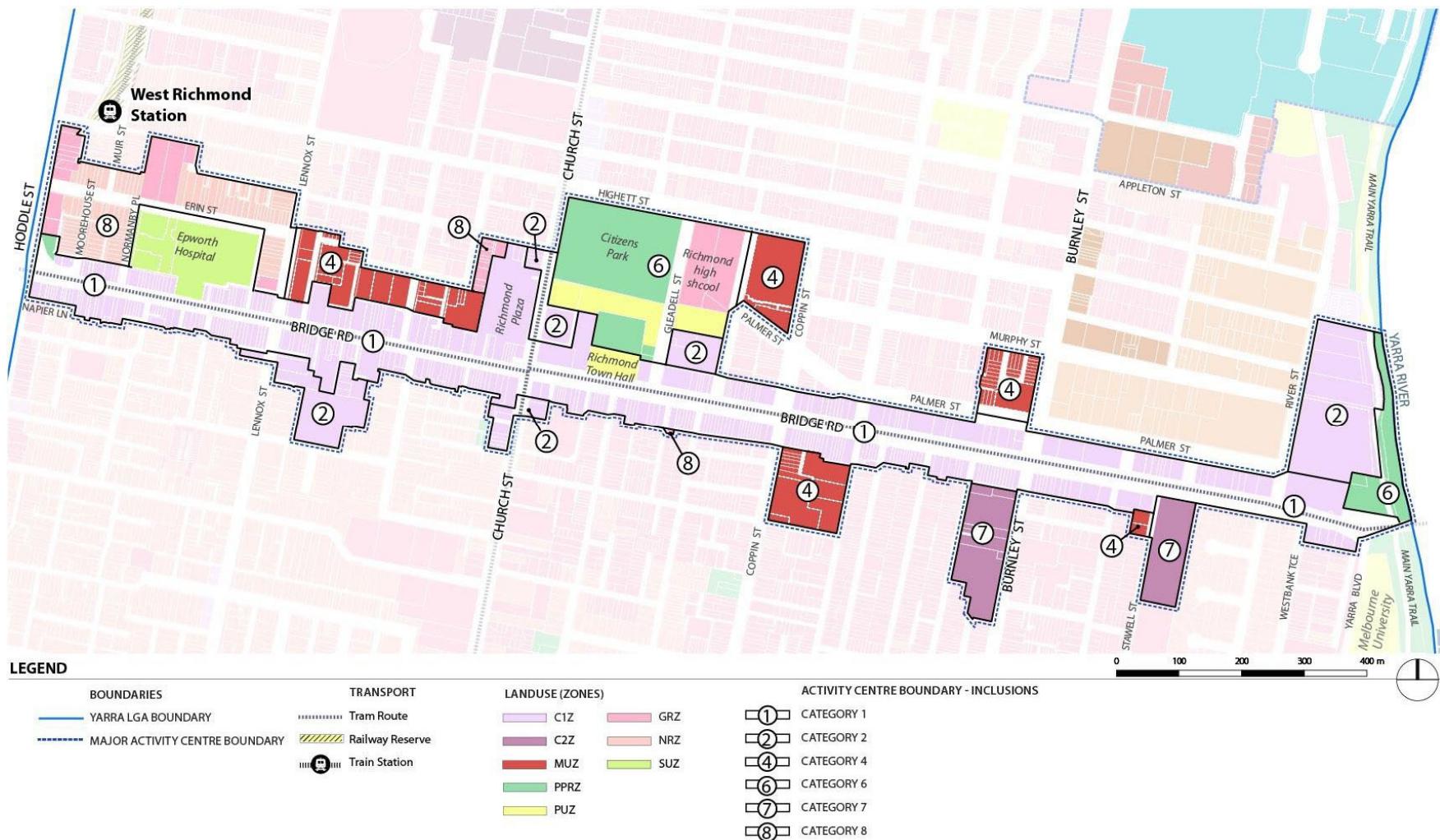
7 Major activity centres –defining boundaries

- Bridge Road – Richmond
- Victoria Street – Richmond
- Smith Street – Collingwood/Fitzroy and Brunswick Street – Fitzroy
- Swan Street – Richmond

The boundary for each centre is mapped and then analysed, based on Planning Practice Note 58 *Structure Planning for Activity Centres*. The tables in this section set out categories defined by Council as a basis on which to assess whether land is included or excluded from the activity centres. The reasons for excluding some land are also discussed.

7.1 Bridge Road

Map 1 Bridge Road



Category	Descriptions	Reasoning
1	<p>Commercial 1, Commercial 2, Mixed Use, Comprehensive Development Zones and civic uses fronting the main street of the retail core.</p> <p><i>Relevant PPN58 criteria:</i> consider</p> <ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Location of existing government and institutional areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> • <i>Key public land uses that have or are intended to have a strong functional inter-relationship with the activity centre</i> 	<ul style="list-style-type: none"> • All properties front Bridge Road • Properties close to jobs and the tram line along Bridge Road – <i>walkability; proximity to fixed transport; location of existing commercial areas and land uses</i> • C1 zones allow for higher density than residential zones – contribute to providing for <i>sufficient land use for commercial and residential activities</i> • Epworth Hospital – <i>a key public land use</i>. It is an identified Health Precinct in Plan Melbourne, and forms a sub-precinct to the Activity Centre • Richmond town hall – <i>a key public land use</i> • Open space at the west and eastern ends of Bridge Road – <i>Key public open space</i> • Officeworks – SEES recommends site to remain for commercial use – <i>contribute to commercial activities over a 15-20 year timeframe</i> • No impact on the boundaries of other activity centres.
2	<p>Commercial 1 areas not fronting the retail street, but contiguous (generally behind) with Category 1 that do or could have a strong physical or land use connection to the retail core.</p> <p><i>Relevant PPN58 criteria:</i> consider</p> <ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> 	<ul style="list-style-type: none"> • Properties close to jobs and the tram line along Bridge Road – <i>walkability; proximity to fixed transport; location of existing commercial areas and land uses</i> • C1 Zone allows for higher density than residential zones - contribute to providing for <i>sufficient land use for commercial and residential activities</i> • Pelaco site; Church St – north and south of Bridge Road, Gleadell St – recognition of <i>location of existing commercial areas and land uses; proximity to fixed transport; walkability</i>

	<ul style="list-style-type: none"> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> 	<ul style="list-style-type: none"> • C1 - River Street sites have been developed - <i>contribute to providing for commercial activities needed over a 15 – 20 year timeframe + then 30 year horizon.</i> • The NHP Electrical site (River St) includes a large car park - potential for redevelopment – <i>recognise the location of existing commercial areas and land uses; proximity to fixed transport; walkability</i> • No impact on the boundaries of other activity centres • Gleadell St – recognises the non-residential use and zoning in proximity to the civic precinct
3	<p>Commercial 2 areas not fronting the retail street, but contiguous (generally behind) with Category 1 that do or could have a strong physical or land use connection to the retail core.</p> <p><i>Relevant PPN58 criteria:</i> <i>consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> 	<ul style="list-style-type: none"> • No land in this category.
4	Mixed Use areas that are contiguous with Category 1 and 2 areas and do or could have a strong physical connection to the retail core	<ul style="list-style-type: none"> • Jacques site; north side Bridge Road; Burnley St – north side of Bridge Road; and Stawell St recognises that the zone allows for higher density than NRZ / GRZ. Recognises the higher density that has been

	<p><i>Relevant PPN58 criteria:</i></p> <p><i>consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> 	developed – <i>contribute to providing for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon</i>
5	<p>Health</p> <p><i>Relevant PPN58 criteria:</i></p> <p><i>Consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing government and institutional areas and land uses</i> 	Epworth Hospital – see Category 1
6	<p>Public open space, community facilities and schools not fronting the main street of the retail core, with a strong functional inter relationship with the activity centre</p> <p><i>Relevant PPN58 criteria:</i></p> <p><i>Consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing government and institutional areas and land uses</i> • <i>Location of existing areas of public open space</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Public open space areas that have or are intended to have a strong functional inter-relationship with the activity centre</i> 	<ul style="list-style-type: none"> • Civic Precinct around the Richmond Town Hall – town hall; bowls club; Citizen Park; future Richmond High School site; Council leisure centre. • Public open space at the eastern end connects Bridge Road to the Yarra River. • Main Yarra Trail – potential to develop a stronger link between the Activity Centre and River corridor.

7	<p>Commercial 1 and Commercial 2 fronting a main road that intersects the main street of the retail core, and contiguous with land in another category.</p> <p><i>Relevant PPN58 criteria:</i> consider</p> <ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i> <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i></p>	<ul style="list-style-type: none"> • C2 - Burnley Street (south of Bridge Road) the SEES has indicated that this land be retained as C2 zone. • C1 – Church Street (north and south of Bridge Road). Reflects existing uses
8	<p>Residential areas that due to the surrounding uses, built form and road network are logically included</p> <p><i>Relevant PPN58 criteria:</i> Consider</p> <ul style="list-style-type: none"> • <i>Location of existing government and institutional areas and land uses</i> • <i>Location of existing areas of public open space</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Residential areas that are integrated into the activity centre or surrounded by other uses that have a strong relationship with the activity centre, even where limited development opportunities exist</i> 	<ul style="list-style-type: none"> • Land around Epworth Hospital which is an identified health precinct in Plan Melbourne • Reflects existing land use pattern along Erin Street, which is predominantly consulting rooms or medical related. • Includes the Elms Rehabilitation Centre • Land fronting Hoddle Street includes a mix of accommodation types. • This land is covered by HO338 however, including this land in the activity centre is based on promoting the health related land uses rather than intensification of development. • Muir Street, Normanby Place and Moorehouse Street provide direct pedestrian access to west Richmond Station and the tram along Bridge Road.

<p>9 Large sites or areas with potential to be part of or contribute to an activity centre, if upgraded or redeveloped</p> <p><i>Relevant PPN58 criteria:</i></p> <p><i>Consider:</i> <i>Strategic Redevelopment Sites</i></p>	<ul style="list-style-type: none"> • N/A
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Excluded land

The following table sets out reasons for excluding land that is proximate to the proposed activity centre boundaries. The reasons consider the criteria of PPN58, in particular: environmental and flooding constraints; and residential land encumbered by significant constraints (eg Heritage Overlay_ located at the edge of the activity centre.

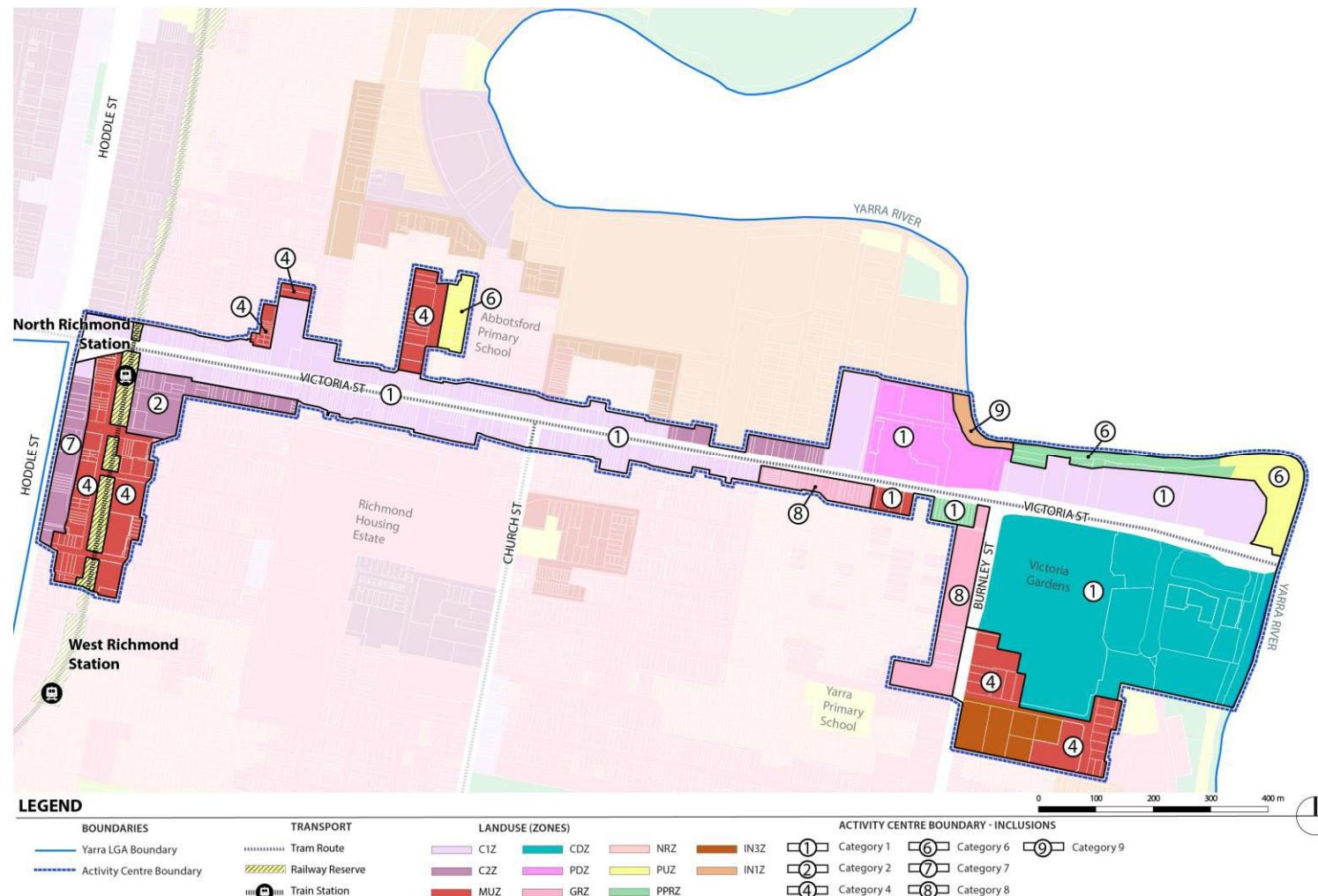
Type	Reason
All NRZ and GRZ	This land covers residential areas which are covered by an HO or developed for established lower density housing
Richmond East industrial precinct (adjacent to Burnley / Murphy Streets)	<p>The SEES includes this area of almost 10 hectares generally between Palmer and Appleton Streets and adjacent to land zoned Residential, Mixed Use and Commercial 1. The precinct has access to Bridge Road, Victoria Gardens and the Yarra River. Compared to the Burnley South precinct the existing industrial uses are more local population serving in their orientation, providing an important service role. Lot sizes in this precincts are generally much smaller than those in the Burnley and Abbotsford precincts and would benefit from amalgamation to maximise development potential.</p> <p>The earlier capacity analysis suggests there is no immediate need for industrial zoned land to be converted to accommodate demand for alternative employment uses,</p> <p>The industrial precincts will remain, and not be considered for zone change, until further strategic work is completed.</p>

Activity centres – roles and boundaries – October 2019April 2022

Land adjacent to West Richmond Station	This land is predominantly low scale residential development and use. It is not related to the health land uses occurring along Erin Street. It is covered by HO 338.
Carpark in Napier Lane (south of Bridge Road)	This land is subject to cluster plan. Redevelopment of the land may be constrained legal agreements about the car park use.
NRZ land between Stawell Street and West Bank Terrace	Buildings are part of the Racecourse, Heritage Overlay Area (HO 331). This Area is significant as: <ul style="list-style-type: none"> • the first public housing estate to be built in Richmond and as an estate developed by Richmond Council. • a symbol of the site of John Wren's popular trotting track, Richmond Racecourse • Visual homogenous collection of dwellings in a simplified English cottage style • Cul-de-sac planning
Church St (north of Highett Street)	<ul style="list-style-type: none"> • This may form part of a local centre with the Commercial 2 Zone land further north. This area also relates to the Victoria Street activity centre. The Victoria Street Structure Plan 2010 identifies some of this land as employment land.
Melbourne Girls College	<ul style="list-style-type: none"> • The connection between the College and the activity centre is very limited, and its exclusion, does not impact on the potential for the activity centre to accommodate residential or employment capacity.

7.2 Victoria Street

Map 2 Victoria Street



Category	Descriptions	Reasoning
1	<p>Commercial 1, Commercial 2, Mixed Use, Comprehensive Development Zones and civic uses fronting the main street of the retail core.</p> <p><i>Relevant PPN58 criteria: consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Location of existing government and institutional areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> • <i>Key public land uses that have or are intended to have a strong functional inter-relationship with the activity centre</i> 	<ul style="list-style-type: none"> • Properties front Victoria Street and include Comprehensive Development Zone and Priority Development Zone which allow for higher density development • Properties close to jobs and the tram line along Victoria Street • C1 zone allows for higher density than residential zones • C2 supports commercial growth / opportunities • Williams Reserve – public parkland with a strong relationship with the activity centre
2	<p>Commercial 1 areas not fronting the retail street, but contiguous (generally behind) with Category 1 that do or could have a strong physical or land use connection to the retail core.</p> <p><i>Relevant PPN58 criteria:</i></p>	<ul style="list-style-type: none"> • N/A

	<p><i>consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> 	
3	<p>Commercial 2 areas not fronting the retail street, but contiguous (generally behind) with Category 1 that do or could have a strong physical or land use connection to the retail core.</p> <p><i>Relevant PPN58 criteria:</i></p> <p><i>consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p>	<ul style="list-style-type: none"> • C2 – Adjacent to North Richmond Station –proximity to fixed transport; walkability

	<ul style="list-style-type: none"> <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> 	
4	<p>Mixed Use areas that are contiguous with Category 1 and 2 areas and do or could have a strong physical connection to the retail core</p> <p><i>Relevant PPN58 criteria:</i> <i>consider</i></p> <ul style="list-style-type: none"> <i>Location of existing commercial areas and land uses</i> <i>Commercial and residential needs</i> <i>Proximity to fixed transport esp fixed rail (train or tram)</i> <i>Location of transport infrastructure</i> <i>Walkability</i> <i>Impacts of boundary on other activity centres</i> <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> 	<ul style="list-style-type: none"> Burnley Street – Appleton / Doonside Streets. Remaining Industrial land (81-95 Burnley Street and 25 Doonside Street) is currently the subject of a rezoning to MUZ. This land is in Precinct 11 of the <i>Victoria Street Structure Plan</i>, adopted 2010, which is identified as a substantial change area and having the potential for mixed use development. Adjacent to the North Richmond Train station. Reflects opportunities for sustainable land use and development close to public transport – proximity to fixed transport Properties close to jobs and the tram line along Victoria Street MUZ – Church Street north of Victoria St; Lithgow Street; Little Charles Street recognises that the zone allows for higher density than NRZ / GRZ
5	<p>Health Precinct</p> <p><i>Relevant PPN58 criteria:</i> <i>Consider</i></p> <ul style="list-style-type: none"> <i>Location of existing government and institutional areas and land uses</i> 	N/A
6	<p>Public open space, community facilities and schools not fronting the main street of the retail core, with a strong functional inter relationship with the activity centre</p> <p><i>Relevant PPN58 criteria:</i></p>	<ul style="list-style-type: none"> Abbotsford Primary School Lithgow Street Open space along the Yarra - forms part of the Main Yarra Trail with the potential for a strong link to activity centre PUZ land adjoining the Yarra River immediately north of Victoria Street / Barkers Road bridge

	<p><i>Consider</i></p> <ul style="list-style-type: none"> • Location of existing government and institutional areas and land uses • Location of existing areas of public open space <p><i>Include:</i></p> <ul style="list-style-type: none"> • Public open space areas that have or are intended to have a strong functional inter-relationship with the activity centre 	
7	<p>Commercial 1 and Commercial 2 fronting a main road that intersects the main street of the retail core, and contiguous with land in another category.</p> <p><i>Relevant PPN58 criteria:</i></p> <p><i>consider</i></p> <ul style="list-style-type: none"> • Location of existing commercial areas and land uses • Commercial and residential needs • Proximity to fixed transport esp fixed rail (train or tram) • Location of transport infrastructure • Walkability • Impacts of boundary on other activity centres • Strategic Redevelopment Sites <p><i>Include:</i></p> <p>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</p>	<ul style="list-style-type: none"> • Land along Hoddle Street which is contiguous to the mixed use land around the north Richmond Station - <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • Contributing to economic and commercial activities in the centre
8	<p>Residential areas that due to the surrounding uses, built form and road network are logically included</p> <p><i>Relevant PPN58 criteria:</i></p> <p><i>Consider</i></p>	<ul style="list-style-type: none"> • GRZ2 land fronting Victoria Street and is not covered by a Heritage Overlay (408 – 496 Victoria St). 408-422 Victoria Street – existing townhouse development. Number of properties occupied by a mix of uses (retail, hairdresser, residential) • Burnley Street – from 522 Victoria Street to 34 Burnley Street to reflect the existing higher density built form (part of Victoria St East Urban Design

	<ul style="list-style-type: none"> • Location of existing government and institutional areas and land uses • Location of existing areas of public open space <p><i>Include:</i></p> <ul style="list-style-type: none"> • Residential areas that are integrated into the activity centre or surrounded by other uses that have a strong relationship with the activity centre, even where limited development opportunities exist 	Framework which identifies the land as potential for higher intensity housing to consolidate the Burnley Street edge of the Residential 1 Zone)
9	<p>Large sites or areas with potential to be part of or contribute to an activity centre, if upgraded or redeveloped</p> <p><i>Relevant PPN58 criteria:</i></p> <p><i>Consider:</i> Strategic Redevelopment Sites</p>	<ul style="list-style-type: none"> • N/A

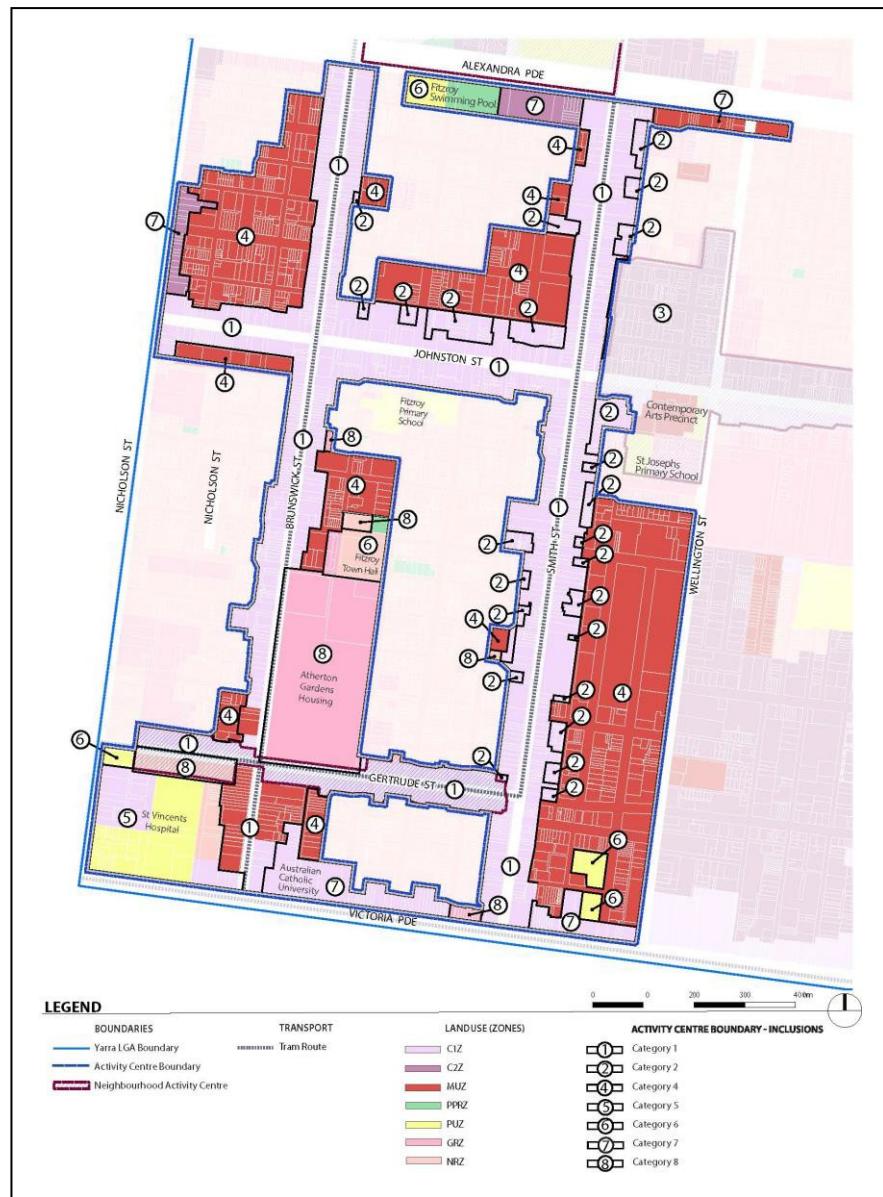
Excluded land

The following table sets out reasons for excluding land that is proximate to the proposed activity centre boundaries. The reasons consider the criteria of PPN58, in particular: environmental and flooding constraints; and residential land encumbered by significant constraints (eg Heritage Overlay_ located at the edge of the activity centre.

Type	Reason
2 – 8 Davison St (corner of Victoria St and Davison)	<ul style="list-style-type: none"> • Land is within HO 363 and zoned NRZ.
CUB and surrounding industrial land	<ul style="list-style-type: none"> • The SEES identified that the future of this precinct is largely dependent on the presence of the CUB which occupies about half the precinct. • If CUB moved it would be subject to a separate strategic planning process to accommodate employment, housing and community uses. Integration with Victoria Street Activity Centre would be a further consideration.
River Street – land south of the CDZ / open space / housing along River Street	<ul style="list-style-type: none"> • Acts as a residential enclave with tree lined streets • Currently only pedestrian access from CDZ to this area

7.3 Smith Street and Brunswick Street

Map 3 Smith Street and Brunswick Street



Category	Descriptions	Reasoning
1	<p>Commercial 1, Commercial 2, Mixed Use, Comprehensive Development Zones and civic uses fronting the main street of the retail core.</p> <p><i>Relevant PPN58 criteria: consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Location of existing government and institutional areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> • <i>Key public land uses that have or are intended to have a strong functional inter-relationship with the activity centre</i> 	<ul style="list-style-type: none"> • Properties front Smith Street– All C1Z • MUZ, C1Z fronting Brunswick Street • Reflects existing commercial uses, recognises walkability and proximity to tram
2	<p>Commercial 1 areas not fronting the retail street, but contiguous (generally behind) with Category 1 that do or could have a strong physical or land use connection to the retail core.</p> <p><i>Relevant PPN58 criteria: consider</i></p>	<ul style="list-style-type: none"> • Warehouses, former industrial and commercial properties along Bedford Street – location of existing commercial use, proximity to transport.

	<ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> 	
3	<p>Commercial 2 areas not fronting the retail street, but contiguous (generally behind) with Category 1 that do or could have a strong physical or land use connection to the retail core.</p> <p><i>Relevant PPN58 criteria: consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p>	<ul style="list-style-type: none"> • This land is likely to remain C2Z and provide opportunities for redevelopment for office land uses and growth in employment floor-space

	<ul style="list-style-type: none"> <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> 	
4	<p>Mixed Use areas that are contiguous with Category 1 and 2 areas and do or could have a strong physical connection to the retail core</p> <p><i>Relevant PPN58 criteria:</i> <i>consider</i></p> <ul style="list-style-type: none"> <i>Location of existing commercial areas and land uses</i> <i>Commercial and residential needs</i> <i>Proximity to fixed transport esp fixed rail (train or tram)</i> <i>Location of transport infrastructure</i> <i>Walkability</i> <i>Impacts of boundary on other activity centres</i> <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> 	<ul style="list-style-type: none"> MUZ – between Smith and Wellington Streets MUZ between Brunswick and Smith, reflecting mixed built form MUZ – between Nicholson and Brunswick, Provides for higher density development than residential areas in the NRZ and GRZ. The heritage overlay does constrain opportunities in parts of this area. Recognises walkability and proximity to trams
5	<p>Health Precinct not fronting the main street of the retail core, but contiguous with Category 1 or 2</p> <p><i>Relevant PPN58 criteria:</i> <i>Consider</i></p> <ul style="list-style-type: none"> <i>Location of existing government and institutional areas and land uses</i> 	<ul style="list-style-type: none"> St Vincent Hospital is identified in Plan Melbourne 2017-2050 as a Health and Education Precinct. It forms a sub precinct within the AC – <i>recognising location of institutional areas</i>

6	<p>Public open space, community facilities and schools not fronting the main street of the retail core, with a strong functional inter-relationship with the activity centre</p> <p><i>Relevant PPN58 criteria:</i></p> <p><i>Consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing government and institutional areas and land uses</i> • <i>Location of existing areas of public open space</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Public open space areas that have or are intended to have a strong functional inter-relationship with the activity centre</i> 	<ul style="list-style-type: none"> • Fitzroy Town Hall – <i>recognising location of institutional areas</i> • Fitzroy Pool and adjoining open space • Local primary school in Cambridge Street • Former Tram engine house Gertrude Street at the corner of Nicholson Street • Public land with a range of institutional, educational and civic land uses
7	<p>Commercial 1 and Commercial 2 fronting a main road that intersects the main street of the retail core, and contiguous with land in another category.</p> <p><i>Relevant PPN58 criteria:</i></p> <p><i>consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p> <p><i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i></p>	<ul style="list-style-type: none"> • Land along Alexandra Parade • Victoria Parade between Napier St and Wellington Street • Nicholson St adjoining C1Z and MUZ

8	<p>Residential areas that due to the surrounding uses, built form and road network are logically included</p> <p><i>Relevant PPN58 criteria:</i></p> <p><i>Consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing government and institutional areas and land uses</i> • <i>Location of existing areas of public open space</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Residential areas that are integrated into the activity centre or surrounded by other uses that have a strong relationship with the activity centre, even where limited development opportunities exist</i> 	<ul style="list-style-type: none"> • Atherton Gardens public housing estate to recognise the density and importance of the site if it is re-developed in the future
9	<p>Large sites or areas with potential to be part of or contribute to an activity centre, if upgraded or redeveloped</p> <p><i>Relevant PPN58 criteria:</i></p> <p><i>Consider:</i> <i>Strategic Redevelopment Sites</i></p>	<ul style="list-style-type: none"> • N/A

Excluded land

The following table sets out reasons for excluding land that is proximate to the proposed activity centre boundaries. The reasons consider the criteria of PPN58, in particular: environmental and flooding constraints; and residential land encumbered by significant constraints (eg Heritage Overlay_ located at the edge of the activity centre.

Type	Reason
Former industrial sites along Rose St (inc McRobertson)	<ul style="list-style-type: none"> • Zoned NRZ1 • Former industrial sites surrounded by finer grain residential development
Fitzroy Primary School	<ul style="list-style-type: none"> • It is separated by a laneway from the C1Z land

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	<ul style="list-style-type: none">• It extends into the NRZ1 land – which is surrounded by lower density dwellings
MUZ land Mater Street	<ul style="list-style-type: none">• Not contiguous with AC• Already developed as 3 storey townhouses

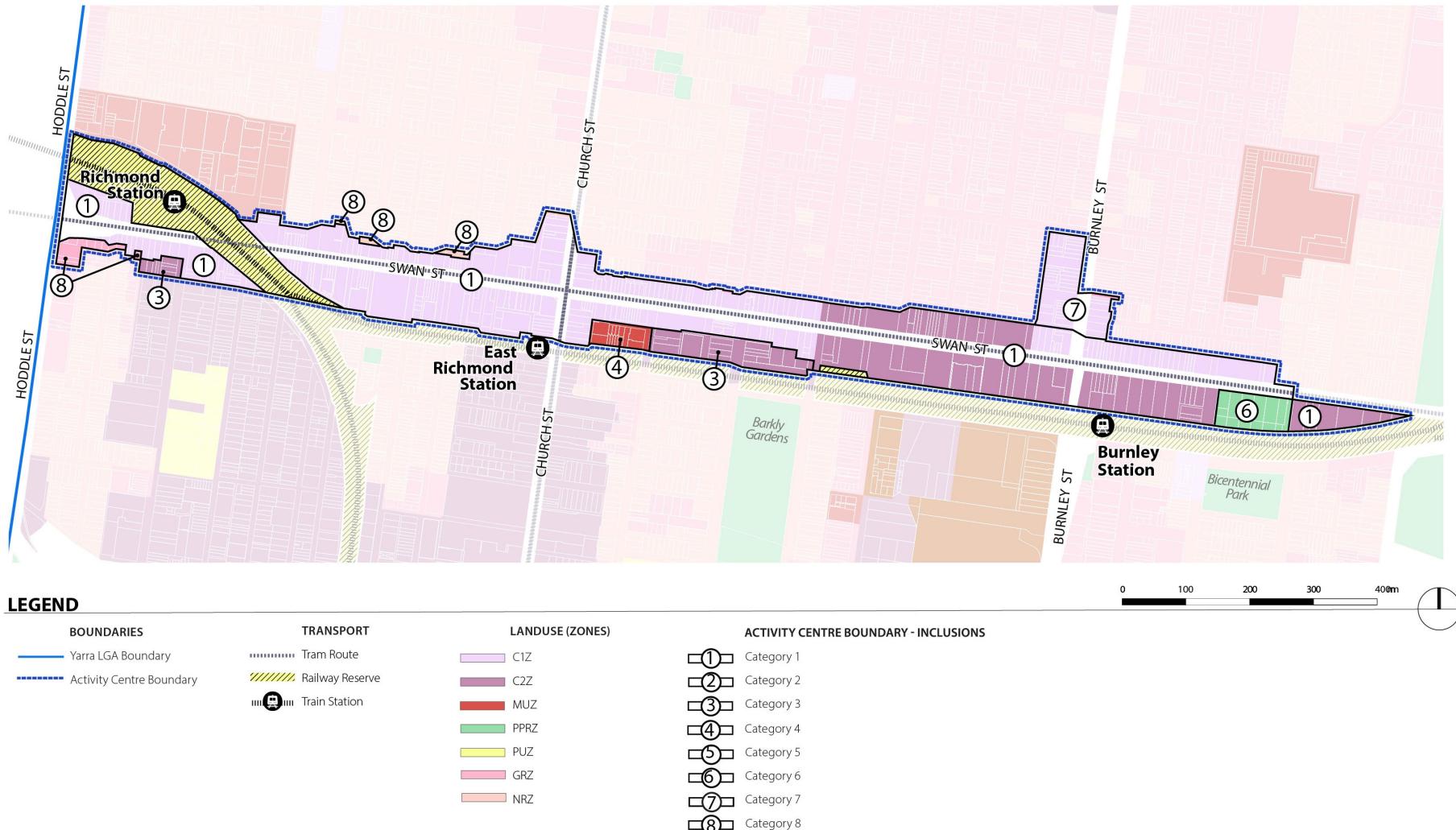
7.4 Swan Street

Map 4 Swan Street



7.4 Swan Street

Map 4 Swan Street



Category	Descriptions	Reasoning
1	<p>Commercial 1, Commercial 2, Mixed Use, Zones and civic uses fronting the main street of the retail core.</p> <p><i>Relevant PPN58 criteria:</i> consider</p> <ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Location of existing government and institutional areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> • <i>Key public land uses that have or are intended to have a strong functional inter-relationship with the activity centre</i> 	<ul style="list-style-type: none"> • Properties front Swan St recognising existing commercial areas and land uses, proximity to fixed public transport, walkability and access to services • C1Z zone allows for higher density than MUZ, NRZ and GRZ
2	<p>Commercial 1 areas not fronting the retail street, but contiguous (generally behind) with Category 1 that do or could have a strong physical or land use connection to the retail core.</p> <p><i>Relevant PPN58 criteria:</i> consider</p> <ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> 	<ul style="list-style-type: none"> • N/A

	<ul style="list-style-type: none"> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> 	
3	<p>Commercial 2 areas not fronting the retail street, but contiguous (generally behind) with Category 1 that do or could have a strong physical or land use connection to the retail core.</p> <p><i>Relevant PPN58 criteria: consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> 	<ul style="list-style-type: none"> • Recognising commercial uses between Swan St and railway (east of Church St) near Mary and Coppin Street • Include C2Z adjacent north of Stephenson St / Jesse St as it is logical to include the block north of Jesse St and west of Cremorne Street. • Recognises different land uses, proximity to Richmond Station, walkability • Opportunity for higher development adjacent to a non-sensitive interface – railway line, east of Church St • Provides for a broader range of commercial activity

4	<p>Mixed Use areas that are contiguous with Category 1 and 2 areas and do or could have a strong physical connection to the retail core</p> <p><i>Relevant PPN58 criteria:</i> consider</p> <ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> 	<ul style="list-style-type: none"> • Recognises proximity to Richmond Station and East Richmond Station • Recognises existing apartment development • Recognises a mix of uses • Opportunity for higher development adjacent to a non-sensitive interface – railway line
5	<p>Health Precinct</p> <p><i>Relevant PPN58 criteria:</i> Consider</p> <ul style="list-style-type: none"> • <i>Location of existing government and institutional areas and land uses</i> 	N/A
6	<p>Public open space, community facilities and schools not fronting the main street of the retail core, with a strong functional inter relationship with the activity centre</p> <p><i>Relevant PPN58 criteria:</i> Consider</p> <ul style="list-style-type: none"> • <i>Location of existing government and institutional areas and land uses</i> 	<ul style="list-style-type: none"> • Ryans Reserve – public land with a strong relationship with the activity centre

	<ul style="list-style-type: none"> <i>Location of existing areas of public open space</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> <i>Public open space areas that have or are intended to have a strong functional inter-relationship with the activity centre</i> 	
7	<p>Commercial 1 and Commercial 2 fronting a main road that intersects the main street of the retail core, and contiguous with land in another category.</p> <p><i>Relevant PPN58 criteria: consider</i></p> <ul style="list-style-type: none"> <i>Location of existing commercial areas and land uses</i> <i>Commercial and residential needs</i> <i>Proximity to fixed transport esp fixed rail (train or tram)</i> <i>Location of transport infrastructure</i> <i>Walkability</i> <i>Impacts of boundary on other activity centres</i> <i>Strategic Redevelopment Sites</i> <p><i>Include:</i> <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i></p>	<ul style="list-style-type: none"> CIZ land along Burnley Street north from Swan Street Relates to the node of retail and other activity around the junction of Burnley and Swan Streets
8	<p>Residential areas that due to the surrounding uses, built form and road network are logically included</p> <p><i>Relevant PPN58 criteria: Consider</i></p> <ul style="list-style-type: none"> <i>Location of existing government and institutional areas and land uses</i> 	<ul style="list-style-type: none"> GRZ1 land - Inclusion in the activity centre recognises: <ul style="list-style-type: none"> - the opportunities as a gateway to Swan Street - 6 storey building at 381 Punt Road Series of smaller zones are anomalies and will be corrected through a rezoning as part of Amendment C191.

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	<ul style="list-style-type: none"><i>Location of existing areas of public open space</i> <p><i>Include:</i></p> <ul style="list-style-type: none"><i>Residential areas that are integrated into the activity centre or surrounded by other uses that have a strong relationship with the activity centre, even where limited development opportunities exist</i>	
9	<p>Large sites or areas with potential to be part of or contribute to an activity centre, if upgraded or redeveloped</p> <p><i>Relevant PPN58 criteria:</i></p> <p><i>Consider:</i> <i>Strategic Redevelopment Sites</i></p>	<ul style="list-style-type: none">N/A

8 Neighbourhood activity centres – boundaries and categories

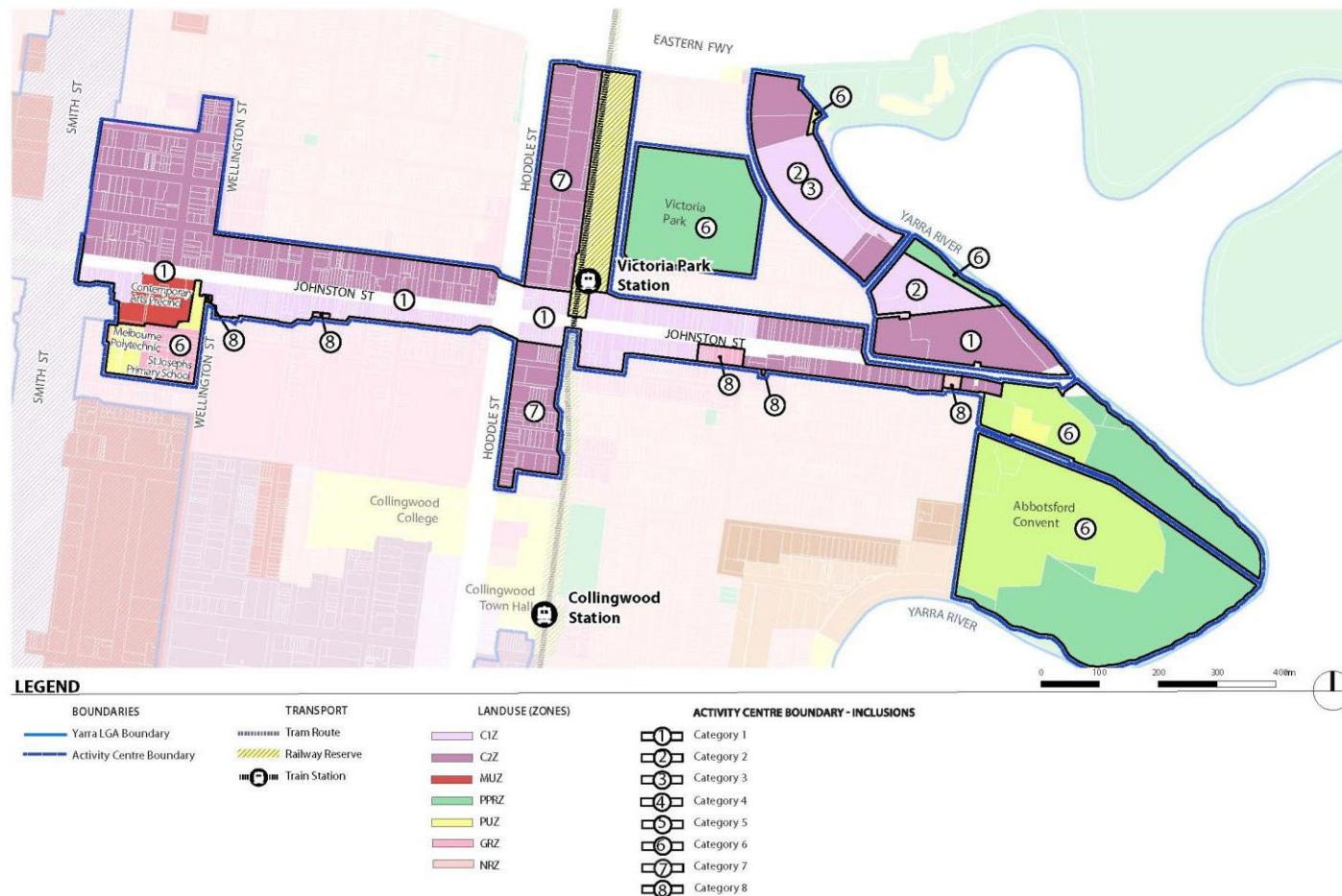
- Johnston Street – Collingwood/Abbotsford
- Queens Parade – North Fitzroy/ Clifton Hill
- Nicholson Street – North Fitzroy/North Carlton
- Rathdowne Street – North Carlton
- St Georges Road – North Fitzroy
- Heidelberg Road – Alphington
- Gertrude Street - Fitzroy

The boundary for each centre is mapped and then analysed, based on the criteria and categories discussed earlier in this report. The reasons for excluding some land are also discussed.



8.1 Johnston Street – Collingwood/Abbotsford

Map 5 Johnston Street



Category	Descriptions	Reasoning
1	<p>Commercial 1, Commercial 2, Mixed Use, Comprehensive Development Zones and civic uses fronting the main street of the retail core.</p> <p><i>Relevant PPN58 criteria:</i> consider</p> <ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Location of existing government and institutional areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> • <i>Key public land uses that have or are intended to have a strong functional inter-relationship with the activity centre</i> 	<ul style="list-style-type: none"> • The land identified as the main strip shopping centre precincts in the recent Johnston Street Local Area Plan <ul style="list-style-type: none"> ◦ Properties fronting Johnston Street– a mix of C1Z and C2Z from the Yarra River in the east to Smith Street ◦ Properties on the south side of Sackville Street between Hoddle Street and Wellington Street • This includes a mix of industrial, office and retail activity • Provides for future growth in retail, residential and office space along or adjoining the main street • Includes C2Z land around Easey Street to provide opportunities for redevelopment for office land uses and growth in employment floor-space
2	<p>Commercial 1 areas not fronting the retail street, but contiguous (generally behind) with Category 1 that do or could have a strong physical or land use connection to the retail core.</p> <p><i>Relevant PPN58 criteria:</i></p>	<ul style="list-style-type: none"> • Land between Trenerry Crescent and the Yarra River has been mostly converted from former industrial uses to a mix of office and higher density residential use. It has and will in the future provide for growth in these sectors. This area also provides a connection to and potentially stronger orientation to the River corridor and landscape. • This includes the sites subject to rezoning (either MUZ or C1) • This area has been included in the JSLAP

	<p><i>consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> 	
3	<p>Commercial 2 areas not fronting the retail street, but contiguous (generally behind) with Category 1 that do or could have a strong physical or land use connection to the retail core.</p> <p><i>Relevant PPN58 criteria:</i></p> <p><i>consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p>	<ul style="list-style-type: none"> • Includes land along Sackville Street in Category 1 • Trennery Crescent included in the JSLAP

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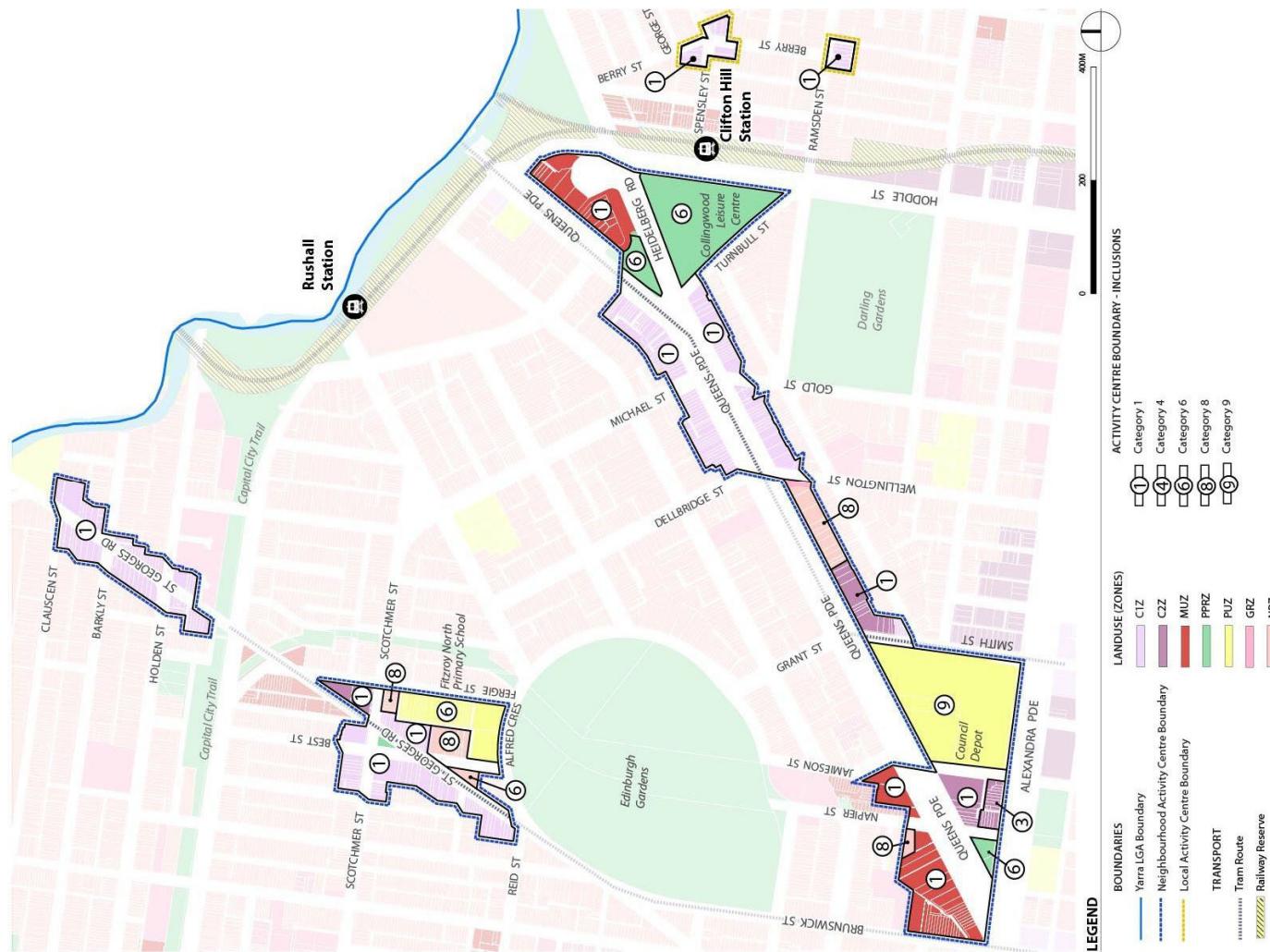
	<ul style="list-style-type: none"> <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> 	
4	<p>Mixed Use areas that are contiguous with Category 1 and 2 areas and do or could have a strong physical connection to the retail core</p> <p><i>Relevant PPN58 criteria:</i> <i>consider</i></p> <ul style="list-style-type: none"> <i>Location of existing commercial areas and land uses</i> <i>Commercial and residential needs</i> <i>Proximity to fixed transport esp fixed rail (train or tram)</i> <i>Location of transport infrastructure</i> <i>Walkability</i> <i>Impacts of boundary on other activity centres</i> <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> 	<ul style="list-style-type: none"> N/A
5	<p>Health Precinct not fronting the main street of the retail core, but contiguous with Category 1 or 2</p> <p><i>Relevant PPN58 criteria:</i> <i>Consider</i></p> <ul style="list-style-type: none"> <i>Location of existing government and institutional areas and land uses</i> 	<ul style="list-style-type: none"> N/A

6	<p>Public open space, community facilities and schools not fronting the main street of the retail core, with a strong functional inter-relationship with the activity centre</p> <p><i>Relevant PPN58 criteria:</i></p> <p><i>Consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing government and institutional areas and land uses</i> • <i>Location of existing areas of public open space</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Public open space areas that have or are intended to have a strong functional inter-relationship with the activity centre</i> 	<ul style="list-style-type: none"> • Victoria Park football ground provides an important open space with a cultural and community focus. It is located between Victoria Park Station, Trenergy Crescent and Turner Street. • Melbourne Polytechnic (Collingwood Campus), Otter St Collingwood • St Joseph's Primary School, Otter St Collingwood • The Collingwood Arts Precinct between Perry Street, Otter Street, Wellington Street and Smith Street is identified in the JSLAP. It includes Collingwood TAFE and Circus Oz. It will provide a focus for arts, community and cultural activities. • Abbotsford Convent and Collingwood Children's Farm are east of Clarke Street and have a long frontage to the Yarra River. They provide a local and regional attraction for cultural and recreational activity
7	<p>Commercial 1 and Commercial 2 fronting a main road that intersects the main street of the retail core, and contiguous with land in another category.</p> <p><i>Relevant PPN58 criteria:</i></p> <p><i>consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p> <p><i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i></p>	<ul style="list-style-type: none"> • 2 precincts in the JSLAP are along the east side of Hoddle Street in the C2Z these areas provide opportunity for uses that complement the commercial activity along Johnston St: <ul style="list-style-type: none"> - Land north of Johnston Street to the Eastern Freeway and including land on both the west and east side of the railway corridor through to Lulie Street - Land south of Johnston Street between Hoddle Street and the railway to Vere Street

8	<p>Residential areas that due to the surrounding uses, built form and road network are logically included</p> <p><i>Relevant PPN58 criteria:</i></p> <p><i>Consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing government and institutional areas and land uses</i> • <i>Location of existing areas of public open space</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Residential areas that are integrated into the activity centre or surrounded by other uses that have a strong relationship with the activity centre, even where limited development opportunities exist</i> 	<ul style="list-style-type: none"> • Two parcels fronting the south side of Johnston Street immediately east of Paterson Street in the NRZ • An area west of Nicholson Street fronting the south side of Johnston Street on the GRZ • A number of minor boundary anomalies where land in the GRZ or NRZ is within the AC boundary
9	<p>Large sites or areas with potential to be part of or contribute to an activity centre, if upgraded or redeveloped</p> <p><i>Relevant PPN58 criteria:</i></p> <p><i>Consider:</i> <i>Strategic Redevelopment Sites</i></p>	<ul style="list-style-type: none"> • No areas in this category

8.2 Queens Parade – North Fitzroy/ Clifton Hill

Map 6 Queens Parade - St Georges Road (Local Activity Centres: Spensley Street – Berry Street – Ramsden Street)



Category	Descriptions	Reasoning
1	<p>Commercial 1, Commercial 2, Mixed Use, Comprehensive Development Zones and civic uses fronting the main street of the retail core.</p> <p><i>Relevant PPN58 criteria: consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Location of existing government and institutional areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> • <i>Key public land uses that have or are intended to have a strong functional inter-relationship with the activity centre</i> 	<ul style="list-style-type: none"> • The main retail centre is located in C1Z land on both the north and south sides of Queens Parade between Wellington Street / Delbridge Street and the junction of Queens Parade and Heidelberg Road. • Convenience retail and food offerings are stronger on the north side. • Significant residential redevelopment either exists or is proposed for areas of MUZ between Jamieson Street and Brunswick Street on the north side of Queens Parade • These areas are remote from the retail centre but close to the redevelopment opportunities of the former gasworks land on the opposite (south) side of Queens Parade. This area is likely to see educational, commercial and civic activities. • Land between Queens Parade, Heidelberg Road and Hoddle Street in the MUZ will be redeveloped for a mix of activities including higher density housing
2	<p>Commercial 1 areas not fronting the retail street, but contiguous (generally behind) with Category 1 that do or could have a strong physical or land use connection to the retail core.</p> <p><i>Relevant PPN58 criteria: consider</i></p>	<ul style="list-style-type: none"> • No areas in this category

	<ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> 	
3	<p>Commercial 2 areas not fronting the retail street, but contiguous (generally behind) with Category 1 that do or could have a strong physical or land use connection to the retail core.</p> <p><i>Relevant PPN58 criteria: consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p>	<ul style="list-style-type: none"> • Land fronting Alexandra Parade – opportunities associate with land to the north and to amalgamate with other land in the block of C2Z land

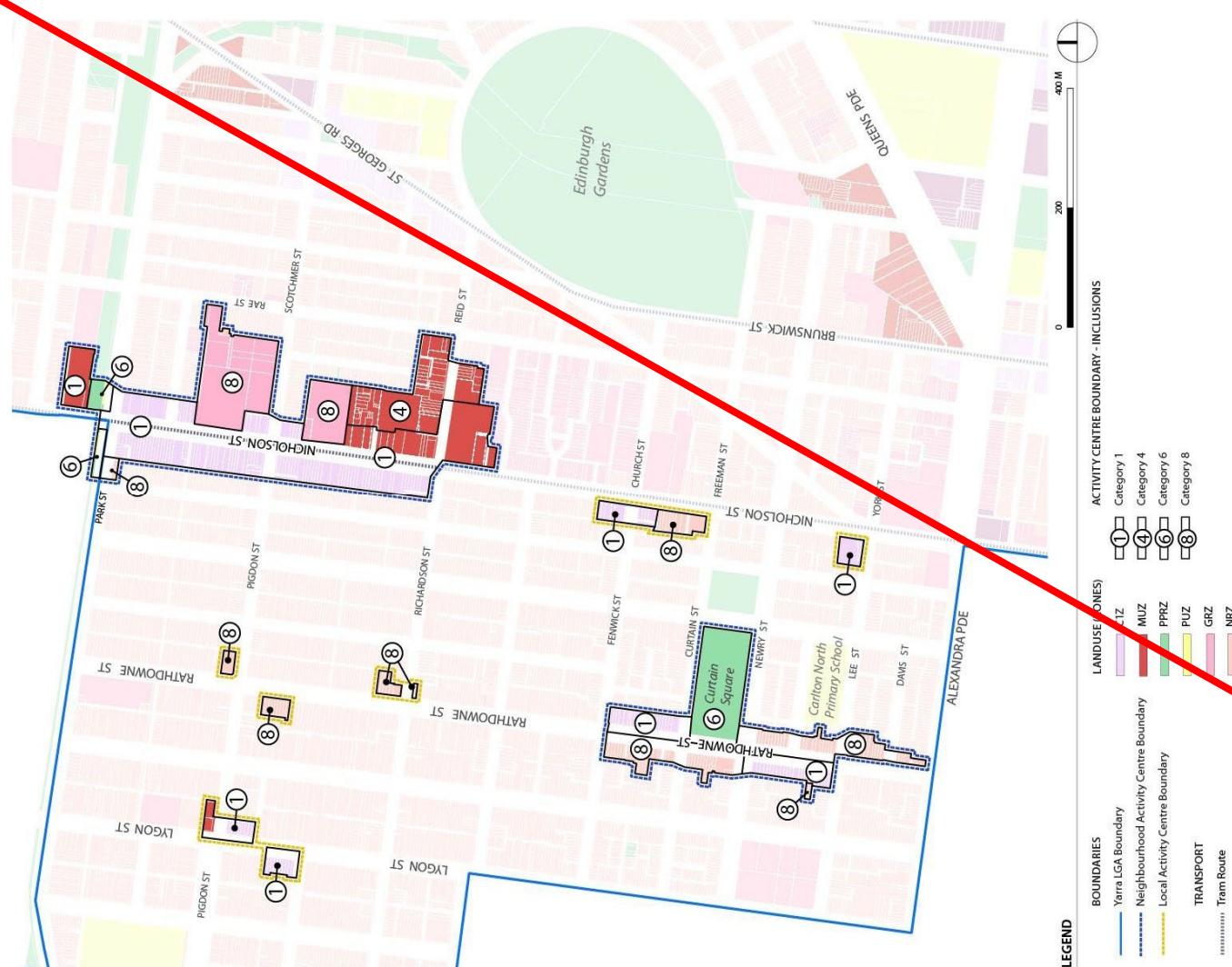
	<ul style="list-style-type: none"> <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> 	
4	<p>Mixed Use areas that are contiguous with Category 1 and 2 areas and do or could have a strong physical connection to the retail core</p> <p><i>Relevant PPN58 criteria:</i> <i>consider</i></p> <ul style="list-style-type: none"> <i>Location of existing commercial areas and land uses</i> <i>Commercial and residential needs</i> <i>Proximity to fixed transport esp fixed rail (train or tram)</i> <i>Location of transport infrastructure</i> <i>Walkability</i> <i>Impacts of boundary on other activity centres</i> <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> 	<ul style="list-style-type: none"> No areas in this category
5	<p>Health Precinct not fronting the main street of the retail core, but contiguous with Category 1 or 2</p> <p><i>Relevant PPN58 criteria:</i> <i>Consider</i></p> <ul style="list-style-type: none"> <i>Location of existing government and institutional areas and land uses</i> 	<ul style="list-style-type: none"> No areas in this category

6	<p>Public open space, community facilities and schools not fronting the main street of the retail core, with a strong functional inter relationship with the activity centre</p> <p><i>Relevant PPN58 criteria:</i></p> <p><i>Consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing government and institutional areas and land uses</i> • <i>Location of existing areas of public open space</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Public open space areas that have or are intended to have a strong functional inter-relationship with the activity centre</i> 	<ul style="list-style-type: none"> • Land between Turnbull Street, Heidelberg Road and Hoddle Street is public open space with tennis courts and the Collingwood Leisure Centre. It provides a significant focus for recreational activities. • A small pocket of open space at the west end of the Queens Parade has a direct link with the Activity Centre.
7	<p>Commercial 1 and Commercial 2 fronting a main road that intersects the main street of the retail core, and contiguous with land in another category.</p> <p><i>Relevant PPN58 criteria:</i></p> <p><i>consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p> <p><i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i></p>	<ul style="list-style-type: none"> • No areas in this category

8	<p>Residential areas that due to the surrounding uses, built form and road network are logically included</p> <p><i>Relevant PPN58 criteria:</i></p> <p><i>Consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing government and institutional areas and land uses</i> • <i>Location of existing areas of public open space</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Residential areas that are integrated into the activity centre or surrounded by other uses that have a strong relationship with the activity centre, even where limited development opportunities exist</i> 	<ul style="list-style-type: none"> • A small area in the NRZ on the south side of Queens Parade between Wellington Street and Smith Street provides a link between the retail centre east of Wellington Street and the future commercial and educational redevelopment around the former gasworks land. • Includes land occupied by the Church and school • 497 Napier Street - a site inspection shows that this site has been developed as part of land at 58 Queens Parade. The AC boundary makes a logical line along the northern boundary of this property with fine grained housing to the north.
9	<p>Large sites or areas with potential to be part of or contribute to an activity centre, if upgraded or redeveloped</p> <p><i>Relevant PPN58 criteria:</i></p> <p><i>Consider:</i> <i>Strategic Redevelopment Sites</i></p>	<ul style="list-style-type: none"> • The former gasworks (PUZ1 and PUZ6) land between Smith Street and George Street with frontages to both Queens Parade and Alexandra Parade is likely to provide opportunities for educational, cultural and leisure activities. Subject to a Government Standing Land Advisory Committee (GSLAC) process.

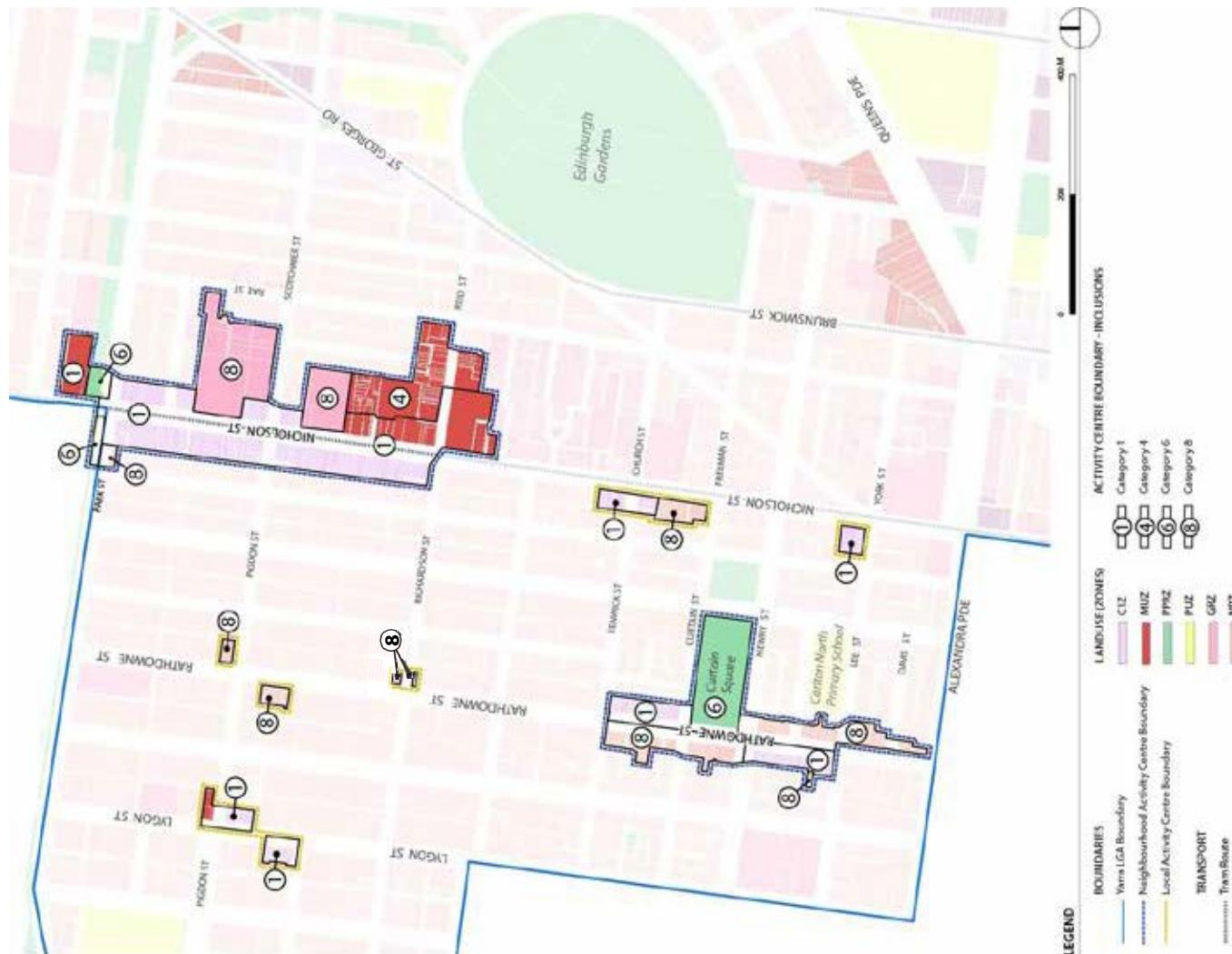
~~8.3 Nicholson Street – North Fitzroy/North Carlton~~

Map 7 Nicholson Street - Rathdowne Street and Lygon Street



8.3 Nicholson Street – North Fitzroy/North Carlton

Map 7 Nicholson Street - Rathdowne Street and Lygon Street



Category	Descriptions	Reasoning
1	<p>Commercial 1, Commercial 2, Mixed Use, Comprehensive Development Zones and civic uses fronting the main street of the retail core.</p> <p><i>Relevant PPN58 criteria: consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Location of existing government and institutional areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> • <i>Key public land uses that have or are intended to have a strong functional inter-relationship with the activity centre</i> 	<ul style="list-style-type: none"> • Properties fronting Nicholson Street– all C1Z and MUZ • Primary retail core at and north of Pigdon Street on the west side of Nicholson Street • C1Z south of Pigdon Street includes a mix of retail, office and residential use • MUZ on the east side of Nicholson Street, immediately north of Park Street and Inner Circle parklands. This area includes a designated Strategic Development site in the MSS.
2	<p>Commercial 1 areas not fronting the retail street, but contiguous (generally behind) with Category 1 that do or could have a strong physical or land use connection to the retail core.</p> <p><i>Relevant PPN58 criteria: consider</i></p>	<ul style="list-style-type: none"> • No areas in this category

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	<ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> 	
3	<p>Commercial 2 areas not fronting the retail street, but contiguous (generally behind) with Category 1 that do or could have a strong physical or land use connection to the retail core.</p> <p><i>Relevant PPN58 criteria: consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p>	<ul style="list-style-type: none"> • No areas in this category

	<ul style="list-style-type: none"> <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> 	
4	<p>Mixed Use areas that are contiguous with Category 1 and 2 areas and do or could have a strong physical connection to the retail core</p> <p><i>Relevant PPN58 criteria:</i> <i>consider</i></p> <ul style="list-style-type: none"> <i>Location of existing commercial areas and land uses</i> <i>Commercial and residential needs</i> <i>Proximity to fixed transport esp fixed rail (train or tram)</i> <i>Location of transport infrastructure</i> <i>Walkability</i> <i>Impacts of boundary on other activity centres</i> <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> 	<ul style="list-style-type: none"> MUZ – east Nicholson Street, north and south of Reid Street and extending to Rae Street, with a mix of parcel sizes and building forms. Provides some scope for more intensive mixed use development but is constrained by proximity to GRZ and NRZ land and interface considerations.
5	<p>Health Precinct not fronting the main street of the retail core, but contiguous with Category 1 or 2</p> <p><i>Relevant PPN58 criteria:</i> <i>Consider</i></p> <ul style="list-style-type: none"> <i>Location of existing government and institutional areas and land uses</i> 	<ul style="list-style-type: none"> No areas in this category

6	<p>Public open space, community facilities and schools not fronting the main street of the retail core, with a strong functional inter-relationship with the activity centre</p> <p><i>Relevant PPN58 criteria:</i></p> <p><i>Consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing government and institutional areas and land uses</i> • <i>Location of existing areas of public open space</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Public open space areas that have or are intended to have a strong functional inter-relationship with the activity centre</i> 	<ul style="list-style-type: none"> • Public open space adjoining mixed use and commercial zones. This includes land adjoining the north side of Park Street which is part of the Inner Circle railway parklands. • This land has a strong inter-relationship with the centre and includes a café and cycle shop adjoining the parkland immediately west of Nicholson Street. The linear parkland serves a range of recreational purposes and links to other local and neighbourhood centres.
7	<p>Commercial 1 and Commercial 2 fronting a main road that intersects the main street of the retail core, and contiguous with land in another category.</p> <p><i>Relevant PPN58 criteria:</i></p> <p><i>consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p> <p><i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i></p>	<ul style="list-style-type: none"> • No areas in this category

8	<p>Residential areas that due to the surrounding uses, built form and road network are logically included</p> <p><i>Relevant PPN58 criteria:</i></p> <p><i>Consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing government and institutional areas and land uses</i> • <i>Location of existing areas of public open space</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Residential areas that are integrated into the activity centre or surrounded by other uses that have a strong relationship with the activity centre, even where limited development opportunities exist</i> 	<ul style="list-style-type: none"> • GRZ2 area on the east side of Nicholson Street – just south of Scotchmer Street, adjoins and is opposite Category 1 and retail core. This land has been developed for medium density housing and is unlikely to be redeveloped in the foreseeable future. • NRZ1 land on the south side of Park Street, between Nicholson Street and Station Street. This land is occupied by small shops which face the parkland, a café and playground on the north side of Park Street. The shops complement the activities along the street and parkland. • GRZ3 area on the east side of Nicholson Street and immediately north of Scotchmer Street. This area is a designated Strategic Development site in the MSS. This land faces the retail core and could be redeveloped to strengthen the retail function and character of the centre. It is occupied by a bus depot.
9	<p>Large sites or areas with potential to be part of or contribute to an activity centre, if upgraded or redeveloped</p> <p><i>Relevant PPN58 criteria:</i></p> <p><i>Consider:</i> <i>Strategic Redevelopment Sites</i></p>	<ul style="list-style-type: none"> • No areas in this category

8.38.4 Rathdowne Street – North Carlton

See Map 7

Category	Descriptions	Reasoning
1	<p>Commercial 1, Commercial 2, Mixed Use, Comprehensive Development Zones and civic uses fronting the main street of the retail core.</p> <p><i>Relevant PPN58 criteria: consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Location of existing government and institutional areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> • <i>Key public land uses that have or are intended to have a strong functional inter-relationship with the activity centre</i> 	<ul style="list-style-type: none"> • Properties front Rathdowne Street – all C1Z • Primary retail core areas are in two small blocks <ul style="list-style-type: none"> ◦ East side of Rathdowne between Fenwick Street and Curtain Street ◦ West side of Rathdowne between Newry Street and Lee Street
2	Commercial 1 areas not fronting the retail street, but contiguous (generally behind) with Category 1 that do or could have a strong	<ul style="list-style-type: none"> • No areas in this category

	<p>physical or land use connection to the retail core.</p> <p><i>Relevant PPN58 criteria:</i> consider</p> <ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> 	
3	<p>Commercial 2 areas not fronting the retail street, but contiguous (generally behind) with Category 1 that do or could have a strong physical or land use connection to the retail core.</p> <p><i>Relevant PPN58 criteria:</i> consider</p> <ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> 	<ul style="list-style-type: none"> • No areas in this category

	<ul style="list-style-type: none"> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> 	
4	<p>Mixed Use areas that are contiguous with Category 1 and 2 areas and do or could have a strong physical connection to the retail core</p> <p><i>Relevant PPN58 criteria: consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> 	<ul style="list-style-type: none"> • No areas in this category
5	<p>Health Precinct not fronting the main street of the retail core, but contiguous with Category 1 or 2</p> <p><i>Relevant PPN58 criteria: Consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing government and institutional areas and land uses</i> 	<ul style="list-style-type: none"> • No areas in this category

6	<p>Public open space, community facilities and schools not fronting the main street of the retail core, with a strong functional inter relationship with the activity centre</p> <p><i>Relevant PPN58 criteria:</i></p> <p><i>Consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing government and institutional areas and land uses</i> • <i>Location of existing areas of public open space</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Public open space areas that have or are intended to have a strong functional inter-relationship with the activity centre</i> 	<ul style="list-style-type: none"> • Curtain Square is parkland which adjoins the retail core of this centre and adds to the attractiveness, function and character of the centre
7	<p>Commercial 1 and Commercial 2 fronting a main road that intersects the main street of the retail core, and contiguous with land in another category.</p> <p><i>Relevant PPN58 criteria:</i></p> <p><i>consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p>	<ul style="list-style-type: none"> • No areas in this category

	<i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i>	
8	<p>Residential areas that due to the surrounding uses, built form and road network are logically included</p> <p><i>Relevant PPN58 criteria:</i></p> <p><i>Consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing government and institutional areas and land uses</i> • <i>Location of existing areas of public open space</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Residential areas that are integrated into the activity centre or surrounded by other uses that have a strong relationship with the activity centre, even where limited development opportunities exist</i> 	<ul style="list-style-type: none"> • Two areas in the NRZ1 adjoin or are opposite the retail areas in Category 1. <ul style="list-style-type: none"> ◦ Land on the west side of Rathdowne Street between Fenwick Street and Newry Street includes a mix of cafes, shops, dwellings and the North Carlton Library. The café and shop activities complement the more intense retail and Curtain Square on the opposite frontage ◦ Land on the east side of Rathdowne Street between Newry Street and Princes Street includes a mix of cafes, shops and dwellings. The café and shop activities complement the more intense retail and Curtain Square on the opposite frontage, north of Lee Street • One small section of NRZ1 is located immediately west of the C1Z just north of Lee Street. This land is part of two lots which extend across the zone boundary and front Rathdowne Street in the C1Z.
9	<p>Large sites or areas with potential to be part of or contribute to an activity centre, if upgraded or redeveloped</p> <p><i>Relevant PPN58 criteria:</i></p> <p><i>Consider:</i> <i>Strategic Redevelopment Sites</i></p>	<ul style="list-style-type: none"> • N/A

8.48.5 St Georges Road – North Fitzroy

See Map 6

Category	Descriptions	Reasoning
1	<p>Commercial 1, Commercial 2, Mixed Use, Comprehensive Development Zones and civic uses fronting the main street of the retail core.</p> <p><i>Relevant PPN58 criteria: consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Location of existing government and institutional areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> • <i>Key public land uses that have or are intended to have a strong functional inter-relationship with the activity centre</i> 	<ul style="list-style-type: none"> • There are two main retail nodes <ul style="list-style-type: none"> ○ The southern area extends from Reid Street to Fergie Street along St Georges Road and extends east and west along Scotchmer Street. Most of this land is in the C1Z but a small section north of Scotchmer Street is C2Z. The focus of activity is near the junction of Scotchmer Street with St Georges Road and the Piedimontes supermarket ○ The northern area extends from the Inner Circle parkland north to Clausen Street. This area is separated from the other area around Scotchmer Street by about 600m
2	Commercial 1 areas not fronting the retail street, but contiguous (generally behind) with Category 1 that do or could have a strong	<ul style="list-style-type: none"> • No areas in this category

	<p>physical or land use connection to the retail core.</p> <p><i>Relevant PPN58 criteria:</i> consider</p> <ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> 	
3	<p>Commercial 2 areas not fronting the retail street, but contiguous (generally behind) with Category 1 that do or could have a strong physical or land use connection to the retail core.</p> <p><i>Relevant PPN58 criteria:</i> consider</p> <ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> 	<ul style="list-style-type: none"> • No areas in this category

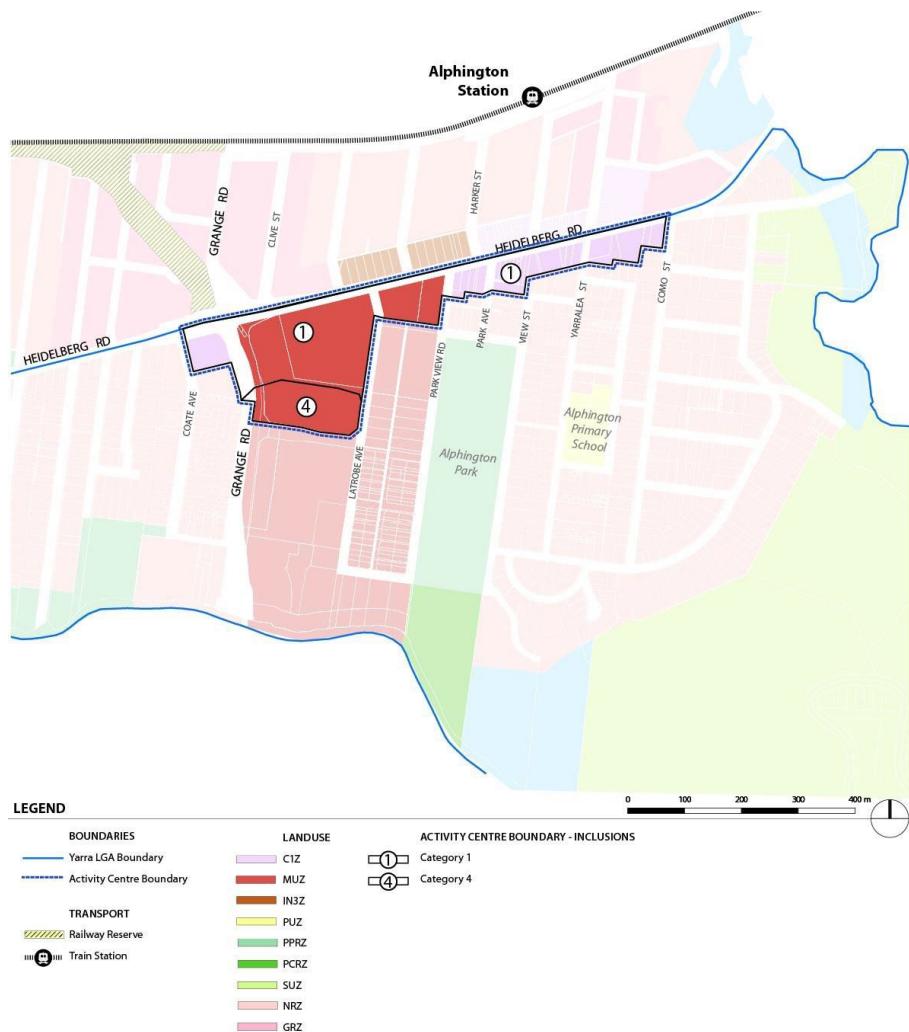
	<ul style="list-style-type: none"> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> 	
4	<p>Mixed Use areas that are contiguous with Category 1 and 2 areas and do or could have a strong physical connection to the retail core</p> <p><i>Relevant PPN58 criteria: consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> 	<ul style="list-style-type: none"> • No areas in this category
5	<p>Health Precinct not fronting the main street of the retail core, but contiguous with Category 1 or 2</p> <p><i>Relevant PPN58 criteria: Consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing government and institutional areas and land uses</i> 	<ul style="list-style-type: none"> • No areas in this category

6	<p>Public open space, community facilities and schools not fronting the main street of the retail core, with a strong functional inter relationship with the activity centre</p> <p><i>Relevant PPN58 criteria:</i></p> <p><i>Consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing government and institutional areas and land uses</i> • <i>Location of existing areas of public open space</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Public open space areas that have or are intended to have a strong functional inter-relationship with the activity centre</i> 	<ul style="list-style-type: none"> • The Government Fitzroy North primary school is located on land bounded by Fergie Street, Alfred Crescent and Best Street. This school adjoins the new community centre and library at the junction of St Georges Road and Best Street and Edinburgh Gardens to the south. • The site of the new Bargoonga Nganjin, North Fitzroy Library, at the corner of Best Street and St Georges Road is in the NRZ1. It is an important addition to the community facilities in the centre.
7	<p>Commercial 1 and Commercial 2 fronting a main road that intersects the main street of the retail core, and contiguous with land in another category.</p> <p><i>Relevant PPN58 criteria:</i></p> <p><i>consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p>	<ul style="list-style-type: none"> • No areas in this category

	<i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i>	
8	<p>Residential areas that due to the surrounding uses, built form and road network are logically included</p> <p><i>Relevant PPN58 criteria:</i></p> <p><i>Consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing government and institutional areas and land uses</i> • <i>Location of existing areas of public open space</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Residential areas that are integrated into the activity centre or surrounded by other uses that have a strong relationship with the activity centre, even where limited development opportunities exist</i> 	<ul style="list-style-type: none"> • One small area in the NRZ1 on the south side of Scotchmer Street between St Georges Road and Fergie Street is a mix of shops and dwellings. This land faces commercial and retail activity in the C2Z. It complements the adjoining retail activity and is close to the retail core. • NRZ in Bent St is between the school, library and commercial land and is occupied by converted warehouses.
9	<p>Large sites or areas with potential to be part of or contribute to an activity centre, if upgraded or redeveloped</p> <p><i>Relevant PPN58 criteria:</i></p> <p><i>Consider:</i> <i>Strategic Redevelopment Sites</i></p>	<ul style="list-style-type: none"> • N/A

8.58.6 Heidelberg Road – Alphington

Map 8 Heidelberg Road



Category	Descriptions	Reasoning
1	<p>Commercial 1, Commercial 2, Mixed Use, Comprehensive Development Zones and civic uses fronting the main street of the retail core.</p> <p><i>Relevant PPN58 criteria: consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Location of existing government and institutional areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> • <i>Key public land uses that have or are intended to have a strong functional inter-relationship with the activity centre</i> 	<ul style="list-style-type: none"> • This centre is very small with few retail businesses and very little weekly shopping. The existing C1Z land is in two parts: <ul style="list-style-type: none"> ◦ Land on the south side of Heidelberg Road between Parkview Road and Como Street ◦ Land on the north side of Heidelberg Road between Harker Street and Yarralea Street. This is in the City of Darebin and outside the scope of the YPS re-write. • Future development in this centre is likely to be strongly influenced by the Alphington Paper Mill redevelopment (former AMCOR site) • A parcel of land between Coate Avenue and Grange Road on the south side of Heidelberg Road is zoned C1Z and will become part of the larger centre as Alphington Paper Mill develops.
2	<p>Commercial 1 areas not fronting the retail street, but contiguous (generally behind) with Category 1 that do or could have a strong physical or land use connection to the retail core.</p> <p><i>Relevant PPN58 criteria: consider</i></p>	<ul style="list-style-type: none"> • No areas in this category

	<ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> 	
3	<p>Commercial 2 areas not fronting the retail street, but contiguous (generally behind) with Category 1 that do or could have a strong physical or land use connection to the retail core.</p> <p><i>Relevant PPN58 criteria: consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p>	<ul style="list-style-type: none"> • No areas in this category

	<ul style="list-style-type: none"> <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> 	
4	<p>Mixed Use areas that are contiguous with Category 1 and 2 areas and do or could have a strong physical connection to the retail core</p> <p><i>Relevant PPN58 criteria:</i> <i>consider</i></p> <ul style="list-style-type: none"> <i>Location of existing commercial areas and land uses</i> <i>Commercial and residential needs</i> <i>Proximity to fixed transport esp fixed rail (train or tram)</i> <i>Location of transport infrastructure</i> <i>Walkability</i> <i>Impacts of boundary on other activity centres</i> <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> 	<ul style="list-style-type: none"> Parts of the Alphington Paper Mill redevelopment will in the future become a new activity centre or extension of the current small centre. The Alphington Paper Mill redevelopment will be staged over 7-12 years with the retail and commercial components potentially built from around 2024 to 2030. This will see a new neighbourhood centre established with non-residential activities including office, community and retail which will total 24,050m² – 33,450m² with retail as a sub-set of about 13 – 15,000m². The extent of the land in this new centre is defined in the approved Development Plan and is generally bounded by Parkview Road, La Trobe Avenue and future internal roads within the redevelopment.
5	<p>Health Precinct not fronting the main street of the retail core, but contiguous with Category 1 or 2</p> <p><i>Relevant PPN58 criteria:</i> <i>Consider</i></p> <ul style="list-style-type: none"> <i>Location of existing government and institutional areas and land uses</i> 	<ul style="list-style-type: none"> No areas in this category

6	<p>Public open space, community facilities and schools not fronting the main street of the retail core, with a strong functional inter-relationship with the activity centre</p> <p><i>Relevant PPN58 criteria:</i></p> <p><i>Consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing government and institutional areas and land uses</i> • <i>Location of existing areas of public open space</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Public open space areas that have or are intended to have a strong functional inter-relationship with the activity centre</i> 	<ul style="list-style-type: none"> • No areas in this category
7	<p>Commercial 1 and Commercial 2 fronting a main road that intersects the main street of the retail core, and contiguous with land in another category.</p> <p><i>Relevant PPN58 criteria:</i></p> <p><i>consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p> <p><i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i></p>	<ul style="list-style-type: none"> • No areas in this category

8	<p>Residential areas that due to the surrounding uses, built form and road network are logically included</p> <p><i>Relevant PPN58 criteria:</i></p> <p><i>Consider</i></p> <ul style="list-style-type: none">• <i>Location of existing government and institutional areas and land uses</i>• <i>Location of existing areas of public open space</i> <p><i>Include:</i></p> <ul style="list-style-type: none">• <i>Residential areas that are integrated into the activity centre or surrounded by other uses that have a strong relationship with the activity centre, even where limited development opportunities exist</i>	<ul style="list-style-type: none">• No areas in this category
9	<p>Large sites or areas with potential to be part of or contribute to an activity centre, if upgraded or redeveloped</p> <p><i>Relevant PPN58 criteria:</i></p> <p><i>Consider:</i> <i>Strategic Redevelopment Sites</i></p>	<ul style="list-style-type: none">• N/A

8.68.7 Gertrude Street – Fitzroy

See Map 3

Category	Descriptions	Reasoning
1	<p>Commercial 1, Commercial 2, Mixed Use, Comprehensive Development Zones and civic uses fronting the main street of the retail core.</p> <p><i>Relevant PPN58 criteria: consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Location of existing government and institutional areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> • <i>Key public land uses that have or are intended to have a strong functional inter-relationship with the activity centre</i> 	<ul style="list-style-type: none"> • C1Z land fronting Gertrude Street between Smith Street and Nicholson Street
2	<p>Commercial 1 areas not fronting the retail street, but contiguous (generally behind) with Category 1 that do or could have a strong physical or land use connection to the retail core.</p>	<ul style="list-style-type: none"> • No areas in this category

	<p><i>Relevant PPN58 criteria:</i> <i>consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> 	
3	<p>Commercial 2 areas not fronting the retail street, but contiguous (generally behind) with Category 1 that do or could have a strong physical or land use connection to the retail core.</p> <p><i>Relevant PPN58 criteria:</i> <i>consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> 	<ul style="list-style-type: none"> • No land in this category

	<p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> 	
4	<p>Mixed Use areas that are contiguous with Category 1 and 2 areas and do or could have a strong physical connection to the retail core</p> <p><i>Relevant PPN58 criteria:</i> consider</p> <ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> 	<ul style="list-style-type: none"> • No land in this category
5	<p>Health, civic and cultural precincts not fronting the main street of the retail core, but contiguous with Category 1 or 2</p> <p><i>Relevant PPN58 criteria:</i> Consider</p> <ul style="list-style-type: none"> • <i>Location of existing government and institutional areas and land uses</i> 	<ul style="list-style-type: none"> • No land in this category

6	<p>Public open space, community facilities and schools not fronting the main street of the retail core, with a strong functional inter-relationship with the activity centre</p> <p><i>Relevant PPN58 criteria:</i></p> <p><i>Consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing government and institutional areas and land uses</i> • <i>Location of existing areas of public open space</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Public open space areas that have or are intended to have a strong functional inter-relationship with the activity centre</i> 	<ul style="list-style-type: none"> • No land in this category
7	<p>Commercial 1 and Commercial 2 fronting a main road that intersects the main street of the retail core, and contiguous with land in another category.</p> <p><i>Relevant PPN58 criteria:</i></p> <p><i>consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p> <p><i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i></p>	<ul style="list-style-type: none"> • No areas in this category

8	<p>Residential areas that due to the surrounding uses, built form and road network are logically included</p> <p><i>Relevant PPN58 criteria:</i></p> <p><i>Consider</i></p> <ul style="list-style-type: none">• <i>Location of existing government and institutional areas and land uses</i>• <i>Location of existing areas of public open space</i> <p><i>Include:</i></p> <ul style="list-style-type: none">• <i>Residential areas that are integrated into the activity centre or surrounded by other uses that have a strong relationship with the activity centre, even where limited development opportunities exist</i>	<ul style="list-style-type: none">• NRZ1 land on the south side of Gertrude Street between Nicholson and Brunswick Streets
9	<p>Large sites or areas with potential to be part of or contribute to an activity centre, if upgraded or redeveloped</p> <p><i>Relevant PPN58 criteria:</i></p> <p><i>Consider:</i> <i>Strategic Redevelopment Sites</i></p>	<ul style="list-style-type: none">• N/A

9 Local centres – boundaries and categories

These small local centres offer a limited range of local services such as cafes, restaurants, milk bar or newsagent. In many cases the amount of local weekly shopping has declined in these centres as this type of shopping has shifted to supermarkets in larger centres.

- Lygon Street – North Carlton / Princes Hill
- Rathdowne Street – North Carlton
- Nicholson Street – North Carlton
- Spensely Street - Clifton Hill
- Berry Street - Clifton Hill

Analysis and categories in tables

The Local Centres include a much more limited mix of the categories set out in earlier parts of this report. The tables below apply only category 1 and 8.



9.1 Lygon Street – North Carlton / Princes Hill

See Map 7

This centre is located at and south of the junction of Pigdon Street and Lygon Street. It includes two groups of properties in the C1Z and land north of Pigdon Street in the MUZ. The extent is shown on the map below.

Category	Descriptions	Reasoning
1	<p>Commercial 1, Commercial 2, Mixed Use, Comprehensive Development Zones and civic uses fronting the main street of the retail core.</p> <p><i>Relevant PPN58 criteria:</i> consider</p> <ul style="list-style-type: none">• <i>Location of existing commercial areas and land uses</i>• <i>Location of existing government and institutional areas and land uses</i>• <i>Commercial and residential needs</i>• <i>Proximity to fixed transport esp fixed rail (train or tram)</i>• <i>Location of transport infrastructure</i>• <i>Walkability</i>• <i>Impacts of boundary on other activity centres</i>• <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p> <ul style="list-style-type: none">• <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i>• <i>Key public land uses that have or are intended to have a strong functional inter-relationship with the activity centre</i>	<ul style="list-style-type: none">• C1Z land fronting Lygon Street at the junction with Pigdon Street and extending south to Paterson Street, Princes Hill• A parcel of MUZ land immediately north of Pigdon Street

9.2 Rathdowne Street – North Carlton

See Map 7

This ‘centre’ is in three parts, located between Pigdon Street and Richardson Street. It includes two groups of shops or former shops and a hotel north of Pigdon Street. All these properties are in the NRZ1. The areas between the groups of shops or former shops are consistently residential. The extent of these areas is shown on the map below.

Category	Descriptions	Reasoning
8	<p>Residential areas that due to the surrounding uses, built form and road network are logically included</p> <p><i>Relevant PPN58 criteria:</i></p> <p><i>Consider</i></p> <ul style="list-style-type: none">• <i>Location of existing government and institutional areas and land uses</i>• <i>Location of existing areas of public open space</i> <p><i>Include:</i></p> <ul style="list-style-type: none">• <i>Residential areas that are integrated into the activity centre or surrounded by other uses that have a strong relationship with the activity centre, even where limited development opportunities exist</i>	<ul style="list-style-type: none">• NRZ1 land on both the east and west side of Rathdowne Street between Pigdon and Richardson Streets. The properties include the Great Northern Hotel at the NE corner of Pigdon Street and clusters of shops and former shops. The activities include cafes and other food outlets and small businesses providing a range of services.• There are few if any shops providing for local weekly shopping.• The clusters of shops are separated by consistent housing development.

9.3 Nicholson Street (south) – North Carlton

See Map 7

Category	Descriptions	Reasoning
1	<p>Commercial 1, Commercial 2, Mixed Use, Comprehensive Development Zones and civic uses fronting the main street of the retail core.</p> <p><i>Relevant PPN58 criteria:</i> consider</p> <ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Location of existing government and institutional areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> • <i>Key public land uses that have or are intended to have a strong functional inter-relationship with the activity centre</i> 	<ul style="list-style-type: none"> • C1Z land fronting Nicholson Street in two areas: <ul style="list-style-type: none"> ◦ North and south of Fenwick Street ◦ North of Lee Street • The land north of Lee Street is occupied by the San Remo Ballroom and associated activities including a music store. • The land north and south of Fenwick Street is occupied by a mix of activities including restaurants, laundromat and service businesses. • There are no local weekly shopping retail businesses (apart from the 24hr convenience shop to the south in the NRZ1 NW cnr Curtain Street)
8	<p>Residential areas that due to the surrounding uses, built form and road network are logically included</p> <p><i>Relevant PPN58 criteria:</i> Consider</p>	<ul style="list-style-type: none"> • NRZ1 land extends south of the C1Z land at Fenwick Street to Curtain Street and includes a 24hr convenience shop at the NW corner of Curtain Street and a few shops or former shops mixed in with dwellings • The 24hr convenience shop at the NW corner of Curtain Street is the only significant weekly convenience shopping in the centre and serves the high volume traffic in Nicholson Street. It provides off street parking.

Activity centres – roles and boundaries – October 2019April 2022

	<ul style="list-style-type: none">• <i>Location of existing government and institutional areas and land uses</i>• <i>Location of existing areas of public open space</i> <p><i>Include:</i></p> <ul style="list-style-type: none">• <i>Residential areas that are integrated into the activity centre or surrounded by other uses that have a strong relationship with the activity centre, even where limited development opportunities exist</i>	
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9.4 Spensley Street – Clifton Hill

See Map 6

Category	Descriptions	Reasoning
1	<p>Commercial 1, Commercial 2, Mixed Use, Comprehensive Development Zones and civic uses fronting the main street of the retail core.</p> <p><i>Relevant PPN58 criteria: consider</i></p> <ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Location of existing government and institutional areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> • <i>Key public land uses that have or are intended to have a strong functional inter-relationship with the activity centre</i> 	<ul style="list-style-type: none"> • C1Z land fronting Spensley Street and Berry Street around the junction generally coincides with the extent of this local centre • The C1Z includes the large three storey Royal Hotel at the SW corner. • The activities include the hotel, cafes, fish and chip shop and a medical centre. • Local weekly convenience shopping is minimal.

9.5 Berry Street / Ramsden Street – Clifton Hill

See Map 6

This centre is located at the junction of Berry Street and Ramsden Street. It includes shops, apartments and commercial properties in the C1Z around this junction.

Category	Descriptions	Reasoning
1	<p>Commercial 1, Commercial 2, Mixed Use, Comprehensive Development Zones and civic uses fronting the main street of the retail core.</p> <p><i>Relevant PPN58 criteria:</i> consider</p> <ul style="list-style-type: none"> • <i>Location of existing commercial areas and land uses</i> • <i>Location of existing government and institutional areas and land uses</i> • <i>Commercial and residential needs</i> • <i>Proximity to fixed transport esp fixed rail (train or tram)</i> • <i>Location of transport infrastructure</i> • <i>Walkability</i> • <i>Impacts of boundary on other activity centres</i> • <i>Strategic Redevelopment Sites</i> <p><i>Include:</i></p> <ul style="list-style-type: none"> • <i>Sufficient land to provide for commercial activities needed over a 15 – 20 years timeframe + then 30 year horizon.</i> • <i>Key public land uses that have or are intended to have a strong functional inter-relationship with the activity centre</i> 	<ul style="list-style-type: none"> • C1Z land fronting the south side of Ramsden Street at the intersection with Berry Street generally coincides with the extent of this local centre • The C1Z includes five or six shops on the south side of Ramsden Street. • The activities include a cafe and service businesses. • There is no local weekly convenience shopping. • One site at the east end of the centre has been redeveloped for two level apartments and some of the shops may be used as dwellings.

NOISE AND VIBRATION CONSIDERATIONS DISCUSSION REPORT

City of Yarra

Commented [YCC1]: Reason for all changes shown in track changes in this document, unless otherwise stated: Panel's recommendation 31 supported by Officers and Panel's further recommendation in section 10.6 of the Panel Report supported by Officers, which states:

Amend the Noise and Vibration Considerations Discussion Report in accordance with the changes proposed by Mr Antonopoulos and to include:

- an explanation of the relevance and relationship with Planning Practice Notes 81 and 83*
- a reference to relevant Victorian and Civil Administrative Tribunal cases being relied on to establish standards or appropriate noise levels in the bibliography.*

Prepared for:

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SLR Ref: 640.10090.99990-R01
Version No: -v0.6
[8269117: 32230927_1]March 2022



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BASIS OF REPORT

This report has been prepared by SLR Consulting Australia Pty Ltd (SLR) with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with City of Yarra (the Client). Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of the Client. No warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR.

SLR disclaims any responsibility to the Client and others in respect of any matters outside the agreed scope of the work.

DOCUMENT CONTROL

Reference	Date	Prepared	Checked	Authorised
640.10090.99990 Planning Review -R01_v0.6-0.5	<u>24 March 2022</u> <u>September 2024</u>	Dianne Williams	Jim Antonopoulos	<u>Jim Antonopoulos</u>

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1 Introduction

This report provides a technical discussion and summary of previously provided advice to City of Yarra on planning related noise and vibration issues and forms the basis of the *Guidelines – managing noise impacts in urban development, Guidance for planning permit and related decisions under the Yarra Planning Scheme 2021*.

1 Road Traffic Noise

1.1 Background Information

Road traffic is a significant and major source of noise impact to dwellings on main roads. The issue has been acknowledged and addressed in recently introduced Apartment Developments provisions at Clause 58 and specifically at 58.04-3 Noise impacts objectives and Standard D16. Planning Practice Note PPN83 Assessing external noise impacts for apartments provides further guidance to these clauses. The issue has been acknowledged and addressed in new Better Apartments Design Standards, 2016. The document provides provisions nominate decibel targets for day and night average road traffic noise levels, and applies to apartment developments on roads carrying more than 40,000 vehicles, or within 300 m from a freeway. The design targets are 40 dBA Leq,16h for all habitable rooms and 35 dBA Leq,8h for bedrooms.

It is of note that the time classifications used in *Better Apartments* document place the 6 am to 7 am period in the 'day' rather than the 'night' category. This classification is not consistent with those we have been applying to City of Yarra projects, and is not consistent with the classifications usually used in Victoria (e.g.-the Vic EPA 'Noise limit and assessment protocol for the control of noise from commercial, industrial and trade premises and entertainment venues' (Publication 1826) and the Vic EPA 'Noise control guidelines'SEPP N 1 and the Vic EPA Noise Control Guidelines (Publication 1254)).

In our opinion the *Better Apartments* document should be modified as follows:

- the 6 am to 7 am period should be included in the 'night' period rather than the 'day' period;
- application of the targets should be extended to all developments affected by road traffic noise (not just those near freeways or on roads carrying more than 40,000 vehicles), and
- the targets should be applied to all residential developments, not just apartments.

1.2 Mandatory Requirements

The Victorian Planning Provisions were amended in March 2017 with Clause 58, Apartment Developments, objectives and Standard D16 which adopted the *Better Apartments Design Standards*. This introduced the design targets of 40 dBA Leq,16h for living rooms and 35 dBA Leq,8h for bedrooms in developments within 300 m of a freeway on roads carrying more than 40,000 vehicles.

1.3 Other Potentially Useful Standards and Guidelines

AS/NZS2107:2016 Acoustics – Recommended design sound levels and reverberation times for building interiors, provides recommended noise level ranges for dwellings near major and minor roads. This Standard has traditionally been called up in planning permits to address road traffic noise impacts. However the provision in the Standard of a decibel range instead of a specific design target has led to uncertainty with regard to actual design targets (most consultants design to the upper end of the range). Furthermore the assessment methodology is not defined (it is unclear whether traffic noise should be quantified as an average or worst case level, e.g. the loudest hour of traffic noise). In our reviews of acoustic reports for the City of Yarra, and in our own planning noise assessments, we have interpreted the AS/NZS2107 design levels to be as follows: the day and night average noise levels are assessed to the lower end of the AS/NZS2107 range (35 dBA bedrooms and 40 dBA living rooms), and the loudest hour of road traffic noise during the day and night periods are assessed to the upper end of the AS/NZS2107 range (40 dBA bedrooms and 45 dBA living rooms).

The NSW *Road Noise Policy*, 2011 provides internal targets for road traffic noise of 35 dBA in bedrooms at night and 40 dBA in all habitable rooms during the day period (NSW Road Noise Policy, 2011, C10). These targets are elaborated in the NSW guideline document *Development Near Rail Corridors and Busy Roads - Interim Guideline*, 2008. The NSW targets are generally consistent with the *Better Apartments Design Standards* (with the exception that the 6 am to 7 am period is classified as 'night' in the NSW Road Noise Policy – as per our preference and consistent with the time intervals used in the assessment of commercial noiseSEPPs).

Development Near Rail Corridors and Busy Roads - Interim Guideline also provides clear and practical guidance for measuring and reporting. This information is missing from the Victorian policy and guidelines documents for road and rail noise.

1.4 SLR Recommendations

Our office recommends designing to the following levels for road traffic noise:

- 40 dBA Leq,16h [6 am to 10 pm] to all habitable rooms and 35 dBA Leq,8h [10 pm 6 am] in bedrooms, and
- Loudest hour of road traffic noise is not to exceed 45 dBA Leq,1h in habitable rooms from 7 am to 10 pm, and 40 dBA Leq,1h in bedrooms from 10 pm to 7 am the following morning. The basis for the loudest hour targets is AS/NZS2107:2016, with the day and night periods defined in accordance with Victorian EPA legislation and guidelines rather than in accordance with the Better Apartment Design Standards.
- These targets recommended maximum design noise levels should apply to all residential development where there is a reasonable expectation that traffic noise may impact the land (i.e. not just those formally triggered by Clause 58 of the planning scheme).

Reporting should generally be in accordance with NSW guideline document *Development Near Rail Corridors and Busy Roads - Interim Guideline* Appendix D – Acoustic Consultant Reports, Methodology for Testing and Compliance Reporting.

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Commented [YCC3]: Reason for change: consequential change as a result of recommendation 7(b) and 35(c) to ensure consistency with changes made to the Noise Guidelines.

2 Rail Noise

2.1 Background Information

The Victorian Government Passenger Rail Infrastructure Noise Policy, 2013 provides screening levels for rail noise. The Policy is a high level document and it is designed for transport bodies and planning authorities. Where existing rail noise exceeds the threshold levels specific consideration of rail noise is required before the project proceeds. However if the threshold levels are not exceeded, rail noise impacts may still need to be considered as a 'secondary matter'. In the context of a proposed residential development, we understand this to mean that the issue of rail noise should be dealt with by the individual developer and local government.

Until recently there was no government guidance about how to assess rail noise impacts on apartment developments. The Clause 58, Apartment Developments, [objectives and Standard D16 \(and associated Planning Practice Note PPN83\)](#) address both rail and road traffic noise. Standard D16 requires that all apartment developments within 80 m of a passenger line or 135 m of a freight rail line, are designed to internal targets. The design targets to be met are the same as those for road traffic noise: 40 dBA Leq,16h and 35 dBA Leq,8h.

Prior to the release of the Apartment Developments, Standard D16, a common approach has been to assess rail noise to L_{max} targets of 60 dBA in living rooms and either 50 or 55 dBA L_{max} in bedrooms. These design levels broadly align with:

- The minimum acoustic standard (2-3 star) for external noise intrusion provided in the Association of Australasian Acoustical Consultants (AAAC) Guideline for Apartment and Townhouse Acoustic Ratings ([20162017](#))
- Aircraft noise design levels provided in Australian Standard AS 2021:2015 Acoustics – Aircraft noise intrusion – Building siting and construction
- General sleep disturbance criteria provided in the NSW Road Traffic Policy and sleep disturbance studies.

The levels of 60 dBA (living rooms) and 55 dBA (bedrooms) have been accepted at VCAT on some projects, and are cited by acoustical consultants on those grounds.

The use of long term day and night average targets for rail noise, in the Apartment Developments Standard D16 provides a clear standard. There is, however, benefit in also incorporating L_{max} [targets criteria](#) for rail noise for the following reasons:

- Leq is primarily a noise descriptor used to quantify steady or quasi-steady state noise. So this is appropriate for sources such as mechanical plant noise, and reasonably applied to traffic noise which has a fairly regular and consistent noise level. Train noise is not as constant / regular as traffic noise. While there are no trains passing by, the occupant experiences little or no noise, yet while the train passes, there is a short term high noise event which can only be quantified via an L_{max} descriptor; to clarify, the L_{max} is the actual highest level that someone experiences as the train goes past. In contrast, the long term Leq's are not easily related to the actual objective experience of an occupant when the train passes by.
- L_{max} levels are often used to address sleep disturbance [targets](#).

- On suburban rail corridors where there may only be one line in each direction, relatively infrequent trains and no trains during some of the night period, the L_{max} targets criteria become more important and are likely to drive the assessment. If these targets are not in place it is possible for the L_{eq} targets to be met, and rail noise to exceed sleep disturbance L_{max} targets by appreciable amounts.
- Very short term noise events, such as train horns, are not well quantified using long term L_{eq} targets criteria.

It may be of consideration that in the City of Yarra, where all rail lines carry significant numbers of trains, it is less likely that the assessment will be driven by the L_{max} targets criteria.

2.2 Mandatory Requirements

Clause 58, Apartment Developments, objectives and Standard D16 has been incorporated into the planning scheme.

2.3 Other Potentially Useful Standards and Guidelines

The NSW guideline document *Development Near Rail Corridors and Busy Roads - Interim Guideline*, 2008 provides average day and night targets for road and rail noise that are similar to the levels included in Apartment Developments, Standard D16.

2.4 SLR Recommendations

Our office recommends designing to the following levels for road traffic noise:

- Clause 58, Apartment Developments, Standard D16 - 40 dBA L_{eq,16h} (6 am to 10 pm) in habitable rooms and 35 dBA L_{eq,8h} (10 pm to 6 am) in bedrooms, and
- Train and Tram generated L_{max} levels, including horn noise, should not exceed 60 dBA L_{max} in living rooms or 55 dBA L_{max} in bedrooms. L_{max} levels to be achieved for 95% of train pass-by events (a minimum of 20 trains to be measured).

Reporting should generally be in accordance with NSW guideline document *Development Near Rail Corridors and Busy Roads - Interim Guideline* Appendix D – Acoustic consultant Reports, Methodology for Testing and Compliance Reporting.

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3 Rail Vibration – Trains and Trams

3.1 Background Information

In Victoria, there are no guidelines, standards or policies that address transportation vibration impacts.

The only time that vibration assessments are typically undertaken is when a local council perceives there may be a vibration issue and calls up a vibration assessment in a permit condition, or larger scale projects where a Planning Panel or VCAT may require consideration of the issue.

The lack of guidelines and policy leads to enormous variability and inconsistency in addressing vibration in Victoria.

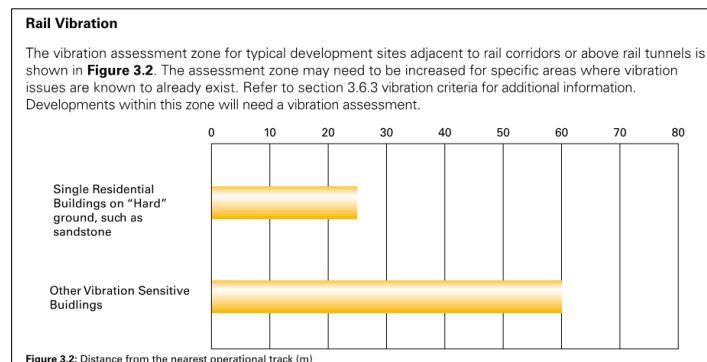
3.2 Other Potentially Useful Standards and Guidelines

NSW has significantly more noise and vibration related planning guidance documents than Victoria does.

Their main planning guideline document relating to new developments is the *Development Near Rail Corridors and Busy Roads – Interim Guideline* (Department of Planning, State Government of NSW, 2008) and provides some guidance on vibration assessment methodology, including a basic preliminary screening process.

Section 3.5.1 of the NSW Interim Guideline provides a basic buffer distance within which a rail vibration assessment should be undertaken, and is reproduced below:

Figure 1 NSW Interim Guideline Rail Vibration Assessment Zones



So from the above any multi-level development within 60 m of a railway line will require a vibration assessment. This is a particularly large assessment zone. It should be noted that this relates to railway lines, not trams (which we discuss further below).

The NSW Interim Guideline does not provide the technical requirements of the assessment; it instead refers to another NSW Technical Guideline; *Assessing Vibration: a technical guideline* (DECC 2006).

The Technical Guideline includes all necessary details of the testing / or prediction of vibration and also provides the assessment targets. The assessment methodology and targets are based on British Standard BS6472 which uses the 'Vibration Dose Value' measurement (VDV) for intermittent vibration assessment.

The VDV is a long term averaged 'dose' based parameter (a little like a long term Leq), and is a relatively new measurement parameter. The equipment used to measure VDV is more advanced than traditional vibration measuring equipment, however, is readily available and most of the larger acoustical consulting firms have the necessary equipment.

The VDV is assessed for the day (16 h) and night (9 hour) with different criteria applicable for each period and for different uses. The following excerpt from the NSW Technical Guideline shows the criteria:

Table 2.4 Acceptable vibration dose values for intermittent vibration (m/s ^{1.75})				
Location	Daytime ¹		Night-time ¹	
	Preferred value	Maximum value	Preferred value	Maximum value
Critical areas ²	0.10	0.20	0.10	0.20
Residences	0.20	0.40	0.13	0.26
Offices, schools, educational institutions and places of worship	0.40	0.80	0.40	0.80
Workshops	0.80	1.60	0.80	1.60

¹ Daytime is 7.00 am to 10.00 pm and night-time is 10.00 pm to 7.00 am.
² Examples include hospital operating theatres and precision laboratories where sensitive operations are occurring. These criteria are only indicative, and there may be a need to assess intermittent values against the continuous or impulsive criteria for critical areas.
Source: BS 6472-1992

It is normally necessary to monitor for at least a 24 hour period to obtain the VDV value (although it is possible to estimate using shorter measurements). There are also some further complicated calculations necessary when the vibration transmits to the upper floors of a building.

One of the most significant issues relating to the assessment is what to do if the criteria are exceeded. There are really only two options – do not build the building in that location, or design in complicated building vibration isolation into the footings. Both are of major concern to any application / developer.

Trams

There is a large gap in knowledge and information on tram vibration impacts, primarily because it has not been considered historically in any assessments.

We have minimal reference data upon which to draw indicative buffer distance triggers, however, from our experience in CoY, it is clear that trams operate in very close proximity to existing and proposed residential / office buildings. In addition, there are many additional variables such as track condition, joint locations in the track, and the speed of pass-bys, that would affect the vibration level in the building.

3.3 SLR Summary and Recommendations

Rail and tram vibration presents one of the most difficult challenges in relation to planning assessments.

There are no Victorian policy or guideline documents, and no precedent for assessing vibration (with many historical and new developments constructed in close proximity to rail with no formal assessment undertaken).

The further complicating issue is that if vibration impacts are found to exceed the British Standard BS 6472 criteria at a particular building, it has drastic implications; either further setback is required, or the building is required to be designed with vibration isolation within the footings – potentially making the development financially not-viable.

Overall, due to the lack of formal guidance in any Victorian policy or guideline and the large extent of variables that can affect a vibration assessment, it is ~~considered that this issues is not specifically addressed at this point in time~~ not considered appropriate for these issues to be addressed in the Yarra Planning Scheme at this time.

4 SEPP N-1 Assessable Commercial NoiseCommercial and Industrial Plant and Equipment Noise

Commercial and industrial noise assessable to [the Victorian EPA Noise limit and assessment protocol for the control of noise from commercial, industrial and trade premises and entertainment venues, Part I: Commercial, industrial and trade premises \(Noise Protocol, Part I\)SEPP N-1](#) is considered in the following section.

4.1 Background Information

This is a critical 'tier one' planning issue from our perspective. Noise from existing commercial and industrial premises to residential developments needs to be addressed to ensure that:

- The [SEPP N-1](#)-compliance status of the business [with the Noise Protocol](#) is not changed by the residential development. If the business is forced into non-compliance by introduction of new noise receptors, it may be required to undertake significant and costly noise control works.
- The amenity of future occupants is addressed.

The main issue with [SEPP N-1 assessable commercial and industrial noise](#) pertains to whether or not the noise should be assessed at the façade of the proposed residential development, or within the residence with windows and doors closed. The latter approach is not strictly in accordance with the [SEPP Noise Protocol](#), which requires noise to be assessed externally unless noise enters the dwelling via a non-openable section of the façade (solid wall, fixed window etc.).

Whereas [SEPP N-1 the Noise Protocol](#) requires commercial noise to be assessed externally, the City of Yarra (and other Councils) has often allowed for an internal assessment location. This is seen as a reasonable amenity compromise in an inner city environment, where insisting on an external assessment location would effectively make many sites impossible to develop.

Our approach has been largely consistent with the City of Yarra's, however we have encouraged the following exceptions / modifications:

- Where commercial noise is to be assessed internally, we recommend that the targets are equal to the lower of:
 - The effective [SEPP N-1 Noise Protocol](#) internal noise limit, taking into consideration any relevant corrections for noise character (corrections for character are required under [SEPP N-1 the Noise Protocol](#)), and
 - The lower end of the original AS/NZS2107:2000 ranges, which was 35 dBA in living rooms and 30-dBA in bedrooms. However, in the 2016 release of AS/NZS2107, the lower end of the allowable ranges for apartments near major roads has increased to 35 dBA in all rooms

4.2 Mandatory Requirements

Compliance with [SEPP N-1 is mandatory](#), [the Noise Protocol is required](#), [atery](#), however strictly speaking the onus of compliance is on the business, rather than the developer.

[The Better Apartments Design Standards](#) / Clause 58, Apartment Developments, Standard D16 ([and associated Planning Practice Note PPN83](#)) also [potentially also](#) applies to commercial noise however the targets provided in this document are generally likely to be less stringent than [SEPP N-1 the Noise Protocol](#) indoor limits.

4.3 Other Potentially Useful Standards and Guidelines

The Association of Australian Acoustical Consultants (AAAC) *Guideline for Acoustical Star Ratings for Apartments and Townhouses* provides indoor design targets for commercial noise. Assuming 'three star' (i.e. average) apartments the targets would be:

- Bedrooms: 35 dBA Leq and 50 dBA Lmax
- Living rooms: 40 dBA Leq and 55 dBA Lmax

4.4 SLR Recommendations

All residential developments should be designed to ensure that existing commercial uses formally comply with [SEPP-N-1the EPA Noise Protocol, Part 1](#) external to the development wherever possible. Where it is demonstrated that external compliance cannot practically be achieved, including treatment of the source of noise in consultation with the commercial operator, an internal assessment may be considered. The following internal targets for commercial / industrial noise (windows closed) are to be met if noise is assessed internally:

- [Noise Protocol, Part 1](#) indoor limits, being the outdoor limits less ~~15-20~~ dB, and
- Not more than 30 dBA Leq in bedrooms and 35 dBA Leq in living rooms, and
- Not more than 45 dBA Lmax in bedrooms and 50 dBA Lmax in living rooms.

In addition to the above, commercial plant and equipment noise levels should not exceed the following levels externally:

- Not more than 10 dBA above any [SEPP-N-1Noise Protocol, Part 1](#) period noise limits, outside any openable windows or doors,
AND
- For balconies and other private open spaces:
 - Not more than 65 dBA during the day
 - Not more than 55 dBA during the evening and night

All assessment methodologies should apply corrections for character in accordance with [SEPP-N-1the Noise Protocol, Part 1](#) procedure.

The above is aimed at providing a reduced risk of complaint from new sensitive receivers in the City of Yarra.
The above does not represent a formal compliance outcome to the requirements of [SEPP-N-1the Noise Protocol](#).

5 Music Noise

The following considers the issue of music noise impacts from existing venues to new dwellings only. The issue of music from proposed new venues to existing dwellings is straightforward one, and need not revisited here. Consistent with the [SEPP N-2 policy, Noise Protocol, Part II](#), all new venues need to comply with [SEPP N-2](#)-external noise limits at existing dwellings.

5.1 Background Information

This is a critical ‘tier one’ planning issue for acoustics, with existing music venues being at risk [of ing of SEPP N-2](#)-non-compliance [with the Noise Protocol, Part II](#) due to residential encroachment. Yarra City Council has, in recent times, adopted an ‘Agent of Change’ approach to new dwellings in the vicinity of existing music venues. This approach is both supported and complicated by the planning scheme amendment [VC183 28/09/2020 Clause 53.06 Live Music and Entertainment Venues \(previously VC120 4 September 2014 Clause 52.43\) – Live Music and Entertainment Noise. Planning Practice Note PPN81 Live Music and Entertainment Noise provides further technical guidance on the planning scheme clause.](#)

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The [amendment clause](#) provides support for the assessment of music to indoor locations. Prior to the amendment, there was no formal recognition that building upgrades to control music noise would protect existing venues from residential encroachment (i.e. upgrades could be adopted, but the assessment location was still formally outdoors).

The issue of music noise impacts to new residential development is complicated by the following

- Clause [52.4353.06](#) applies to live music venues only. Many existing music venues are not live music venues, and these are explicitly excluded from consideration under Clause [52.4353.06](#).
- Clause [52.4353.06](#) only applies to venues within 50 m from a proposed residential development.

The amendment requires new dwellings at which a [SEPP N-2](#)-[music noise](#) excess is established, and which cannot be managed in any other way, to be constructed such that [SEPP N-2](#)-noise limits are met indoors. However the means by which compliance is to be achieved in doors has not, in our opinion, been thought through. A brief outline of the issues is provided below.

5.1.1 [SEPP N-2](#)-Music Noise -Compliance Indoors

[SEPP N-2](#)-[e](#)-[Compliance with the Noise Protocol, Part II](#) is achieved by either designing for a ‘background + margin’ target (as defined in the Policy), or the [SEPP N-2](#) ‘base noise limits’. The issues are that the ‘background + margin’ target can rarely be reached when a dwelling’s façade is upgraded – the same upgrades that control music noise ingress also work to reduce the ambient noise and effectively lower the noise targets.

By contrast, the ‘base noise limits’ are fixed targets. However they are very low, and can in practice be extremely difficult to achieve. Most high performance acoustic glazing, for example, performs poorly in the region of the acoustic spectrum where music noise generally exceeds the base noise limits the most (i.e. in the 63 Hz and 125 Hz octave bands).

The planning practice note provides options for upgrading a noise sensitive dwelling on page 3 of the May 2016 revision, however the options are inadequate in the context of controlling significant levels of bass music noise.

In practice, to achieve compliance [with SEPP N-2](#) indoors when music levels are 10 dB or more above the [SEPP N-2](#)-external limit, the following [approaches would be necessary](#)[methods or combinations of them can be required](#):

- Design the dwelling so that there are no windows or lightweight walls or roof exposed to high levels of music noise. This can represent significant architectural constraints on a site.
- Include wintergardens to all balconies and windows – this is effectively very large cavity double glazing (e.g. 10 mm glass, 1.2 m airgap, 12 mm glass).
- Incorporate controlled noise masking into the design (relying on air conditioning systems to provide masking is not sufficient as the masking noise provided in this way will vary with the weather). The masking should preferably not be controlled or varied by the user.

As the SEPP currently stands we expect consultants to adopt one or more of the above approaches to ensure that music within an apartment does not exceed SEPP N-2 limits.

5.1.2 What Needs to be Done

In our opinion there is still a lot of work to do before Clause [52.4353.06](#) is workable.

Review of [SEPP N-2](#) indoor limits

- Are the base noise limits appropriate for all environments? It may be reasonable to apply higher limits in an inner urban environment and particularly in one that is acknowledged as an entertainment district or on a very busy road.

And specifically with regard to noise making:

- What level of noise masking is acceptable? The masking should not cause occupants discomfort (ideally it should not even be noticed).
- What level of music is acceptable above the noise masking? i.e. should the masking be equal in level to the music, or should the masking be treated as the background noise level, and higher levels of music allowed in accordance with the [SEPP N-2](#) ‘background +’ targets.
- Could ‘user controlled’ masking systems be used? *As the SEPP N-2 legislation currently stands, masking would need to be continuous and centrally controlled if it is part of a solution to ensure compliance with the SEPP Clause 53.06 allows user control of the acoustic environment by permitting noise limits to be met in dwellings with openable windows closed. It could be argued that the same use control could be extended to noise masking-*

The above questions cannot be simply answered, and should ideally be explored in the context of a [wider review of SEPP N-2](#).

5.2 Mandatory Requirements

Compliance with [SEPP N-2](#)the Noise Protocol, Part II is mandatory, however strictly speaking the onus of compliance is on the venue rather than the developer.

Compliance with Clause [52.4353.06](#) is also mandatory, but only for developments within 50 m of a live music venue.

5.3 Other Potentially Useful Standards and Guidelines

Acoustic rating curves (NR, RC or NC) are provided in acoustic literature for quantifying noise intrusion. The curves define acceptable levels of noise in octave measurement bands, not dissimilar to the [SEPP N-2 Noise Protocol](#) octave band night noise limits.

From recent experience on projects incorporating masking for music noise, use of 'Noise Criteria' or NC curves is considered the most appropriate for domestic use.

5.4 SLR Recommendations

~~Until such time that the SEPP is reviewed and updated, we recommend that formal compliance with SEPP N-2 the Noise Protocol, Part II~~ noise limits is demonstrated, using any of the methods described in **Section 5.1.1** of this review. Effectively this means achieving:

- ~~SEPP N-2 bB~~ase noise limits within apartment habitable rooms with doors and windows closed, OR
- ~~SEPP N-2 The Noise Protocol~~ 'background + margin' noise limits with continuous noise masking installed in habitable rooms of all apartments. The masking system should be set to no more than NC20 L₉₀ and the Leq of the masking to no greater than NC20 L₉₀ + 5 dB.
- Where noise masking is used to achieve compliance:
 - The masking system should be designed to enable masking levels in all rooms to be individually controlled.
 - Future occupants are to be informed that compliance with the relevant music noise limits relies on the masking system operating at the pre-determined level.
 - Commissioning testing should be conducted to demonstrate that the masking system meets the above requirements and is deemed acceptable for domestic use by the acoustical consultant.
- Note: Noise masking should not be relied on as the sole measure to address music noise exceedances. If implemented on a project, it should be used in conjunction with other reasonable and practical façade upgrades.
-
- These indoor targets for music noise should be applied to all existing sources of music, not just live music.
- The requirements should be met at apartments-dwellings where any significant music noise impacts are identified, not just due to venues within 50 m of the proposed residential use.

6 Patron Noise – New Outdoor Patron Areas

6.1 Background

SEPP N-1 and SEPP N-2 The Noise Protocol Parts I and II specifically exclude patron noise, but with the significant increase in outdoor patron area applications, there have been major noise issues associated with this source.

While there are still no mandatory requirements for patron noise, there is general acknowledgement that this source of noise needs to be considered in the context of proposed dwellings near existing outdoor patron areas, and in the context of proposed new outdoor patron areas near existing dwellings. New outdoor patron areas are considered in this section.

6.1.1 Noise Targets

As part of any planning application for an outdoor patron area we expect an assessment of patron noise to 'Leq' and Lmax targets. The Leq descriptor quantifies the average level of patron noise over an interval, and is particularly important for outdoor areas that are proposed to accommodate appreciable numbers of people (say more than 10). The Lmax targets are useful for quantifying impacts from smaller outdoor areas, where the steady state noise emissions may be low, or variable, and the most intrusive impacts are due to isolated loud voices.

The following noise criteria are typically used in assessments:

- SEPP N-1 The Noise Protocol, Part I – while the SEPP N-1 policy Noise Protocol does not strictly apply to patron noise, the policy it can nevertheless provide a useful assessment methodology and we find it valuable for quantifying patron noise impacts.
- Background + 5 dB – this is a standard basis for quantifying the intrusiveness of noise. It is a useful assessment tool for patron noise although we have found that the day and evening limits can be impractically low.
- Sleep disturbance targets of 55 dBA L_{max} in bedrooms with windows open (usually assessed as 65 dBA L_{max} externally, outside openable windows).
- Marshall Day in-house targets for patron noise. MDA have developed patron noise targets based on background noise levels plus a variable margin, being:
 - Background + 10 dB during the day and evening period (including weekends)
 - Background + 5 dB at night (after 10 pm)

The MDA approach is generally supported however the following is noted:

- The evening noise target of 'background + 10 dB' can be too high in some circumstances where there is little other ambient noise (for example for dwellings that back onto an outdoor patron area, but are not exposed to general street noise).
- MDA are careful to emphasise that these levels are not 'noise limits', and that modelling or predictions that show targets will be exceeded represent a risk of nuisance rather than grounds for stopping a project from going ahead.
- The MDA approach appears to allow for long term averaging of background levels. This can lead to a misrepresentation of the impact during, for example, the last hour of operation of a venue when background levels in an area are at their minimum.

6.1.2 Predicting Patron Noise Levels

Unless the application is for the expansion of an existing outdoor patron area, patron noise levels need to be predicted to the nearest receivers. The prediction involves two steps:

- Quantification of the amount of noise produced in the outdoor area. This should take into consideration both the level of noise in the outdoor area, the size of the outdoor area and the number of patrons. Ideally the overall noise level should be expressed as a sound power level.
- Prediction of acoustic attenuation or losses, between the outdoor patron area and the receiver location due to distance, shielding and the like. For complicated built environments it can be appropriate to use a 3D computer noise modelling program to predict noise to receiver locations.

There is enormous variability in how acoustical consultants predict patron noise and we have been particularly disturbed by the recent use of patron sound power data derived from restaurants and non-drinking venues to beer garden environments. Most patron noise assessment we review are delayed during the review process due to differences in opinion with regard to the amount of noise produced in outdoor patron areas.

6.2 Mandatory Requirements

There are no mandatory requirements for patron noise.

6.3 Other Potentially Useful Standards and Guidelines

None.

6.4 SLR Recommendations

Regarding noise limits, or targets for patron noise, we support the following:

- [SEPP N-1Noise Protocol, Part I](#)
OR
 - [MDA-Background](#) based assessment approach of:
 - 'night' targets (background + 5 dB)
 - 'evening' and 'day' targets (background + 10 dB) where they can be demonstrated to be reasonable, and where they align with the [SEPP N-1Noise Protocol](#) definition of evening (that is including [Saturday afternoon and all day Sunday daytimes](#)).
 - Background levels to be based on the minimum 15 minute to 1 hour interval and conducted during a time that is representative of potential worst case noise impacts (long term averaging of background levels is not appropriate).
- AND
- Sleep disturbance targets of 55 dBA Lmax in bedrooms with windows open (65 dBA Lmax externally, outside openable windows).

7 Patron Noise – New Residential Development Near Existing Outdoor Patron Areas

7.1 Background

The issue of existing noise from outdoor patrons areas to new developments should be assessed in any planning application to protect future residents from noise. Due to the fact that there are no mandatory requirements for patron noise, we are generally comfortable with the developer designing to meet appropriate patron noise targets indoors with windows closed. Some consideration should also be given to patron noise to balconies.

7.1.1 Noise Targets

Our approach to date has been to require patron noise to be designed to meet the ‘satisfactory’ levels provided in AS/NZS2107:2000. These were 35 dBA in living rooms and 30 dBA in bedrooms near major roads. The recently reissued version of the Standard proposes higher minimum noise levels in bedrooms (35 dBA). In our opinion these are not appropriate for voice noise and we recommend adoption of the 30 dBA target in bedrooms which also aligns with the WHO recommendations for sleep disturbance during the night (WHO 1996). Patron noise is a very distinctive, potentially annoying and variable noise source. Patron noise levels equal to 35 dBA Leq will include frequent levels of over 40 dBA Lmax, which we believe are unacceptable in sleeping areas.

With regard to acceptable patron noise levels to balconies, this is a complicated issue given that:

- By adopting indoor targets we are effectively accepting high levels of noise externally, and in many cases these will occur on balconies
- It can be difficult to avoid having balconies overlooking the noise source (many apartment developments only have one external façade).
- Unavoidably high levels of noise on balconies can occur in the context of road traffic noise.
- Patron noise levels on balconies above 60-65 dBA Leq would, in our opinion make the outdoor space unusable for most residents
- Options for controlling noise to balconies are limited to:
 - Wintergardens (high level of control but effectively an enclosed space), OR
 - Solid balcony balustrades in combination with sound absorption to the underside of the balcony ceiling (small reduction in noise level to seated position on balcony).

7.1.2 Predicting Patron Noise Levels

Patron noise from existing venues should ideally be measured at a location representative of the most exposed new dwelling. Where this is not practical, for example where a proposed multi-level residential development will overlook an existing outdoor area, it may be necessary to predict patron noise to the new façade. The predictions should, however, still take into consideration the actual patron noise levels at the venue during worst case operating conditions. This may involve monitoring noise over a busy weekend period, with a logger located above the outdoor patron area. In our opinion it is not appropriate to use theoretical patron noise data to predict patron levels from an existing outdoor area

7.2 Mandatory Requirements

None.

7.3 Other Potentially Useful Standards and Guidelines

The *Better Apartments Design Standards, 2016* provides indoor targets of 40 L_{Aeq,16h} and 35 L_{Aeq,8h}. As indicated above, we believe these are too high for patron noise. The long term averaging component (16h and 8h) is also not relevant. To provide for a reasonable level of amenity we would expect patron noise to meet the nominated targets at all times, not just over a long averaged period.

The [SEPP N-1 Noise Protocol](#) effective indoor limits (external [SEPP N-1](#) noise limit less [15-20 dB](#)) can be used as indoor targets for patron noise however there is a risk that the resultant limits will be unreasonably high in some instances.

7.4 SLR Recommendations

We recommend that new residential developments exposed to noise from outdoor patron areas be designed to achieve the following [internal](#) targets:

- 35 L_{Aeq,30mins-15mins} in [living rooms](#)/[habitable rooms](#)
- 30 L_{Aeq,30-15 mins} in bedrooms [at night](#)
- 45 dBA, L_{max} in bedrooms at night
- [60-65 L_{Aeq,30-15 mins}](#) to balconies, 1.2 m high ([We are still considering exact target for this issue](#))

Noise from existing outdoor patron areas should be measured in order to quantify the worst case impacts to the subject site. Where measurements cannot be undertaken at a location representative of the proposed new receptors, they should be made closer to the venue. The measured levels should be adjusted for the size of the outdoor patron area, and for the distance to the development façade.

8 Noise from Apartment Developments to Existing Dwellings

8.1 SEPP N-1 Noise Protocol, Part I Assessable Noise

Communal mechanical plant, car stackers, carpark entrance gates and the like are required to comply with SEPP N-1the Noise Protocol, Part I at existing and proposed dwellings.

In our opinion as much advice as practical should be provided by the consultant at the planning stage, particularly with regard to items that have structural implications for the project, such as carpark entrance doors and car stackers. Effective control of noise and vibration can for example, require full enclosure of the carpark and/or setdowns to accommodate vibration isolation mounts.

Noise from mechanical plant cannot usually be fully addressed during the planning stage because equipment is rarely specified at this time, and equipment location may not be finalised. On larger projects, where an acoustical consultant is retained during the detailed design, it is reasonable for the consultant to state that these issues will be addressed during the detailed design.

On smaller projects, where it is unlikely that a consultant will be retained after the planning phase, we recommend that more guidance be provided for achieving SEPP N-1 compliance. This could entail providing a maximum overall sound power level for any mechanical plant proposed to be installed on a roof top plant deck, and / or maximum ratings for air conditioning condenser units.

8.2 Sleep Disturbance

Noise from operation of carpark equipment should also be designed to comply with sleep disturbance targets outside openable windows of nearby dwellings. Noise levels should not be in excess of 65 dBA L_{max}.

8.3 Apartment Common Areas

There are no mandatory limits for voice noise from apartment common areas such as communal decks, gardens, pools and spas. In our opinion these should be assessed similarly to any other patron noise (see **Section 6** of this document).

9 Noise from Apartment Common Areas to Apartments within the Development

Noise to apartments from common areas within and outside the development buildings has the potential to cause nuisance. We consider this a 'second tier' planning issue because, theoretically, any issues due to noise within the development can be addressed in the future by the Body Corporate. However, it is preferable to address these items during the planning stage particularly as they can be costly and difficult to rectify post construction.

The following is a summary of the relevant potential impacts. City of Yarra should consider if their planning documents should require assessment of these '2nd tier' issues.

9.1 Communal outdoor areas, including decks, outdoor pools, gardens, carpark entrance etc.

Facade upgrades should be provided to apartments within the development that are potentially impacted by noise from voice and vehicles in communal outdoor areas. From our perspective moderate glazing upgrades, as opposed to a full patron noise assessment, are appropriate in the context of outdoor communal areas. If, after reasonable upgrades, occupants are still annoyed by voice noise, the Body Corporate should manage impacts through restricted access to the communal facilities.

Appropriate moderate upgrades may include, for example, calling up double glazing comprising 10.38 mm thick laminated glass, 12 mm airgap, 6 mm glass to the most affected windows.

9.2 Communal enclosed areas, including cinemas, gyms, indoor pools etc.

The main issue with regard to gyms and pools is vibration and structure-borne noise due to running machines, free weights, and weight machines.

The degree of vibration control appropriate for a development will depend on the size of the gym, the proximity of the closest apartments, and the equipment proposed for use. For small gyms, it may be sufficient to install a 50 mm thick dense rubber matt throughout the gym and to restrict the use of free weights and running machines. For more elaborate gyms a full acoustic floating floor may be required.

9.3 Noise transfer between apartments via lightwells

Noise transfer between apartments that share a lightwell should be addressed in the acoustic report as this issue is not covered under the National Construction Code (NCC).

Noise transfer can be a particular problem in instances where the lightwell is enclosed on all sides, as the ambient noise within the lightwell is low, and sound attenuation within the lightwell is minimal. Sound emanating from one apartment (which may have their windows open) will reflect off the walls and windows of the lightwell, potentially causing nuisance to other occupants.

There are two basic scenarios:

- a. Lightwells that contain non-openable windows to habitable rooms, and openable windows to bathrooms / toilets only
- b. Lightwells that have openable window from habitable room.

Scenario A is not a major concern, because, provided reasonable well sealed glazing is fitted to all windows of habitable rooms, noise between apartments will typically travel through two widely spaced panes of glass. We recommend that glazing to habitable rooms in this situation be not less than $R_w = 30$ dB (eg. 6 mm thick glass to windows of all habitable rooms onto the lightwell).

Scenario B is the greater concern because the noise generating apartment may have their window open. In that instance, there is only one window separating affected apartments from the noise source. We recommend glazing to habitable rooms be rated not less than $R_w = 38$ dB in this situation (e.g. double glazing comprising 10.38 mm thick laminated glass, 12 mm airgap, 6 mm glass).

The above advice will not be optimum for all situations – very large lightwells or light courts, for example, may be less critical because more sound attenuation will take place between apartments. A lesser upgrade would be reasonable in these areas.

9.4 Carpark entrance gates and car stackers

These items are potential sources of airborne noise, structure-borne noise and vibration.

Noise

Carpark entrance gates and carstackers need to comply with [SEPP N-1the Noise Protocol, Part 1](#) effective indoor limits within apartments and should also be designed to achieve appropriate L_{max} levels indoors for sleep disturbance and general annoyance.

The [SEPP N-1Noise Protocol](#) assessment should take into consideration typical frequency of use during various times of day and night; the duration of the event, and any relevant corrections for impulse, tonality and intermittency. In our measurements of car stackers we have found that a 5 dB impulsive correction always applies; a 2 dB correction for tonality is often appropriate and intermittency corrections apply to the day and evening periods.

Regarding sleep disturbance, as a minimum, we recommend that the AAAC internal targets for L_{max} levels in three star apartments are met with windows closed (40 dBA L_{max} in living rooms and 35 dBA L_{max} in bedrooms). Lower noise levels should be targeted by the developer if they classify the apartment as moderately high to high quality.

Controls to apartments potentially affected by noise from the carpark typically include glazing upgrades and / or floor ceiling upgrades (particularly for lightweight/non-masonry floor construction).

Structure-borne Sound and Vibration

Car stackers and carpark entrance gates should be vibration isolated to ensure that the noise targets are met in potentially affected apartments.

10 AAAC Guideline for Acoustical Star Ratings for Apartments and Townhouses

SLR have often advised on the use of the AAAC Acoustic Star Rating design targets because these address many sources of noise in apartments that are not always captured or assessable under existing guidelines, standards and policies.

The AAAC recommended indoor targets for internal and external noise, and for discrete events (quantified using the 'Lmax' acoustical descriptor) and steady state noise are provided in the sections below. We have generally advised targeting for not less than 3 stars in City of Yarra reports. If a development is advertised as moderately high to high quality, a higher star rating should be targeted by the developer.

These targets are a useful fall-back for many sources of noise, however we do not recommend using them for:

- Noise from existing outdoor patron areas - the Guideline would result in targets of 35 dBA Leq in bedrooms and 40 dBA Leq in living rooms, which is too high for patron noise.

10.1 External noise intrusion

Examples of external Lmax sources of noise include: individual truck pass-bys, crashing and banging due to deliveries or rubbish collection.

Table 1 External Noise Intrusion Design Targets Levels (AAAC Star Rating Guide), Lmax levels

External noise intrusion	2 star	3 Star	4 Star	5 Star	6 Star
Bedrooms	50	50	45	40	35
Other habitable rooms	55	55	50	45	40

Table 2 External Noise Intrusion Design Targets Levels (AAAC Star Rating Guide), Leq day and night levels

External noise intrusion	2 star	3 Star	4 Star	5 Star	6 Star
Bedrooms	36	35	32	30	27
Other habitable rooms	41	40	35	30	27

10.2 Internal Noise Intrusion

Examples of internal Lmax sources of noise include: mechanical plant and equipment serving the building or commercial tenancies and hydraulic noise.

Table 3 Internal Noise Intrusion Design Targets (AAAC Star Rating Guide), Lmax day and night levels

Internal noise intrusion	2 star	3 Star	4 Star	5 Star	6 Star
Bedrooms	45	40	35	30	27

Internal noise intrusion	2 star	3 Star	4 Star	5 Star	6 Star
Other habitable rooms	55	45	40	35	32

Examples of internal Leq sources of noise include: mechanical plant and equipment serving the building or commercial tenancies and hydraulic noise.

A decibel penalty should be added to the measured noise level where the source is deemed to include annoying characteristics. Penalties are typically equal to +2 dB for just audible characteristics, and +5 dB for clearly audible characteristics

Table 4 Internal Noise Intrusion Design Targets (AAAC Star Rating Guide), Leq day and night levels

Internal noise intrusion	2 star	3 Star	4 Star	5 Star	6 Star
Bedrooms	36	35	32	30	27
Other habitable rooms	41	40	35	30	27

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Parap NT 0820
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F: +61 8 9370 0101

GOLD COAST

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Varsity Lakes QLD 4227
Australia
M: +61 438 763 516

MACKAY

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Australia
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MELBOURNE

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Hawthorn VIC 3122
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NEWCASTLE

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Australia
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PERTH

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Perth WA 6000
Australia
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Lane Cove NSW 2066
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Townsville QLD 4810
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TOWNSVILLE SOUTH

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Townsville South QLD 4810
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T: +61 7 4772 6500

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UoW Innovation Campus
North Wollongong NSW 2500
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T: +61 404 939 922

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NELSON

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Richmond, Nelson 7020
New Zealand
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CITY OF YARRA

Database of Heritage Significant Areas

April 2022~~July 2021~~

Commented [YCC1]: Reason for change: Reason for change: Panel recommendation 34 supported by officers.

Formerly

'Appendix 8 - City of Yarra review of Heritage Overlay Areas, Graeme Butler and Associates (2007)'



City of Yarra - Database of Heritage Significant Areas

The following is an extract from the City of Yarra Heritage Database listing the heritage status of properties within each Heritage Overlay. As requested by the City of Yarra, the table is arranged in heritage overlay number order and then address order within that group. Victorian Heritage Register (VHR) properties have a second listing within Heritage Overlay Areas as recognition of their contribution to each area.

Data fields in City of Yarra Heritage Database extract

Name

Typically as place type only i.e. *Shop and Residence*, if not a house/residence or with no known historical name

Address

Street name and number, suburb

City of Yarra property number

The current City of Yarra Property number

Significance

(From given range as below)

Significance	Definition
Unknown	Insufficient data to allow an assessment from the public domain.
Not Contributory	<u>The place does not contribute to the heritage precinct or building. Not contributory to the identified cultural values of the heritage overlay area as stated in the Statement of Significance.</u>
Contributory	<u>A place or part of a place that contributes to the heritage-significance of a precinct. It could include: a building or group of buildings, a landscape, paving and/or parts of a building such as chimneys, verandahs, wall openings and rooflines. Contributory to the identified cultural values of the heritage overlay area as stated in the Statement of Significance.</u>
Individually Significant	<u>The place is a heritage place in its own right. Where an individually significant place is also part of a broader heritage precinct, the individually significant place is also contributory to the broader precinct. A heritage place in its own right. Where an individually significant place is part of a broader heritage precinct, the individually significant place may also be contributory to the broader precinct.</u>
Victorian Heritage Register	<u>Or included in the Victorian Heritage Register (VHR) as aesthetically, archaeologically, architecturally, culturally, historically, scientifically, and/or social significant at the State level, and contributory or complementary to the Heritage Overlay Area.</u>

Date range

Estimated primary creation date of typically publicly visible fabric only.