

## 5. Managing Development

# 5.1 Introduction

A consistent, corridor approach to managing the impact of built form and vegetation removal is critical to long term protection of the Yarra River.

## Overview

This chapter draws from the research and analysis of earlier chapters to provide study-wide recommendations to strengthen the management of development within the landscape corridor of the Yarra River.

This chapter includes:

- An outline of the segments within the river corridor which help define the spatial extent for where strengthened planning controls may be applied.
- Recommended planning controls for consistent application throughout the Yarra River corridor.
- The general form and content that will inform the development of new and/or amended planning controls.
- Criteria for determining locally tailored mandatory height and setback requirements.

Chapter 6 'Recommendations' provides area specific detail outlining how the above is applied within respective planning schemes. Municipal Toolkits provide a summary of recommendations for each planning scheme and include the detailed analysis of each area where mandatory planning controls are proposed.

## Areas Recommended for Management

An overview of the general area recommended for improved management via strengthened planning controls is shown on the map on the following page.

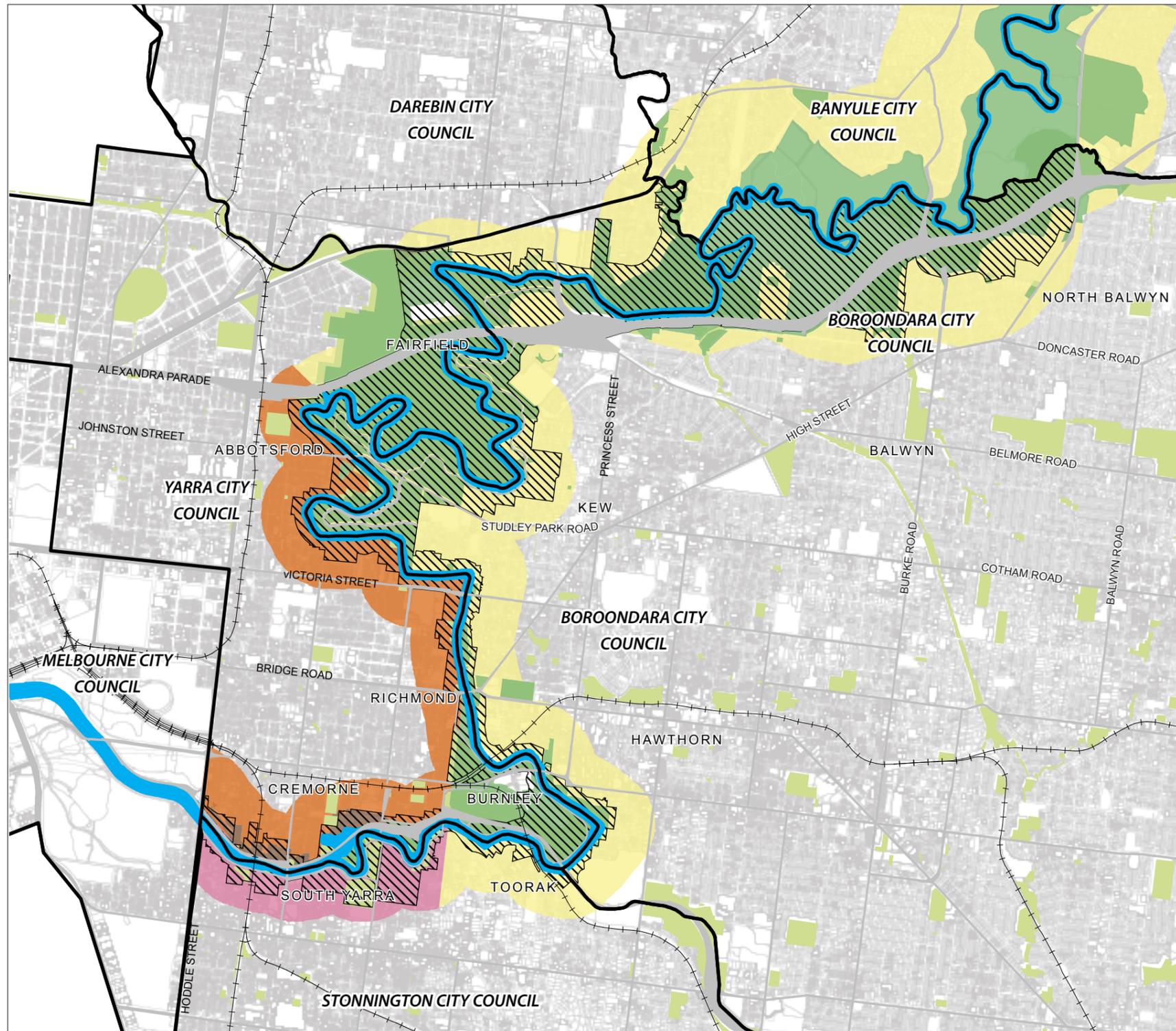
These areas comprise the following landscape segments (which are explained in detail in section 5.2):

1. The "Waterway Corridor" which comprises the river's immediate natural environment;
2. The "River Experience Corridor" encompassing the places where the river can be experienced from its banks and trails; and
3. The "Landscape Setting Corridor" taking in the wider landscape setting beyond, in some locations.

## Recommended Planning Control Approach

The following planning controls are recommended to be applied within the Lower Yarra Corridor:

- Council to consider updating the Municipal Strategic Statement (MSS) to include the content and outcomes of this study as part of a future review of the Local Planning Policy Framework.
- Apply the Design and Development Overlay (DDO) to private land adjacent to, or within close proximity to, the Yarra River, establishing mandatory building heights and setbacks from the river's edge, as well as other detailed discretionary design requirements.
- Apply the Significant Landscape Overlay (SLO) to land adjoining the river, to capture an area approximate to the recommended area of management, establishing consistent landscape, vegetation and other management requirements.
- Include a requirement within the proposed DDO or SLO for Melbourne Water to be the 'Recommending referral authority' for limited classes of development applications within a prescribed distance of the Yarra River.
- Consider the application of the Incorporated Plan Overlay (IPO) or the Development Plan Overlay (DPO) to public land or major development sites, requiring the completion of a master plan prior to approving new development.



**LEGEND**

-  Local Government Boundaries
-  Yarra River
-  Recommended Area of Management

**Character Types**

-  Leafy Suburban
-  Urban Residential
-  Parklands and Recreation
-  Current & Ex-Industrial
-  Motorway



LOWER YARRA RIVER CORRIDOR STUDY  
**RIVER INTERFACE CHARACTER TYPES**

## 5.2 Defining River Corridor Areas for Planning

### Overview

Areas recommended for strengthened planning control management within the Lower Yarra River corridor have been determined based on an assessment of their relationship to the river corridor segments of the Waterway Corridor, River Experience Corridor or Landscape Setting Corridor, shown in Figure 1, below.

Detailed cross-sectional diagrams (Chapter 6) have been prepared in different locations to explore the relationship of the topography, existing development, vegetation cover and other characteristics within the river's immediate and wider landscape to inform the application of planning controls.

This analysis helps to understand how the river and its surrounding landscape vary along its course, at different distances from the river, and what management strategies might be required to achieve the vision and objectives for the study area.

### Waterway Corridor

The Waterway Corridor comprises the river itself, its banks and the immediate environment.

The direct river frontage is dominated by a naturalistic vegetation cover appropriate to a riverine environment, whether or not it is strictly 'natural' in the sense of being indigenous and self-seeded. The riverbanks, with their tree cover and understorey vegetation, frame and enclose the waterway to the extent that, when canoeing down the river, a sense of remoteness from urban activities can be achieved. Maintaining this vegetated corridor has been, and should remain, a prime objective of land management throughout the corridor.

For the length of the Waterway Corridor, State policy requires a vegetated buffer zone of 30 metres to be provided along each side of the river, which is outlined in Clause 12.05 'Yarra River Protection' and Clause 14.02-1 'Catchment planning & management' of the State Planning Policy Framework. Other policies and controls are also in place to protect the river's landscape and environmental values, discussed further in Section 5.4. A coordinated approach to the management of the Waterway Corridor is required in the future, including the setting of mandatory building setback and height controls.

### River Experience Corridor

The River Experience Corridor comprises the fore- and middle-ground landscape that is viewed or experienced from the river, the Main Yarra trail and the adjoining parklands.

The viewsheds of the Main Yarra and Capital City Trails is particularly important because of the popularity of walking or cycling along the river. It differs from the waterway view shed to the extent that the trail is located at varying distances from the river with the river itself often not visible from the trail.

Because the experience of moving along the river and the trail is dynamic, the viewshed also is dynamic. At some locations on the trail, foreground vegetation obscures the horizon; at others there are open views. Even where this wider landscape is mostly obscured by foreground vegetation, progressive and intermittent glimpses of the wider landscape can be obtained from the trail. A photograph from a static viewpoint 'proving' that something is not visible behind the trees can be misleading in this respect.

When walking or cycling along the trail, or visiting the many areas of parkland, the experience is generally one of a naturalistically vegetated corridor. The success of this experience rests on the extent to which one feels enveloped in a continuous corridor of vegetation, a retreat from the hard surfaces and bustle of urban life. In reality, urban activity and development are often closer than one might expect, and urban reality breaks into the experience from time-to-time, such as when a major road crosses the corridor along its journey.

Clause 12.05, 'Yarra River Protection', acknowledges the need to protect the intrinsic value of the river's naturalistic setting, the importance of this environment in preserving the river's sense of place and landscape identity, and its recreational and environmental values. The Policy requires visual intrusion of built form within the river's environment to be minimised.

A key challenge of this study has been to document the qualities of the River Experience Corridor, and to propose measures that will protect and strengthen them. A number of management measures, such as setback lines, maximum building heights, vegetation protection, and siting and design guidance are needed to achieve this.

Currently, a range of discretionary or mandatory statutory controls relate to the River Experience Corridor, or in some locations, none at all. A coordinated consistent approach to planning control management across the River Experience Corridor is required, which should also include mandatory controls elements.

### Landscape Setting Corridor

The Landscape Setting Corridor comprises the wider setting of the river corridor, defined by the ridgelines or skyline at the extremity of the viewshed and beyond.

In simple terms this refers to the horizon visible from the Main Yarra and Capital City trails, adjoining parklands or the Yarra River itself. Where the horizon is close in (up to 300-500m), it is likely also to be the edge of the River Experience Corridor. In some areas the horizon is part of Melbourne's developed suburban area, in others it is public land.

Within the Lower Yarra context, the Landscape Setting Corridor varies significantly. In some locations it is defined by well vegetated parklands or leafy suburban areas with a strong presence of tree cover. This includes areas such as Fairfield, Kew, Hawthorn and Toorak.

In other locations, the river's wider Landscape Setting Corridor is defined by the dense urban form of inner Melbourne. Long range views from elevated locations on the eastern and southern side of the river are afforded across the densely urbanised context of Richmond and Cremorne, through to the Melbourne CBD on the horizon. South Yarra on the southern banks is also a densely urbanised context for the river, within a strongly vegetated setting.

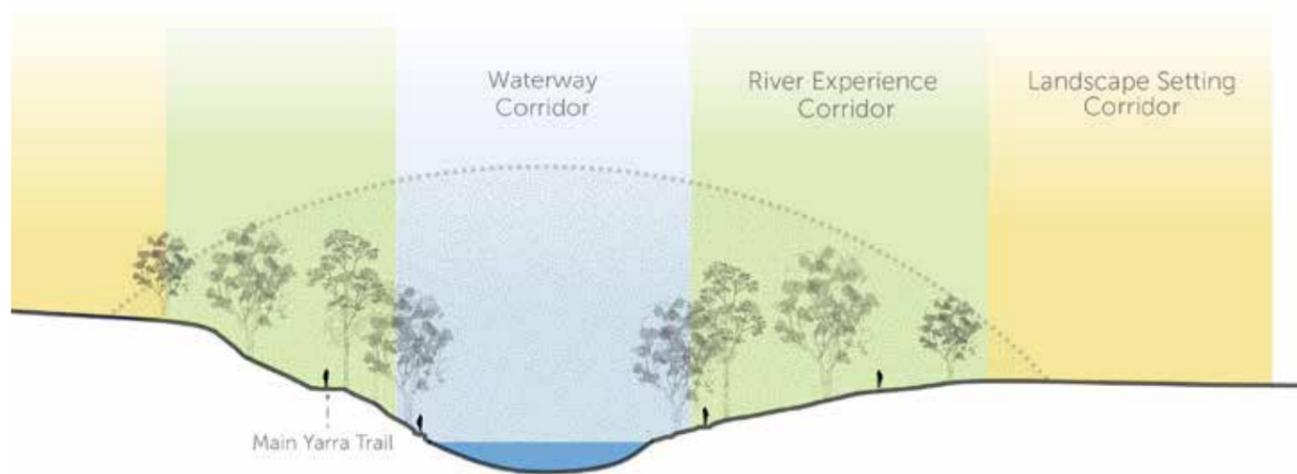


Figure 1: River Corridor Areas

## 5.3 Applying Consistent Overlay Controls

The Victorian Planning Provisions offer a number of options for statutory implementation. The findings of this study will be implemented through a suite of overlay controls that manage built form, landscape and environmental values.

### Overview

The management of built form and its interaction with the landscape characteristics and values of the Yarra River reside in the application of appropriate 'overlay' controls within various planning schemes. The operation of these overlay controls need to work with the existing land use zones.

An analysis of existing planning controls has been undertaken across the Lower Yarra segment (Richmond to Fairfield) and the Middle Yarra segment (Ivanhoe to Warrandyte) to inform consideration of how consistent planning controls could be applied for the entire Yarra River corridor.

The following is an overview of planning controls within the Lower Yarra River corridor and the recommended provisions to address identified gaps.

### Existing Zones and Overlays

An overview of the three planning schemes in the Lower Yarra study area, outlining the application of zone and overlay controls within each municipality, is detailed in **Appendix A**, and illustrated in map form in **Appendix B**.

### Zones

Throughout the study area, a variety of land use planning zones apply to the Yarra River corridor.

The Public Park and Recreation Zone (PPRZ) and the Public Conservation and Resource Zone (PCRZ) are generally used for a variety of Crown land reservations throughout the corridor.

Private land within the corridor is included in a range of zones, reflecting the complex land use patterns of the study area.

Residential areas are included within the Neighbourhood Residential, General Residential and Residential Growth Zones, depending on the degree of change designated in each location. Residential areas are mostly found in the northeastern, eastern and southern parts of the study area.

The western part of the study area comprises mostly Commercial or Industrial zoned land. There are also several large sites that are included within the Priority Development or Special Use Zones.

Recent changes introduced via new format residential zones has broadened the ability for a Planning Authority to vary a number of ResCode standards to suit the design requirements of a particular area, including controls on building height, setbacks, site coverage, permeability and landscaping. Within the General and Neighbourhood Residential Zones, these can be expressed as mandatory requirements.

The Neighbourhood Residential Zone also allows for a minimum lot size and maximum number of dwellings per lot to be set.

The application of detailed requirements through Residential Zone schedules has assisted in managing development pressures within the river's residential backdrop. Large areas within the River Experience and Landscape Setting Corridors are subject to mandatory maximum building heights of between 8m-10m through the residential zone schedules.

Commercial and Industrial Zones do not apply specific design requirements that relate to management of the river's landscape.

### Overlay Controls

The river corridor's natural environment, which encompasses its landscape, topography and vegetation, is currently protected through a mixture of overlay controls. The following are specific to the Yarra River and its immediate environs:

City of Yarra

- Design and Development Overlay (DDO1) 'Yarra River Corridor Protection', inclusive of Merri & Darebin Creeks
- Environmental Significance Overlay (ESO1) 'Yarra River Environs'

City of Stonnington

- Design and Development Overlay (DDO3) 'Yarra River Skyline Area'
- Significant Landscape Overlay (SLO1) 'Yarra River and Valley Streamside Environment Area'

City of Boroondara

- Design and Development Overlay (DDO31) 'Yarra River Corridor Protection'
- Significant Landscape Overlay (SLO2) 'Yarra Valley Significant Landscape Area'
- Environmental Significance Overlay (ESO1) 'Yarra River Corridor Protection'

These controls also interact with a range of other planning controls which manage separate development issues, including:

- protecting heritage values
- managing the impact of floods
- specific development requirements for large strategic sites
- broad scale vegetation and biodiversity protection.

### Control Gaps

The different DDO, ESO and SLO controls across the three council areas of the Lower Yarra present a varying set of objectives, permit triggers and decision guidelines. This has the potential to lead to inconsistent outcomes within the corridor.

Consistent planning controls are required across the corridor to achieve a holistic approach to managing development within the river's landscape, as envisaged by this study.

As Melbourne continues to grow, ongoing development pressure will be placed on land within the Lower Yarra River corridor. This study recommends stronger and more consistent built form controls be applied now, to avert the potential for inappropriate development to occur in the future.

### ESO or SLO

The question of which is the most appropriate planning scheme tool - the Significant Landscape Overlay (SLO) or the Environmental Significance Overlay (ESO) - has been a point of discussion for some time.

The primary purpose of applying either overlay control relates to the need to protect the appearance of the landscape and maintain its environmental integrity, both of which have vegetation management as their focus.

Planning Practice Note No.7 'Vegetation Protection in Urban Areas' provides some direction on the application of both the ESO and the SLO. Practice Note No.7 suggests the application of the ESO and SLO within the following circumstances related to vegetation protection:

- Where there are environmental constraints on development, or where other important ecological values are identified such as coastal or riparian habitat, the use of an ESO may be appropriate. This overlay is usually applied if vegetation protection is part of a wider objective to protect the environmental significance of an area.
- The ESO may contain requirements for the construction of buildings and the carrying out of works as well as fence construction. It can also include requirements for subdivision and exemptions for the removal of vegetation.
- Where there is a need to identify, conserve and enhance the character of significant landscapes, the SLO may be used to protect vegetation in terms of its aesthetic or visual importance in the broader landscape and where vegetation is identified as an important contributor to the character of an area.
- The SLO may contain requirements for the construction of buildings and the carrying out of works as well as fence construction. A schedule must specify a permit requirement for the removal of vegetation.

## Mandatory or Discretionary Provisions

Planning Practice Note 59 (June 2015) supports the use and application of mandatory provisions where there may be strong heritage value, character themes or a sensitive environmental location that require protection from inappropriate development and certainty of outcome through the setting mandatory requirements.

To this point, planning controls that have been applied through the different planning schemes within the river corridor between Richmond and Warrandyte have been general and discretionary in form, aimed at achieving appropriate development outcomes at a site by site basis on merit.

Over time the generic nature of these discretionary requirements has led to a number of negative outcomes with development encroaching on the Yarra River and its environs. The impact of this encroachment is most evident within the Richmond to Fairfield segment of the Yarra River corridor.

There are numerous instances of inappropriate development within the Lower Yarra River corridor, the potential future threat remains that this may continue while these inconsistent and discretionary DDO/ESO/SLO controls continue to apply.

This study proposes the introduction of targeted mandatory controls to ensure that the highly valued natural landscape and environment features of the Yarra River corridor are retained for the benefit of all Melbournians, now and into the future. It is proposed that the following built form aspects be set as mandatory provisions:

- overshadowing by new development of the banks and waters of the Yarra River;
- setting of maximum building heights for a given area measured from natural ground level; and
- setting a minimum building setback line from the Yarra River.

The above mandatory requirements should be consistently represented and applied throughout the corridor. These will be complemented by discretionary requirements that relate to the appearance of buildings and works within the viewshed of the Yarra River. This will provide clarity and certainty at the river's edge, while allowing for a performance based approach for built form outcomes in its broader landscape setting.

These aspects, in addition to protecting vegetation, and other matters such as careful management of the impacts of landscaping or earthworks, are key to ensuring the long term protection of today's landscape values within the Yarra River corridor.

## Recommended Planning Controls

### Principles for Applying New Controls

In reviewing and recommending changes to the application of planning controls across the entire study area, the following principles have been used:

- Controls should focus on the holistic protection of landscape values and the broader environmental values that have been identified in this and past studies.
- Controls should be based on managing development outcomes within the existing, underlying land use zone context.
- Content of controls should provide clear direction for development by including carefully crafted objectives, permit requirements and decision guidelines.
- Controls should be able to be applied consistently across all planning schemes to ensure the protection of overarching Yarra River values.
- Controls should present clear and consistent mandatory elements that are definable and measurable, and allow sufficient scope for other discretionary, performance based built form outcomes where appropriate.
- Controls should be able to be tailored to respond to the different local landscape characteristics and their interface with existing developed areas.
- Any tailoring of planning controls should be limited and not undermine the overall strategic intent or create inconsistency with broader planning control application.

### Significant Landscape Overlay

The SLO is the preferred planning scheme tool to be applied to protect the broad landscape values of the Yarra River corridor.

The SLO is preferred over the ESO as it primarily designed to manage holistic landscape values and significance by protecting vegetation and guiding built form outcomes within significant landscapes – a core element of this study.

The SLO allows for a tailored statement of landscape significance to be included which sets out the values of the landscape. This is supported by clear objectives and decision guidelines, which are discretionary, to guide appropriate development outcomes across a broad area that includes both private and public land.

The SLO should be applied from the centreline of the Yarra River with its landward extent (ranging from around 100m to 400m).

The SLO will work to complement the application of the proposed DDO which will contain mandatory requirements and

provide greater certainty and direction for development of private land within close proximity to the Yarra River.

With regard to existing planning controls within relevant planning schemes, it is proposed that:

- Boroondara ESO1 is combined with SLO2 and converted to a new SLO control.
- Yarra ESO1 is converted to a new SLO control.
- Stonnington SLO1 is extended to include the recommended area of management and converted to the new schedule.

The proposed SLO control should be consistent across all three municipal planning schemes and provide local tailoring where appropriate within the 'Statement of nature and key elements of landscape' and the 'Landscape character objectives to be achieved'.

### Design and Development Overlay

The Design and Development Overlay (DDO) is the preferred planning scheme tool to be applied to specific areas of private land located within the 'Waterway Corridor' and 'River Experience Corridor' areas defined by this study.

The DDO control boundaries have been determined on an area by area basis with detailed assessment of the landscape characteristics and its susceptibility to being impacted by development. The details for each DDO area are contained within the municipal toolkits.

The DDO provides a high degree of flexibility in setting desired built form outcomes, in particular, establishing the maximum building height and minimum setback from the river's edge, expressed as mandatory requirements. As the DDO cannot manage landscape, environmental and vegetation matters it is to be used in tandem with the SLO.

As a general rule, the DDO has not been applied to areas of public land as this study has not undertaken a detailed analysis of current and/or potential development opportunities to support the justification for mandatory planning provisions.

In a limited number of situations, the proposed DDO has been applied to areas of public land for the following reasons:

- Where public land forms a small spatial buffer between the Yarra River and private land;
- Where it helps clarify the spatial intent and application of the DDO; and
- Where ownership of land is in question and is zoned within a public zone.

## Incorporated / Development Plan Overlay

In instances where significant development of an area, or development on public land is proposed, this study recommends that a Master Plan be prepared and implemented into a relevant planning scheme via either an Incorporated Plan Overlay (IPO) or a Development Plan Overlay (DPO), to complement existing controls.

The IPO and DPO are flexible tools that can be used to implement a plan to guide the future use and development of land identified in a strategic document. The IPO and DPO have two key purposes:

- to identify areas that require the planning of future land use or development to be shown on a plan before a permit can be granted; and
- to exempt a planning permit application from notice and review if it is generally in accordance with an approved plan.

An amendment to the relevant planning scheme would be required to implement either overlay option. This process would allow for appropriate input from the community and other interested parties.

## Environmental Significance Overlay

The outcomes from this study have been based on a comprehensive assessment of landscape character, views and values which make up the Lower and Middle Yarra River corridor, to determine an area of significance for the application of amended and/or new planning controls. This study has utilised broad scale Ecological Vegetation Class and Biodiversity and Habitat mapping where it exists (mapped at a regional scale), to inform overall landscape assessment.

Ideally, the application of an Environmental Significance Overlay (ESO) should be based on a scientific assessment of environmental values such as the location and type of remnant riparian and other indigenous vegetation, which may include biodiversity and habitat assessment within the Yarra River corridor. The application of the ESO in this instance should be strategically applied to capture an appropriate area where those values have been identified and require ongoing protection.

To this end, such a study has not been undertaken for the whole of the Yarra River to support application of a specifically tailored and applied ESO. It is suggested that Melbourne Water in their capacity as manager of waterway health for the Yarra River progress a future study.

There is potential for such a process to consider the current Yarra ESO1 'Yarra River Environs' and the Boroondara ESO1 'Yarra River Corridor Protection' as guides to implementing a more defined ESO control.

On this basis it is proposed that Yarra's ESO1 and Boroondara's ESO1 be updated and converted to the Significant Landscape Overlay (SLO). The current drafting of these controls have a strong 'landscape' orientation, making the SLO a more appropriate tool.

## Major Development Sites and Development on Public Land

### Major Development Sites

There are several major development sites within the Lower Yarra corridor, of varying size and development potential. Each site has the capacity to significantly change the use and development fabric of land within a given area and in turn has the potential to contribute positively to its relationship and interface with the Yarra River.

This includes the Carlton and United Breweries site, land adjacent to Victoria Gardens in Richmond within the Comprehensive Development Zone, and other large sites in Cremorne.

To this end, this study has not sought to assess the future development potential of these sites. An assessment of the potential for development based on the current underlying planning zone conditions has been undertaken and recommendations provided, where relevant, aimed at reducing potential impact of development within the Yarra River corridor under current arrangements.

Any proposed future change to the use and development composition of such sites is best undertaken in a comprehensive manner where the merits of a proposal are considered holistically, taking into account the principles and objectives outlined within this study and other studies as appropriate.

Any future development outcome should ideally be explored through a Master Plan exercise, with the outcome implemented via an appropriate rezoning process and/or application of an IPO or DPO.

### Public Land

Public land within the context of the Yarra River corridor generally comprises:

- Crown land;
- Land vested in or owned by a minister, government department, public authority or municipal council; or
- Land otherwise used for public purpose.

A general rule applied through all planning schemes is that a public land manager should be able to use and develop public land for a purpose relative to the reservation of that land and the particular statutory charter of the land manager under its governing legislation.

This study recognizes that all public land adjacent to the Yarra River is significant and is the prime contributor to the overall landscape significance setting of the broader corridor, regardless of whether that land has been set aside for conservation values, recreational values, or other public benefit reason.

The purpose of this study has been to assess the need for new or amended planning controls for private land in proximity to the Yarra River with a focus on managing the interface between public and private land.

Generally, a decision about whether to apply an overlay to public land will depend on the nature of the overlay and the land management legislation of the public land manager. Given the level of investigation, this Study does not recommend the application of the DDO over public land, but does support applying the SLO irrespective of land tenure.

The application of the DDO in this study is based on a detailed analysis of the development potential of land under a current zone and its potential for impact on the landscape significance of the Yarra River. This detailed assessment has led to the need to establish mandatory heights, setbacks and other requirements to manage potential development impacts effectively. The numerous reservations of public land and potential development associated with its reservation status within the Yarra river corridor is difficult to assess and therefore the ability to determine appropriate mandatory requirements to support application of a DDO.

The proposed SLO is considered more appropriate in this instance as it provides for appropriate discretionary requirements for future development to be considered where a permit may be triggered under the relevant zone. These can be assessed against the principles and objectives of the Study and other elements of a planning scheme.

Should any future development be proposed for a segment of public land, this study recommends a master plan type exercise be prepared with the outcome potentially implemented via the application of an IPO or DPO.

## Notice and Referral of Applications under both DDO and SLO

It is proposed that referral of applications be provided to ensure a range of issues regarding the health and amenity of the Yarra River are considered as part of any decision to develop land within either the proposed DDO and SLO controls.

### Melbourne Water

Melbourne Water has responsibility for managing a broad range of water related functions under the Water Act 1989, as they relate to the Yarra River. At present, the planning scheme identifies a statutory referral role where one of a number of flood overlays and/or the Urban Floodway Zone applies to land or the waterway within the Yarra River corridor.

However, not all land adjacent to, or with direct access to the Yarra River is flood affected to generate a referral under clause 66 of the relevant planning scheme. Depending on the location, type or extent of proposed buildings and/or works, there may be potential for impacts on the health and waterway values of the Yarra River and its immediate environs which could include:

- impacts of erosion and sediment run-off either during or after construction;
- impacts of stormwater from hard stand areas within close proximity to the Yarra River;
- construction of buildings within the root zone of indigenous and riparian vegetation;
- removal and inappropriate replacement of riparian vegetation; and/or
- changes to topography of land and bank stability which may arise from inappropriately sited development, cut and fill or other landscape works.

This study proposes that Melbourne Water be considered a "Recommending referral authority" under section 55 of the Planning and Environment Act 1987. This referral should be limited to an area within 50 to 100 metres of the Yarra River.

In the first instance, the proposed referral should be included within the proposed Design and Development Overlay given the potential for development on private property and the close proximity of these properties to the Yarra River. There may be potential to extend this referral to the SLO to capture all land within the same distance parameters as mentioned above.

The proposed referral would require a specific reference at Clause 66.04 of the planning scheme linked to either the DDO or SLO. This approach will ensure that all relevant matters relating to an application's impact on the health and amenity of the river is considered holistically, in addition to flooding issues, and that appropriate advice is provided to the Responsible Authority to allow it to make an informed decision.

### Parks Victoria and/or Public Land Manager

Significant areas of public land within the Yarra River corridor share property boundaries with private land.

It is proposed that notice of an application under section 52(1)(c) of the Planning Environment Act 1987 be considered for applications for buildings and works where private land abuts public land.

Notice to the public land manager under either the proposed DDO or SLO is encouraged at the discretion of the Responsible Authority.

### Adjoining Local Government

The Yarra River forms a municipal and planning scheme boundary for all areas between Richmond and Warrandyte.

Development proposed on one side of the river may be visible from the opposite bank within an adjoining municipality. Consideration could be given to providing notice of an application under section 52 (1)(c) of the Planning Environment Act 1987 to the adjoining municipality at the discretion of the Responsible Authority.

Such notice could be limited to major development proposals where there may be potential visual impacts from the opposing banks.

## 5.4 Planning Control Form and Content

Planning provisions to protect the Yarra River were first drafted 30 years ago. In that period, objectives and guidelines have evolved to respond to changing circumstances and the increasing sophistication of planning schemes.

This study seeks to build on the evolution of past studies and concept plans, retaining tried and tested policy, and making changes where they are needed and clearly justified.

This has included a systematic documentation and review of previous and existing Yarra River planning policies, strategies, overlay controls, VCAT and Planning Panel decisions and recommendations.

The following presents a synthesised set of objectives and decision guidelines that preserve the best of established policy, adapted to respond to particular issues identified within the Lower Yarra River corridor. These will be used to inform the development of new and/or amended overlay controls proposed by this study.

### Objectives

#### Landscape and Environmental Values

- Protect and enhance the environmental, aesthetic, cultural, recreation and tourism values of the Yarra River corridor.
- Maintain the sense of seclusion that the Yarra River corridor provides.
- Protect sites and features of pre and post contact cultural heritage significance.
- Retain native vegetation, particularly established vegetation, mature vegetation and canopy trees on both public and private land along the Yarra River corridor.
- Retain and restore a continuous corridor of native vegetation along the waterway to provide for the movement of fauna, to enhance water quality and to contribute to the natural aesthetic of the river.
- Protect, rehabilitate and expand the Yarra River's corridor of riparian and indigenous vegetation using local indigenous species.
- Protect and enhance both terrestrial and aquatic habitat to allow the movement of wildlife within the Yarra River corridor.
- Minimise the impacts of introduced flora and fauna on indigenous species.
- Protect exotic vegetation which has heritage value or contributes to local landscape significance.
- Increase native vegetation cover throughout the Yarra River corridor.

#### Protecting Views

- Protect and enhance the vegetation dominated views of the Yarra River corridor, particularly from public areas such as roads, paths, bridge crossings and open space reserves.

- Protect and enhance the skyline vista when viewed from the Yarra River, its banks, adjacent parks and trails, and scenic viewpoints within the valley.
- Ensure buildings and other structures on visible hill slopes and skylines are subordinate to vegetation and views of development from the Yarra River are filtered through trees.
- Minimise the visual intrusion of development, particularly when viewed from public areas adjacent to the river, including the Main Yarra Trail, and the river itself.
- Ensure public views of buildings are filtered through vegetation and trees.

#### Built Form Siting and Design

- Ensure buildings are set back from the Yarra River and adjacent public open space.
- Ensure the height of buildings is set below the predominant tree canopy.
- Avoid light spill and overshadowing on the banks and water of the Yarra River, and its adjacent public open space.
- Site and design development so that it responds sensitively to the topographical and landscape character of the Yarra River corridor.
- Ensure that subdivision, lot layout and building development addresses the river appropriately and provides a positive interface with the open space along the Yarra River corridor.
- Ensure sufficient space is provided for the planting and growth of vegetation, including large canopy trees, in new development.
- Ensure buildings are appropriately scaled with elevations that are presented at a variety of heights and stepped back from the Yarra River.
- Ensure all development is designed with all external colours and finishes that are sympathetic to the natural landscape character setting.
- Ensure that development is designed to the highest architectural standards and that the treatment of all elevations and external finishes demonstrates a well-considered contextual response.
- Ensure external building materials and design details complement the landscape and built form character of the area.
- Avoid development within identified setbacks to protect and enhance the riparian zone.
- Provide adequate spacing between buildings to maintain and create views to the Yarra River and its corridor.
- Minimise impervious surfaces to allow for the filtration of water and retention and establishment of vegetation.

- Ensure fencing in close proximity to the Yarra River does not create contrast with its landscape setting.

#### River Health & Conservation

- Ensure that all buildings and works are set back from the river's edge.
- Protect natural landforms, natural stream geomorphology and geological formations of the Yarra River corridor, where practical.
- Protect and enhance the health of the Yarra River including water quality (inclusive of runoff) in stream and streamside habitats, geological features and indigenous riparian vegetation.
- Recognise the function of the Yarra River as part of a natural and urban drainage system.
- Ensure development does not compromise bank stability or result in increased erosion.
- Ensure development results in no net increase in the rate or quantity of stormwater, sediment or other pollutants entering watercourses or wetlands.
- Protect and strengthen the function of the open space corridor as a wildlife corridor.
- Protect and enhance habitats, including aquatic habitats, along the Yarra River corridor.
- Ensure development does not impede the river's natural watercourse character and floodplain capacity.
- Minimise the impacts of introduced flora and fauna on indigenous species and the potential for pest flora and fauna infestation in the Yarra River corridor.

#### Public Open Space & Access

- Protect and enhance the amenity of public areas.
- Provide attractive environments that are conducive to a range of tourism and recreational activities.
- Maintain and enhance public access to and throughout the Yarra River corridor including access to the river itself and shared use of water access locations.
- Maintain and improve linear public open space and pathways along the Yarra River corridor, connecting existing and proposed open space areas upstream and downstream of the Yarra River.
- Ensure commercial or intensive recreational facility development is located near other commercial or recreation uses to retain some secluded areas free from activity.
- Ensure the design of sporting and recreational structures complies with all other design and development objectives.

## Permit Requirements

### DDO Requirements

A permit should be required for all buildings, works and subdivision within the proposed DDO. A requirement for a permit should be extended to the construction of a swimming pool or tennis court associated with a dwelling.

It is proposed to include overshadowing requirements as a mandatory provision so that all new buildings will not cast any additional shadow over the banks and waters of the Yarra River, measured during the winter solstice (22 June).

Overshadowing of public open space during spring/autumn equinox period should be discouraged. Given the close proximity of private land to public open space it is recommended that this requirement be discretionary with any overshadowing assessed on a case by case basis, on merit.

It is proposed that all building heights and setbacks be expressed as mandatory requirements specific to each identified area.

Where existing buildings (partially or wholly) are located within a mandatory setback distance the following mandatory requirements should be placed on any application to partially or completely replace an existing building:

- the height of the proposed building is consistent with the height specified for the area;
- the proposed building does not reduce the existing setback of the previous building; and
- the footprint of the proposed building is limited to the current gross floor area.

Discretion should be afforded to the Responsible Authority to allow for a re-orientation of a building's footprint to encourage an increased setback to be achieved and a better outcome from a visual impact perspective.

A permit should be required to construct a fence, within identified setback areas, with an exemption provided for simple rural post and wire, and timber rail type fencing. Where a permit is required, key considerations should include the height of the fence, its visual permeability and use of materials to avoid contrast with its local environment.

Site area coverage provisions should be included to limit built form and hard stand areas in a residential area as a discretionary requirement. This is to ensure that:

- the bulk and massing of hard stand areas and built form does not dominate the visual appearance of a particular area;
- unnecessary storm water run off is reduced; and
- retention and expansion of vegetated areas is encouraged.

A discretionary provision regarding the selection of building materials should be included to the effect that materials utilise non-reflective colours and finishes to avoid contrast with the surrounding landscape.

Appropriate consideration will need to be given to the potential impact future development associated with subdivision may create from the perspective of the Yarra River environs. No requirements are proposed to be specified in this instance as this study has not recommended minimum subdivision levels. The option to explore minimum subdivision levels is best investigated by relevant Councils using the broader strategic land use planning objectives of this study.

### SLO Requirements

The proposed SLO schedule includes a statement which outlines the significance of the Yarra River at both the State, regional and local level, structured in the following way:

- Sets out a statement outlining the importance of the Yarra River at whole of river perspective;
- Sets out the landscape, environmental, cultural and social values of the Yarra River; and
- Provides an overview of the landscape values relevant to the spatial extent of the SLO within a particular municipal area.

The head provision of the SLO allows for limited permit requirement inclusions and the noting of exemptions from a planning permit. Within this context the following should be considered:

- Requirement to remove, destroy or lop native vegetation with a limited exemption for removal of exotic species of limited height and width.
- Exemption from a permit to construct a dwelling less than 6 metres in height above natural ground level.
- Requirement to construct a fence within 30 metres of the banks of the Yarra River with an exemption for post and wire, or post and rail construction.
- Requirement to construct / undertake buildings and works associated with a bicycle or shared pathway with appropriate exemptions for municipal or public authorities.

As the application of the SLO will affect both private and public land, it is proposed that an exemption be included for municipal and or public authorities who may be conducting waterway, stream or other type of works which are aimed at ensuring the ongoing health of the waterway environment.

## Application Requirements

It is proposed that applications be accompanied by key information which will assist the Responsible Authority in making an informed assessment of a proposal.

Information that should be provided for an application will be based on the type of buildings and works proposed with any requirement at the discretion of the Responsible Authority. This should include:

- A written assessment demonstrating how the proposal meets the objectives and requirements of the DDO/SLO.
- The need for shadow diagrams or schedule of materials and finishes.
- A survey plan, prepared and certified by a suitably qualified surveyor accurately showing the location of proposed buildings and works measured to Australian Height Datum from natural ground level.
- A landscape plan which outlines the location, species type and quantity of vegetation to be removed, and any replacement vegetation, supported by a suitably qualified arborist's report.
- How any earthworks and their impacts will be managed and what protections are to be provided regarding run off or to prevent erosion when close to the river's bank.
- A survey plan, prepared and certified by a suitably qualified surveyor accurately showing proposed buildings and works both against proposed mandatory height and setbacks measured to Australian Height Datum measured from natural ground level.
- A visual impact assessment which may comprise cross-sectional diagrams, photo montages or a view shed analysis from agreed publicly accessible viewing points.

## Decision Guidelines

Decision guidelines are used to inform the assessment of planning permit applications. They could include the following considerations to determine whether the objectives are being met.

### Landscape and Environmental values

- The reasons for removing vegetation and whether there are other alternative options which do not require its removal.
- The effect of the removal of vegetation on the natural landscape character, habitat protection, wildlife movement and long term viability of remnant and revegetated areas.
- Whether sufficient vegetation and canopy trees of appropriate species are to be planted to replace the removal of the existing vegetation and mature canopy trees.

- Whether the location and extent of the buildings or works encroaches into the critical root zone of mature canopy trees.
- The ability for proposed vegetation species to be matched to the local plant communities.
- Whether mature, dead and dying native vegetation should be maintained as habitat for native fauna or removed to avoid a risk or safety hazard.
- Whether the spacing between buildings allows for the planting of appropriate vegetation and canopy trees to filter views of the development.
- The extent to which screening of existing and proposed buildings, structures and areas of hard surfacing contain appropriately scaled informal landscaping, suitable to the indigenous landscape character of the river corridor, particularly when visible from the waterway, Main Yarra Trail and areas of public open space.
- Whether the existing and proposed vegetation fronting the Yarra River will filter the majority views of the proposed development.

### Protecting Views

- The visibility of any proposed buildings and works when viewed from the Yarra River and adjacent public open space, bicycle and shared paths and bridge crossings.
- Whether sufficient space is provided in front of and between buildings to allow for the planting and growth of vegetation, including large canopy trees.
- Whether the siting of buildings and works avoids the removal of existing riparian vegetation.
- Whether any earthworks will affect public views of the river corridor.

### Built Form Siting and Design

- Whether the scale, form, siting and design of new buildings, including materials, colours and finishes, are sensitively integrated with the natural landscape setting of the river corridor.
- Whether buildings will protrude above the predominant tree canopy of a given area.
- The impact of any overshadowing by development:
  - on the banks of the Yarra River between 11:00am and 2:00pm on 22 June; and
  - on public open space between 11:00am and 2:00pm on 22 September.
- Whether any additional overshadowing of public open space can be avoided by redesigning or relocating a proposed building, or part thereof.

- Whether siting of proposed buildings impacts the river's natural flood and watercourse characteristics.
  - Whether any proposed garages and outbuildings ancillary to a dwelling are integrated into the overall design to minimise the appearance of built form impacting public views of the river corridor.
  - Whether building elevations and podium levels need to be stepped back in keeping with the topography and natural landscape character of the Yarra River.
  - Whether the location, bulk, outline and appearance of any proposed building or works are in keeping with or enhance the natural landscape character and appearance of the Yarra River.
  - The need for additional landscaping or new vegetation screening to filter views of proposed buildings and works.
  - The appropriateness of proposed materials and finishes for any proposed buildings and works.
  - The need to minimise impervious surfaces to allow for filtration of water and retention and establishment of indigenous vegetation and canopy trees.
  - The need to limit areas, (including tennis courts and swimming pools) and other impervious surfaces within the minimum setback distance specified in Table 1 of this schedule to allow for replanting and vegetation growth.
  - Whether adequate spacing is provided between buildings to maintain and create views to the Yarra River and its corridor.
  - Whether fences provided along the river frontage property boundary are low, visually permeable, and finished with tones and colours that blend in with its vegetated landscape setting.
- That views of development from the Yarra River and adjacent public open space, bicycle and shared paths and bridge crossings are minimised.
- The need for litter or gross pollutant traps at entry points to drains that serve large developments known to generate litter and sediment.

### Public Open Space & Access

- Whether the location of boating infrastructure is consistent with the *Guidelines for Approval of Jetties 2011 Melbourne Water*, any requirements, plans or guidelines prepared by Parks Victoria or other public land manager.
- Whether bicycle and shared paths are well located, avoid unnecessary earthworks and vegetation removal and have good visibility to help increase safety for users.
- Whether private development results in the loss of, or creates inappropriate access to the Yarra River and its parklands.
- Whether opportunities exist to co-locate new buildings with existing buildings on public land, particularly at the banks of the Yarra River.

### River Health & Conservation

- Whether any proposed earthworks and changes in the topography of the river corridor will detrimentally impact its local natural landscape character and environmental values.
- Whether fencing allows for the free movement of wildlife, minimises visual intrusion and limits impact on watercourse characteristics.
- Whether buildings and works are sufficiently set back from the banks of the Yarra River to ensure that:
  - The river's natural flood and watercourse characteristics is not impacted.
  - The topography of the river and its banks are maintained as the dominant feature in the public views of the river corridor.
  - The existing riparian vegetation is protected and enhanced.

## 5.5 Establishing Mandatory Building Heights and Setbacks

Establishing mandatory heights and setbacks, tailored to suit the local landscape characteristics and context of an area, is critical to protecting the Yarra River corridor.

### Overview

Determining appropriate building heights and setbacks within each part of the study area has been based upon two foundation principles of:

- Protection of the riparian zone - the 'waterway corridor', which is the river's immediate environment; and
- Siting and designing built form so that the topography, naturalistic landscape character, waterway scale and sense of seclusion of the 'river experience corridor' - the area within which the river is experienced from its banks and trails - is protected.

Other design parameters that also play a role in determining the interaction of built form within its landscape include setbacks from parklands and conservation areas, protection from overshadowing, site coverage, permeability and landscaping.

**Chapter 6 'Recommendations'** sets out the strategic intent of these design parameters for each part of the study area. The Municipal Toolkits provide the local level detailed analysis and recommendations for areas of private land adjoining and within close proximity to the river.

### Waterway Corridor

#### *Protection of the riparian zone*

The State Planning Policy Framework at Clause 14.02-1 'Catchment planning and management' identifies the need to:

*"Retain natural drainage corridors with vegetated buffer zones at least 30m wide along each side of a waterway to maintain the natural drainage function, stream habitat and wildlife corridors and landscape values, to minimise erosion of stream banks and verges and to reduce polluted surface runoff from adjacent land uses."*

Melbourne Water guidelines encourage the establishment of a viable riparian vegetated environment to maintain healthy waterways. The guidelines include:

- Waterway Corridors – Guidelines for greenfield development areas within the Port Phillip and Westernport Region 2013*, Melbourne Water
- Constructed Waterways Framework, 2009*, Melbourne Water

### River Experience Corridor

*Siting built form so that the topography, naturalistic landscape character, waterway scale and sense of seclusion of the river are protected*

Different building heights and setbacks will be appropriate in order to achieve the above principle, depending on the location and context.

Clause 12.05-2 'Yarra River protection policy' forms the basis for considering the interaction of built form and landscape along the river experience corridor, and includes the strategies of:

Maintain a sense of place and landscape identity by:

- Retaining a dominant and consistent tree canopy along the river corridor and within its broader landscape setting.
- Ensuring that the appearance of development is subordinate to the local landscape setting, with any views of development being filtered through vegetation.*

Ensure that development is designed and sited to maintain and enhance the river's secluded and natural environment by:

- Minimising the visual intrusion of development when viewed from major roads, bridge crossings, public open space, recreation trails and the river itself.*
- Ensuring that the siting and design of buildings avoid contrast with the local natural landscape and environmental character.*
- Ensuring building height is below the natural tree canopy and all development is set back a minimum of 30 metres, or greater, from the banks of the river.*

Appropriate building heights and additional setbacks have been determined for each section of the Yarra River based on the assessment criteria detailed on the following page. The criteria includes consideration of the existing landscape character and the future landscape directions for each part of the river.

The proposed building heights and setback distances allow an appropriate level of development to occur, reflecting the strategic direction of the underlying zoning.

A 'mandatory height' and a 'mandatory minimum setback line' has been recommended for each area within close proximity to and/or with direct frontage to the Yarra River.

Where existing development is located within the mandatory minimum setback line, allowance should be provided for appropriately designed and suitably scaled replacement of that existing building. Preferably, replacement buildings should be sited behind the identified setback line where it can be achieved.

Works should ideally be set back the same distance as buildings unless they are water dependant or required for river access, such as paths for pedestrians or cyclists, boat infrastructure and viewing platforms. Given the complexity surrounding this aspect, discretion should be afforded the Responsible Authority preferably with referral advice from Melbourne Water.

## Criteria for Determining Building Setbacks & Heights

### Existing Landscape Character

Criteria	Matters for Consideration
Natural landscape character	The key aspects of the river's natural landscape character, as defined by: <ul style="list-style-type: none"> <li>The topography and gradient of the land</li> <li>The vegetation cover of the river's edge, banks and adjoining land</li> <li>The formation of the river's course and how this affects visibility of the river from viewing locations</li> </ul>
Pattern of viewing	How the river corridor landscape is viewed e.g. from recreation trails, parkland or bridge crossings, or only from the river itself
Interaction of built form & landscape	The existing pattern of development and the level of visibility of built form from viewing locations Whether existing development shows a consistent setback pattern and, if so, whether this pattern is appropriate and should be reinforced The extent to which views of a natural landscape horizon or skyline might be interrupted by buildings Avoidance of overshadowing of the river's waterway and banks

### Future Landscape Directions

Criteria	Matters for Consideration
Strategic context	How the strategic intent of the underlying zoning, overlay controls or policy may influence the level of development that could occur
Desired outcomes	Strategic objectives for future development in relation to the valued landscape character

### Recommendations

Criteria	Matters for Consideration
Setback reference point	Ability to measure a setback through alignment with a property boundary to allow ease of administration in preparing and assessing development proposals
Existing development	Existing building heights, siting and setback patterns from the river Depth of sites fronting the river Street frontage setback requirements of sites adjoining the river and how this might influence building siting
Recommended maximum building height	Recommended overall maximum building height to ensure development reflects established landscape character, avoids overshadowing of the river and achieves desired outcomes for the location
Recommended minimum building setbacks	Recommended minimum setback from setback reference point - either represented as a numerical distance or through a contour reference Whether a property has sufficient depth to accommodate a reasonable level of development in view of the preferred setback from the river

### The Lower Yarra Context

The Yarra River is a unique asset to Melbourne as a near-continuous landscape corridor. However, there are also several locations where clusters of urban activity and built form are highly visible from the river. These clusters serve as 'punctuation points' along the river corridor, which is otherwise defined by its extensive vegetation and tree canopy cover rather than built form.

Within the Middle Yarra River corridor these 'punctuation points' include the Warrandyte Town Centre and the clustering of development on both sides of the river at Heidelberg and Bulleen. Within the Lower Yarra corridor, closer to the city centre, there are a greater number of 'punctuation points' that comprise more intense built form within the landscape as it becomes more urbanised, such as those at Abbotsford, Cremorne and South Yarra; the Lower Yarra is where the 'city meets the river'.

Despite the highly urbanised setting of the Lower Yarra corridor, the waterway and banks of the Yarra River retain a strong naturalistic landscape character in many locations. This includes within the Parkland and Leafy Suburban character types, where the river retains a strong landscape character with an overall tree canopy presence, and buildings are screened by vegetation.

In more urban locations, such as within the Urban Residential, Current & Ex-Industrial and Motorway character types, built form is highly prominent in the river's landscape, reflecting historic patterns of development, and the presence of major urban centres within this part of the river corridor. In these locations, visible buildings are also a part of the Lower Yarra River's character.

Given the strategic land use direction and existing patterns of development within the Lower Yarra corridor, this study identifies a number of 'urban nodes' that strategically support a higher concentration of activity or mixed use development. In these locations, the interaction of land use and urban design policy may suggest (or has already resulted in) a higher or more visible scale of development. They include:

- CUB future mixed use area (Current & Ex-Industrial Area C)
- Victoria Gardens, Victoria Street & Trenerry Crescent (Current & Ex-Industrial Area A)
- Key strategic sites in Cremorne (Motorway Areas A & B)
- The Forest Hill precinct in South Yarra (Urban Residential).

Outside of these areas, a lower scale of built form is appropriate, both in terms of integration with the river environment and within the streetscape context.

Figure 2 below shows how the built form analysis criteria can be applied 'on the ground' and through the application of permit requirements within the relevant overlay control. The level of visible built form within the 'waterway corridor' and 'river experience corridor' is managed through establishing appropriate height and setback controls, either as mandatory or discretionary requirements, to respond to the river's character in each location.

In some parts of the Lower Yarra corridor, there is a significant difference in the landscape character on each side of the river, and the level of visibility of buildings may vary considerably.

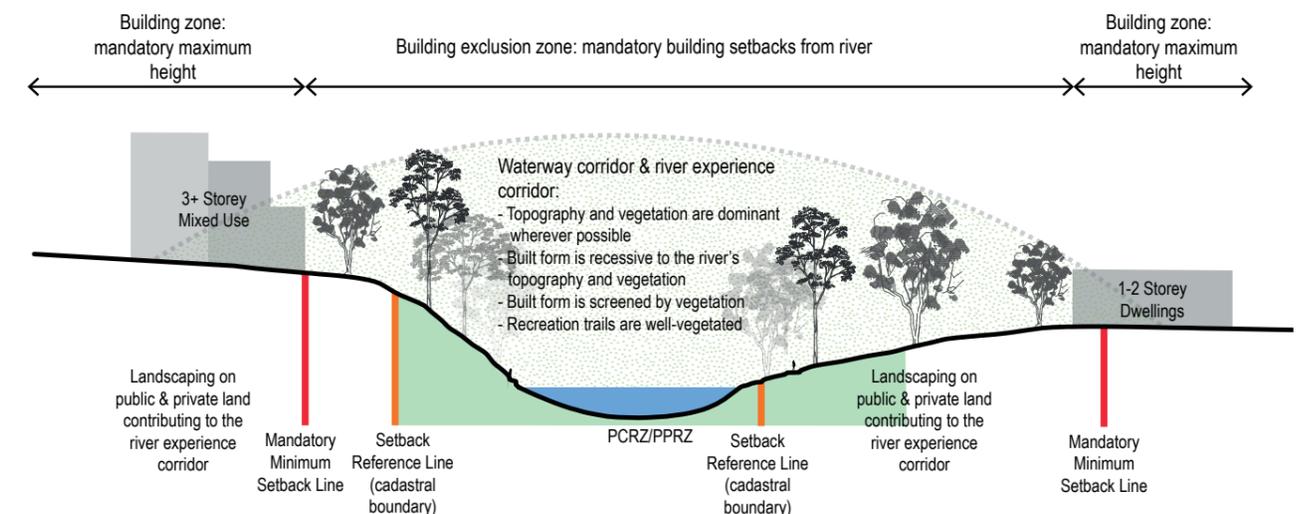


Figure 2: Defining Building Setbacks & Heights

## Ground Level Building Setbacks

A range of ground level building setback distances are recommended for private land within the study area, which are detailed in general in Chapter 6 and assessed in more detail within each Municipal Toolkit. These setbacks have been determined based on the 'Criteria for determining Building Setbacks and Heights' outlined on the previous page.

Given the extent of developable land along at the river's edge throughout much of the study area, in all instances, the greatest ground level setback distance reasonably possible has been recommended. This approach aims to limit further visual encroachment of development as experienced from the Yarra River, including both the waterway itself and public land adjoining the river.

## Defining Building Setbacks

A mandatory minimum setback line has been applied to all private land abutting or with direct access to the Yarra River. The minimum mandatory setback line is defined as either a:

- consistent parallel distance, measured horizontally from the identified setback reference line; and/or
- a specific contour level measured to Australian Height Datum standards.

This is measured from the 'setback reference line' which relates to the closest cadastral/property boundary to the river's edge, for ease of reference and administration. The minimum setback line and the setback reference line are illustrated in Figure 3.

In some circumstances the use of both a parallel distance and a contour level are proposed to provide a more naturalistic setback outcome. In these instances the application of a "which ever is greater" test will apply.

A range of options have been considered in determining how to measure setback distances. This approach has been found to be the most transparent and easily applied from a statutory planning perspective. Both forms of setback distances can be measured by a suitably qualified surveyor and shown on certified survey plans.

It is important to note that the proposed setbacks are a minimum behind which all new buildings must be sited. There may be other site specific factors which might require a greater setback to be achieved as determined by the responsible authority.

These may include, but are not limited to:

- A site's exposure to flood, bushfire, landslip and other risk factors.
- Additional street and/or side boundary setbacks required by other parts of the planning scheme (such as amenity or neighbourhood character provisions).
- The need to locate a building behind a more defined vegetation line or the need to protect existing vegetation.
- Other site specific issues such as the topographic nature of the site, ability to dispose of waste water etc.

There are limited circumstances where new buildings would be acceptable within a minimum mandatory setback line. In some instances there may be existing buildings or works which are either partially or wholly located within the mandatory minimum setback area.

In these discreet circumstances the responsible authority, via the planning permit application process, will be provided limited discretion to consider:

- Replacement, alterations and additions to existing buildings partially or wholly within the minimum mandatory setback line; and
- Applications to construct a swimming pool, tennis court, outbuildings and other 'works' such as landscaping or earthworks.

Any proposed replacement, alteration and/or addition to an existing building must not:

- Exceed the maximum building height specified in the planning control;
- Reduce the existing setback of the building from the Yarra River; and
- Increase the existing gross floor area of the existing building.

Some discretion should be afforded to the Responsible Authority to consider the potential for an existing building within the setback area to be re-orientated, whereby an increased setback or a better outcome from a visual impact perspective may be achieved.

In these instances, an applicant should be required to justify why any proposed buildings and works cannot be relocated behind the mandatory minimum setback line.

This approach provides fairness for existing land holders while delivering long term benefits for the management and protection of landscape character and amenity values of the Yarra River corridor.

## Other Options

A number of different options for defining a minimum setback line and the setback reference line have been considered in the process of preparing the Inner-Middle Yarra River studies. These include:

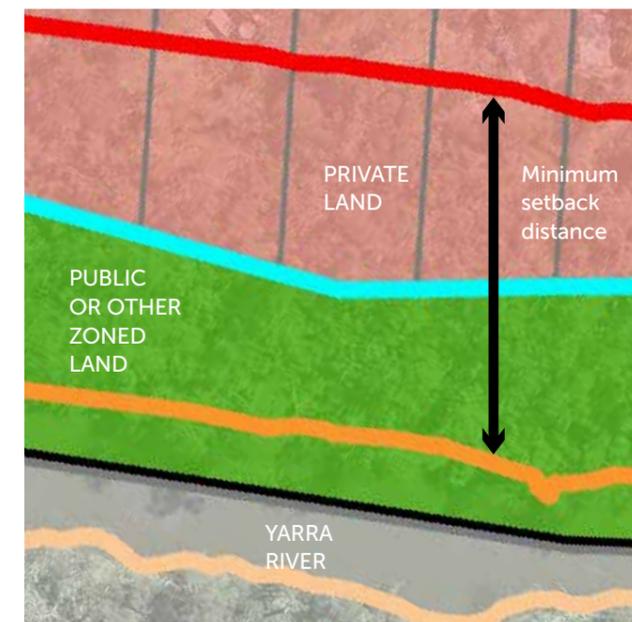
- **'Top of bank'**. This is commonly used by Melbourne Water as a reference point, but is difficult to accurately reference in an overlay control schedule. Additionally, references associated with the river's topographic features may change over time.
- **'Break of slope' or 'crestline'**, which is the point at which the river's topography flattens out away from the bank. While this approach allows the control to be adjusted to reflect topographic variations, it is difficult for the line to be accurately referenced in a statutory context. Additionally, in some locations, there is no clear break of slope to be defined.

- **River centreline.** No definitive mapping of the river centreline exists so this cannot be used as a reference. It could also potentially change location over time.
- **Setback line mapped in schedule.** A setback line provided in the planning scheme cannot be used as a primary control; it can only be provided for illustrative purposes. It is difficult to scale a map from the planning scheme and this would require access to the GIS layer for an accurate setback.
- **Performance-based approach, no setback line specified.** This allows for flexibility but cannot be enforced as a mandatory control and would not ensure desired outcomes are met.

Figure 3: Measuring Building Setbacks

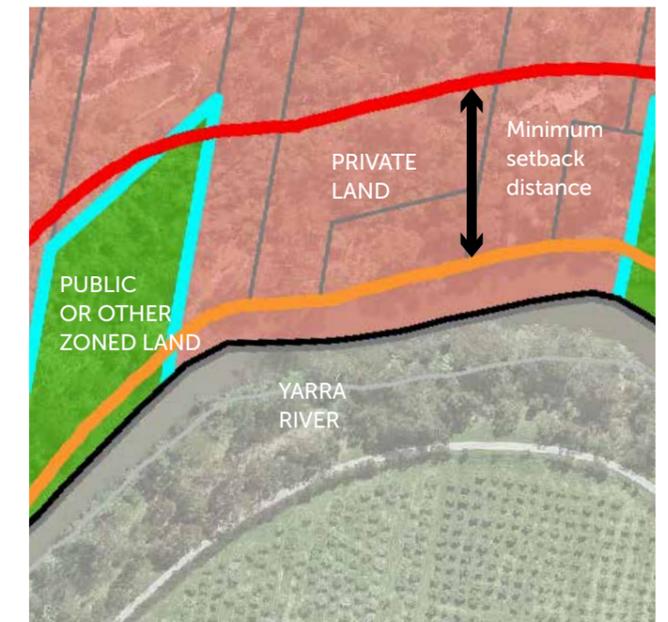
### Example 1

Public land separates private land from the Yarra River. Setback assessment includes all public land and private land from the closest cadastral boundary to the river's edge.



### Example 2

Private land title extends to the edge or into the Yarra River. Setback assessment includes all land (and water as required) from the closest cadastral boundary from the river's edge.



- Setback Reference Line: established from the closest cadastral (property) boundary to the Yarra River
- Mandatory Minimum Setback Line: may be measured perpendicular to the Setback Reference Line or may be a contour reference

## Building Heights

### Existing Statutory Context

A range of building height controls apply to different parts of the Lower Yarra River study area, as either discretionary or mandatory provisions, either through zone or overlay controls. Existing height controls include:

- Design and Development Overlays (DDO) set mandatory (and some discretionary) height controls relating specifically to the Yarra River environment within Cities of Yarra, Stonnington and Boroondara.
- General Residential Zone (GRZ) schedules which apply discretionary or mandatory controls ranging from 9m-12m
- Neighbourhood Residential Zone (NRZ) which applies a 8m (9m on a sloping site) mandatory control
- Residential Growth Zone (RGZ) within Hawthorn and Heidelberg which sets a discretionary height limit of 13.5m
- Other zones apply to extensive parts of the study area and do not specify height controls, including the Commercial 1 & 2 Zones (C1Z, C2Z), Industrial 1 & 3 Zones (IN1Z, IN3Z), Urban Floodway Zone (UFZ), Special Use Zone (SUZ), Public Use Zone (PUZ), Comprehensive Development Zone (PDZ) and Priority Development Zone (PDZ).
- The Heritage Overlay (HO) applies to various sites and precincts close to the river and while it does not set a specific height limit, could serve to restrict building heights if heritage conservation values are impacted

### Approach

This study has made recommendations on preferred building heights for each part of the study area, based on the 'Criteria for determining Building Setbacks and Heights' outlined previously.

Current height controls applying to each part of the study area have been assessed to determine how they are effective in protecting the river's landscape values to achieve the objective of Clause 12.05-2 'Yarra River Protection' in the State Planning Policy Framework.

Clause 12.05-2 emphasises maintaining a dominant tree canopy and visually subordinate development within a naturalistic landscape setting. The landscape character assessment and views analysis undertaken as part of this study has shown that the pattern of development within the Lower Yarra River corridor is highly varied, and includes low-rise residential buildings of between 1-2 storeys, industrial buildings up to 3-4 storeys and high rise apartment towers up to 16 storeys.

Given the urbanised context of the Lower Yarra corridor, detailed controls that carefully manage further encroachment of built form into the river's landscape have been prepared. These controls reflect the existing patterns of development and strategic land use direction of character type, while aiming to minimise additional visibility of built form wherever possible.

On this basis, for the Lower Yarra River corridor maximum building heights have been tailored for each section of the corridor as follows:

### Leafy Suburban

A mandatory maximum building height of 8m or 9m (with a 1m allowance for a sloping site) is proposed for the Leafy Suburban character type (Toorak, Hawthorn, Kew and Alphington). This proposed height:

- Equates to the typical height of a suburban residential structure within the corridor.
- Ensures that future built form will sit well below the tree canopy.
- Would limit the appearance of building scale/mass on steeply sloping sites as seen from the opposite bank.
- Is consistent with the existing height controls of the NRZ and some areas of GRZ within the study area.

Sloping site allowances have been recommended for proposed building heights at or below 9m for residential areas across the corridor from Richmond to Warrandyte. A sloping site allowance is not recommended above this height, as this allowance should be considered within the overall mandatory height set out in the schedule to the DDO.

### Urban Residential

A mandatory maximum building height of between 9m (10m on a sloping site) and 12m is proposed for the Urban Residential character type (South Yarra). This proposed height:

- Reflects the varied heights of existing dwellings and apartment buildings within this character type.
- Allows design flexibility to accommodate the variations changes within the of steeply sloping topography.
- Ensures that future built form will sit below the tree canopy.
- Is consistent with the existing height controls of the GRZ, introduced through Amendment C187 (and reflecting the outcomes of the City of Stonnington *DDO3 Review*).

### Motorway

Discretionary height controls are proposed for the Motorway character type (Cremorne). In this location, land is separated from the river by the Monash Freeway. Therefore, the key considerations for built form are to:

- Avoid overshadowing of the river's waterway and banks (as detailed on the following page).
- Create a positive skyline image, as viewed from the southern bank, avoiding the appearance of a solid wall of development.

In this character type, it is proposed that a mandatory requirement be established that new buildings must not cast any additional shadow over the banks and waters of the Yarra River, measured during the winter solstice.

### Current & Ex-Industrial

Buildings within the Current & Ex-Industrial character type (Richmond and Abbotsford) are constructed in close proximity to the river's edge and frequently of a high scale. For this character type, the proposed built form controls include building heights which range from an overall maximum of between 11m-25m and include upper level setbacks of varying distances. These have been set out for each location to reflect the local context of the river corridor and are expressed as mandatory and/or discretionary heights. These heights have been determined to:

- Avoid overshadowing of the river's waterway and banks (as detailed on the following page).
- Minimise further visual intrusion of built form into the river corridor landscape, taking into consideration existing development patterns and strategic land use directions of each location.

## Determining Buildings Heights & Upper Level Setbacks

Within the Current & Ex-Industrial character type stepped building heights and upper level setbacks are proposed at the river interface. These have been determined in each location to reflect the local context.

These built form controls have been determined through consideration of three key factors (as illustrated in Figure 4, below):

- Topography of the riverbank
- Width of the river
- Proximity to the river's edge.

The recommendations of this study are based upon previous analysis and recommendations of the City of Yarra's *Built Form Review* (2003) and the *Yarra River Corridor Strategy* (2015), updated to reflect the current methodology of the Yarra River planning controls program.

### Topography of the River Bank

The riverbank is perceived as being relatively steep in the built-up areas of Richmond and Abbotsford, with a height of around 12-15m (refer to Figure 4). Any impression of topography being significant and the dominant landscape feature is diminished by buildings that approach or exceed these dimensions.

In order to retain the dominance of the river and the river bank, the front wall building height should be in proportion to the height of the riverbank. Visual analysis has shown that a ratio of front wall height facing the river (y) of up to 0.75 of the river bank height (x) is acceptable, provided that the front wall height of the building is set back. This would give an average front wall height of 11m in the Current and Ex-Industrial character type.

### Width of the River: Front Wall

The width of the Yarra River in this location averages just over 30m. Through cross-sectional analysis it has been established that the front wall height of buildings located adjacent to the river need to be well under half the width of the river to maintain the dominance of the waterway, which is approximate with the previously determined 11m. It is recommended that this front wall height be implemented as a mandatory control.

### Width of the River: Secondary Height

The height of buildings beyond the immediate interface with the river should also ensure that built form does not visually dominate the topography of the river banks or the apparent scale of the river. Cross-sectional analysis has determined that this height (noted in Figure 5 as 'z') should be less than two thirds of the average width of the river, which results in an overall building height of 18m. It is recommended that this secondary height also be implemented as a mandatory control.

Mandatory built form controls are recommended to apply to the parts of buildings that are most likely to impact on the character and visual amenity of the 'river corridor experience' area, which is determined to be a distance of 15-20m from the front wall facing the river.

Beyond 15-20m from the front wall facing the river, a preferred height of 5 to 6 storeys (equivalent to 18m) is proposed, being consistent with Clause 21.05 of the MSS. In some locations, a higher scale may be acceptable provided it is adequately set back so that it is not visible from the opposite bank.

There are a number of large sites within this character type, such as the Carlton and United Brewery site in Abbotsford, with an overall site depth of well beyond 15m. On these larger sites it is expected that Council would exercise its discretion regarding the height of built form further from the river, but would be guided by the preferred height as outlined in the MSS (and supported by this report). It is accepted that the height of built form has a decreasing visual impact upon the river and its banks, the further back it is located.

### Proximity to the River: Upper Level Setbacks

The *Built Form Review* outlined an approach to overall building height and upper level setbacks based on an 'angle of viewing' and a 'stepping down' of building mass from an overall height to a frontage height of 11m by a gradient of 1 in 4. This was interpreted into the former DDO1 as an additional 1m of height for every 4m, stepping back from the building frontage.

This report recommends mandatory upper level setbacks, which ensure that the river and its banks remain the dominant feature of the landscape. Upper level setbacks above 11m (sb) and above 18m (usb) would help to ensure that built form above 11m is visually recessive.

Proximity analysis has been used to consider possible upper level setback distances. Distance away from the viewer is an important factor in assessing visual impact. The effect of distance on the ability to discern detail of built form elements, as well as the contribution of surrounding 'visual noise' in the wider vista or view, is critical.

The further the viewer is from the building, and the wider the view / vista or panorama, the less dominant or intrusive the built form will appear.

Viewing distances are site specific and have been determined through site visits and desk-based analysis. The visibility of built form in this character type can be described as follows:

**Foreground:** Begins at the viewer, assuming location at the river edge, and extends to approximately 30m. Detail in the landscape such as individual leaves, flowers etc. and the colour and texture of the landscape and structures are evident within this view plane.

For the Yarra River corridor the foreground of views should be dominated by vegetation, views of the river bank and views of the river itself.

**Middleground:** Within the Yarra River corridor context, the middleground view plane has been determined as beyond 30m, and extending to 50m. Colour and textures are still visible, but secondary to those within the foreground of views.

It is within this view plane that the majority of front walls of buildings would be located. Front walls of buildings up to a height of 11m would be clearly visible within this plane, but would be in proportion to the river and its banks, and would therefore not diminish or 'visually overwhelm' the topography of the corridor. This is aided by the fact that views within this plane are often screened by vegetation and topographical rises.

However, any visible built form elements above 11m in height have the potential to visually dominate, and overwhelm the topography of the river and its banks. As such, any building elements above 11m should be designed and sited to be visually recessive, with a substantial upper level setback being the most effective solution.

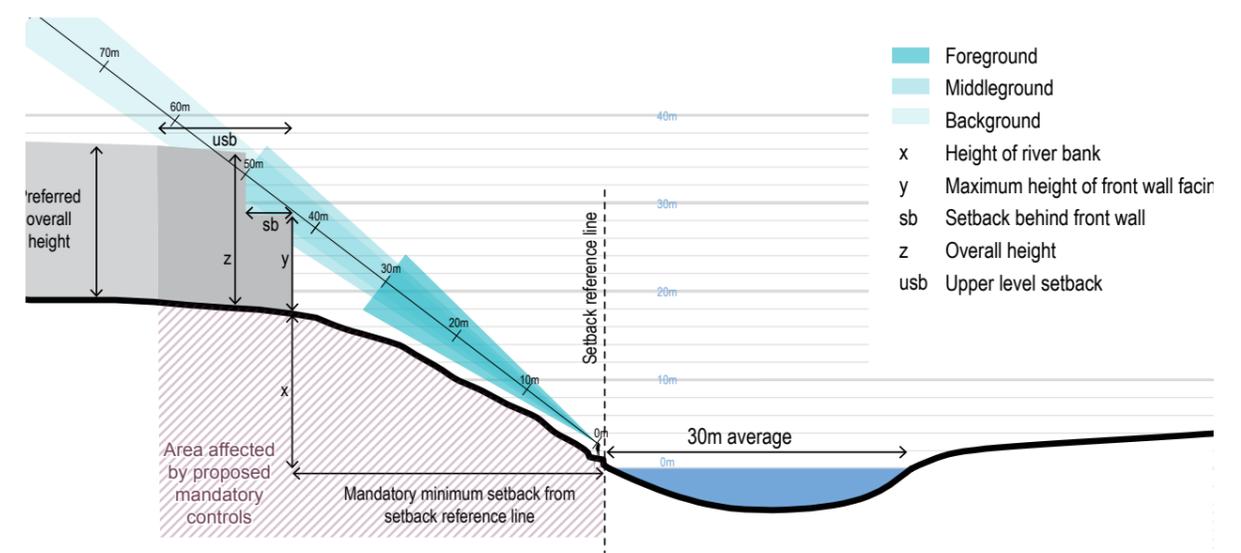
**Background:** Alterations in the background (beyond 50m) are less distinctive. Detail can be seen, but increasingly, colour and texture variation is seen as grouped into mass elements and secondary in nature.

Built form beyond 50m of the viewer, while still visible, has less visual impact on the immediate river environs, and the viewer's experience of the river corridor.

Based on these considerations, it is concluded that:

- A minimum mandatory upper level setback of 5m should apply to those parts of buildings above 11m. This would ensure that the upper levels of buildings are within the background of views (due to the angle of viewing, though it is accepted that this distance varies according to local topographic conditions). It would result in those building elements up to 18m in height being visually recessive, and would ensure that built form does not dominate the topography of the river and its banks.
- A greater mandatory upper level setback of 10m apply to those areas currently defined by a lower scale of built form at the river's interface.
- Further, any built form elements above 18m (if permitted) must adhere to a minimum mandatory setback of between 15-25m to ensure that built form is recessive and does not detrimentally impact upon the river corridor experience.
- In some locations, greater upper level setbacks for elements above 18m are required to ensure that built form is not visible from the opposite bank.

Figure 4: Viewing Distances & Upper Level Setbacks



## Measuring Building Height & Setbacks

The measurement of building height based on natural ground level is an important component in ensuring overall building height remains within mandatory limits set by relevant planning controls. Using different measures may lead to development being much taller than anticipated, inappropriately impacting the Yarra River corridor.

Both the Victoria Planning Provisions and the Building Code of Australia use 'natural ground level' as a standard approach to measuring the proposed height of all built form. 'Natural ground level' is the ground level of a site before any works (such as filling and/or excavating) are undertaken to alter the naturally occurring contours of the land, based on Australian Height Datum standards.

The Victorian Building Authority's *Practice Note No.47* should be consulted if clarification is needed to define natural ground level in instances where it is difficult to ascertain, such as where cut and fill or other earthworks have previously been undertaken.

Building setback distances are measured from the setback reference line, on the horizontal, as shown in Figure 5, below.

## Avoiding Overshadowing

Overshadowing considerations apply to the Motorway and Current & Ex-Industrial character types, which are located on the northern or western banks of the river and within areas and where future buildings could be of a scale that could cast shadow.

Avoidance of overshadowing the banks and waterway of the Yarra River has been a long held planning policy. To date this has predominately been an issue requiring management within the central business district of Melbourne and expressed as a prohibition within the Capital City Zone.

In December 2015, Amendment VC121 implemented a revised Yarra River protection policy at Clause 12.05-2 of the State Planning Policy Framework. On the matter of overshadowing, the policy identifies the need to:

*"Avoid overshadowing of the river its banks and adjacent public open space to ensure that the amenity of the public realm is maintained year round"*

As Melbourne has grown, pressure for larger, taller buildings, particularly within the Lower Yarra River corridor has occurred with overshadowing of public open space and the banks and waterway of the Yarra River becoming a greater issue.

To continue to reinforce the long standing policy the proposed DDO control should contain a mandatory requirement to the following effect:

*New buildings must not cast any additional shadow over the banks and waterways of the Yarra River between 11am and 2pm on 22 June (winter solstice).*

As noted in the previous section discussing establishing mandatory setback, the 'banks and waterways of the Yarra River' is challenging to define accurately for statutory application purposes, as the precise relationship between both varies considerably along the river's length.

The identification and use of a 'Setback Reference Line' (SRL) provides a consistent and measurable approach to define a point at which new overshadowing must not exceed. As previously discussed, the SRL uses a property based cadastral line which best reflects the location of the intersection of the banks and waterway of the Yarra River.

In some instances, there may be existing built form which currently overshadows the Yarra River. The proposed mandatory requirement will take this into account by providing allowance for new buildings to work within existing shadow extent, while ensuring that new impacts are avoided.

A variety of different types of public open space can be found throughout the Yarra River corridor. In some locations, particularly within the lower Yarra River corridor, some overshadowing of public open space is inevitable due to the close proximity of private land to public land and the nature of the topography in a given area.

To ensure overshadowing of public open space is taken into account, it is proposed that the DDO control contain a discretionary requirement to the following effect:

*New buildings should not cast any additional shadow across any public open space between 11:00am and 2:00pm on 22 September.*

Ideally, no overshadowing of public open space should occur as a result of new development as this can have a negative affect on the environmental characteristics and enjoyment of that space, but may also affect the growth and habitat characteristics of an area.

The spring equinox provides a common test threshold used in planning practice. The above approach provides some flexibility to consider any proposed impacts on their merits and against the design objectives proposed within the new DDO control. Some issues worthy of consideration include:

- The duration of the proposed overshadowing – will it occur throughout the period, or for a short time.
- The type of public open space landscape being shadowed – whether it is densely vegetated, or open grassed areas, where consistent light may affect growth and development.
- Whether the area is regularly visited and/or a recreational area (e.g. playground, walking cycling trail etc).
- Whether the site being overshadowed has environmental or cultural values where solar access is critical to maintain those values.
- Whether a building can be redesigned to rearrange height and bulk to avoid overshadowing.

An application requirement to provide a shadow cast assessment outlining the impacts during the policy period should be included as part of both the DDO and SLO control where development may overshadow both public land and the banks and waterway of the Yarra River.

Figure 5: Measuring Building Heights & Setbacks

