URBAN DESIGN FRAMEWORK:
PRINCIPLES & OBJECTIVES, MEASURES & BENCHMARKS

JULY 2024

Version 6

ACKNOWLEDGEMENT OF COUNTRY

In the spirit of reconciliation, we acknowledge the Traditional Custodians of Country throughout Victoria and their connections to land, waters and community.

We deliver projects that touch Country across Victoria and pay our respects to the spirit and passion of Traditional Custodians and to the ongoing living culture of Aboriginal people.

We pay our respects to Elders past and present and extend that respect to other Aboriginal and Torres Strait Islander peoples who work with us.

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FOREWORD

A UNIQUE OPPORTUNITY

The Victorian Infrastructure Delivery Authority (VIDA) is delivering one of the most significant investments in transport infrastructure in Victoria's history.

The program, which includes projects led by the Level Crossing Removal Project (LXRP), extends beyond typical road or rail initiatives - it's comprehensively city-shaping. Embracing the principles and practices of great urban design and place-making, ensuring the delivery of its wide-ranging benefits, is therefore a priority. It represents an investment and a lasting legacy that benefits all Victorians.

The Victorian Government, through the LXRP, is removing 110 dangerous and congested level crossings across Melbourne, as well as undertaking network improvement projects, to improve safety and efficiency for rail and road users, pedestrians and cyclists.

Achieving high quality urban design is a long-term, multi-disciplinary process that is intent on creating integrated, useful, attractive, safe, equitable, sustainable and economically successful places. By incorporating a focus on urban design from the outset of our project design process, we aim to build cohesive and inclusive communities by taking opportunities to reduce carbon, design environmentally sensitive infrastructure and creating new public spaces that are safe and respectful of local demographics.

This Urban Design Framework (UDF) sets LXRP expectations for high quality, context-sensitive urban design outcomes. It sets out principles, measures and benchmarks so that we can be sure to design outcomes that meet those expectations.

Thank you to all the people who have contributed to this document and who are working hard to achieve great urban design outcomes for the project. Together, we are shaping the future landscape of Melbourne, its transport network and its role in building and sustaining healthy and prosperous communities.

MATTHEW GAULT
Chief Executive Officer
Level Crossing Removal Project

1. INTRODUCTION

1.1   WHAT IS URBAN DESIGN AND WHY IS IT IMPORTANT?

Urban design is the practice of shaping the built environment to deliver great places that are functional and enjoyable for people. It seeks to maximise safety and amenity for all users* when delivering integrated transport infrastructure to local neighbourhoods.

Urban designers at LXRP actively engage the knowledge of Registered Aboriginal Parties (RAPs), to enhance integrated Indigenous design opportunities that raise awareness and promote reconciliation.

While urban design can be tailored for a specific project, the evolving nature of built environments means that urban design is also a long-term process.

Urban design employs a multi-disciplinary approach that includes planning, architecture, engineering, landscape architecture and sustainability. It draws on these disciplines to create an integrated vision for an area, LXRP then deploys the resources and skills needed to bring that vision to life.

Operating at different scales, from city-wide structures to micro-elements such as lighting, from the point of initial project definition, through options development, concept and detailed design, construction and evaluation stages, urban design is a crucial consideration throughout the entire project lifecycle.

Best practice urban design processes and outcomes improve:

–   the functionality, character and spirit of public places for individuals and communities

–   the levels of comfort, accessibility, safety and inclusiveness of places for all users

–   the expression of social and cultural values associated with places

–   the socio-economic composition, diversity and economic vibrancy of urban areas

–   the sustainability and resilience of urban environments

–   community connectedness, health and wellbeing, and pride of place.

Early involvement of urban design in project development yields more integrated and cost-effective outcomes. It is important in even the smallest urban interventions, which is why at LXRP, its objectives are considered alongside technical considerations from the project outset through to delivery.

Figure 1 shows that when key design initiatives are put in place early, there is greater opportunity for good design to be realised.

More broadly, urban design may act as a catalyst to unlock transformative urban integration and urban renewal opportunities.

*refer to glossary for "all users"

Figure 1 Design quality and delivery stages (Source: OVGA Government as Smart Client)
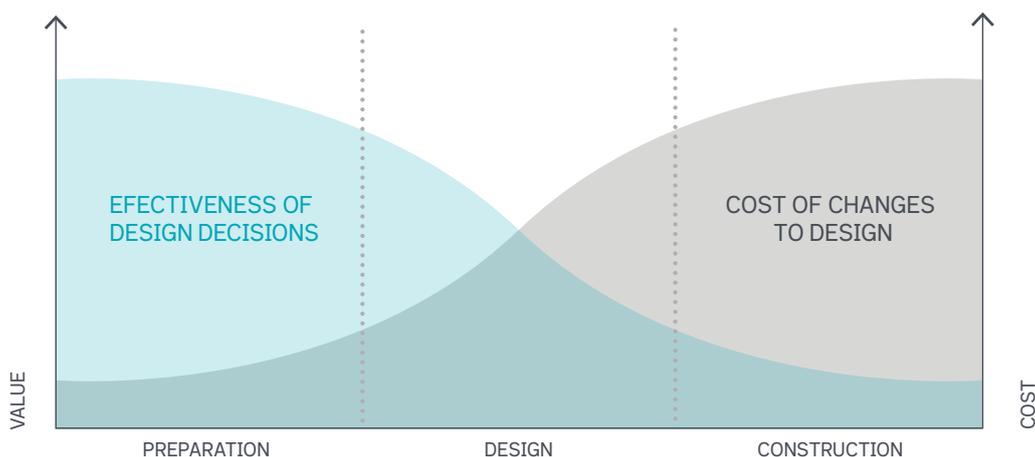
Factors that have a significant positive impact on design outcomes for a given project include:

- developing a vision statement
- quality of the brief
- adequacy of the budget
- adequacy of the program
- good design review processes
- good management and governance of urban design process
- skill of the design team
- design team involvement in construction
- ability to integrate multiple design disciplines.

Urban Design Approach

VIDA delivers city shaping projects that will create a lasting legacy for Victoria and contribute to the wellbeing of all Victorians. Incorporating the principles and practices of great urban design and place making is therefore a priority if this investment is to deliver a full range of benefits for current and future Victorians.

The Project teams of VIDA will deliver a design approach that is based on the five pillars outlined below:

- *Common vision: Create a lasting legacy for Victoria through great urban design and place making in our major transport and health infrastructure projects.*

- *Accountability: Prepare urban design documents and requirements to guide the planning, design and evaluation of major transport and health infrastructure projects.*

- *People focused: Consider the needs of users and community in the design of major transport and health infrastructure projects, including identifying key local considerations and opportunities to reflect community values and identity, and promote inclusive design outcomes.*

- *Integration: Articulate processes and systems for achieving high quality, integrated urban design outcomes for the whole of project life cycle, retaining consistent design expertise, and industry and stakeholder input at all stages of the project from development through to procurement and delivery.*

- *Design review: Ensure a robust design review process through a design advisory panel, or similar, comprising urban design professionals from OVGA and/or other independent organisations, as appropriate, at key milestones throughout the project lifecycle.*

1.2 PURPOSE AND ROLE OF THE UDF

The UDF informs planning and design for level crossing removals and related projects (see bigbuild. vic.gov.au/projects/level-crossing-removal-project for a full list of LXRP sites). It guides high quality, context sensitive urban design to enhance urban amenity and minimise adverse impacts. The UDF is used to:

- inform site specific urban design guidelines

- provide the basis for the LXRP Urban Design Advisory Panel (UDAP) to provide advice and feedback

- influence project design and delivery

- evaluate design proposals and assess built form outcomes

- establish the quality expected by the Victorian Government

Designs address rail and road infrastructure, active transport networks and broader place-making opportunities.

The UDF encourages private sector expertise and innovation when creating outstanding urban design outcomes. This is achieved through a collaborative design approach when developing technical proposals.

Rather than providing prescriptive urban design solutions, the UDF sets out what is to be achieved in terms of urban design quality and performance.

The UDF is a living document updated as the LXRP program progresses. While providing program-wide guidance, it complements the Urban Design Guidelines (UDG) and project requirements for each site. Figure 2 shows the relationship between these documents. Guidance documents, technical reports and lesson learnt studies also support the UDF.

Additionally, LXRP provides program-wide guidance through the LXRP Indigenous Design Guidelines, which sets out LXRP's expectations for engaging with Traditional Owners in Indigenous Design, including principles and process.

Figure 2 Purpose and role of LXRP documents

1. Urban Design Framework

- Overarching framework that describes high-level design aspirations and expectations of the state.
- Contains eight key urban design principles, with objectives, measures and benchmarks.
- Used to inform and influence the development of design proposals and provide a framework for design evaluation.

2. Urban Design Guidelines

- Based on local, regional and strategic context analysis.
- Establishes design intent for each location.
- Includes site-specific design requirements that guide the design and delivery of projects.

3. Project Requirements Specification

- Detailed performance requirements for the project addressing disciplines including urban design, architecture and landscape architecture.
- References the UDF and site-specific UDG.

1.3 POLICY CONTEXT AND RELEVANT DOCUMENTS

The UDF is informed by and seeks to give effect to a range of policies and strategies at both the federal and state government level. The key policy documents are outlined below.

- the eight principles of the UDF are derived from the Australian National Urban Design Protocol 'Creating Places for People'. These principles outline the expected urban design outcomes for LXRP and are supported by objectives, measures and qualitative benchmarks.

- the Transport Integration Act 2010 (TIA) is Victoria's principal transport statute. The TIA sets out a vision for an integrated and sustainable transport system that contributes to an inclusive, prosperous and environmentally responsible State. It requires the transport system to increase environmental sustainability and ensure the greatest benefit for health and wellbeing.

- the UDF has been informed by the Public Transport Victoria (PTV) Network Technical Standard for Public Transport Precincts (2017). Precinct environments will be designed to provide safe and predictable movements prioritised according to PTV's transport mode hierarchy, which prioritises pedestrians and bicycle access over private vehicle access.

- the Victorian State Government developed the Urban Design Guidelines for Victoria to support state agencies, local government and the urban development sector to create neighbourhoods that foster community interaction and make it easy for people of all ages and abilities to live healthy lifestyles and engage in regular physical activity.

- the Metropolitan Planning Strategy 'Plan Melbourne 2017–2050' (Plan 2050) is structured around nine principles and seven outcomes. By applying the UDF, level crossing removals and associated projects will be integral to realising 20-minute neighbourhoods, a key principle of Plan 2050. In addition, the UDF will support several outcomes of Plan 2050:

- Outcome 4: Melbourne is a distinctive and liveable city with quality design and amenity

- Outcome 5: Melbourne is a city of inclusive, vibrant and healthy neighbourhoods

- Outcome 6: Melbourne is a sustainable and resilient city.

The UDF is guided by relevant legislation, such as the Disability Discrimination Act 1992 and the Gender Equality Act 2020, to ensure the delivery of inclusive and equitable urban design outcomes for all users. It plays an important role in facilitating compliance by establishing principles and objectives designed to promote vibrant and safe public spaces and transport precincts.

Victoria's Recycled First Policy supports the state's plan to improve the recycling sector, growing recycling capabilities and fuel innovation, particularly among Victorian major transport projects.

Figure 3 provides some context between the different elements of urban form, the relationship and scale of planning, and LXRP documentation in which they are addressed.

LXRP considers other urban design frameworks, strategies and guidelines among Victoria's Big Build projects to create prosperous, safe and vibrant places for Melbourne.

LXRP acknowledges the work of other institutions in advocating for high quality urban design outcomes, including the Australian Institute of Landscape Architects and Office of the Victorian Government Architect (OVGA) among others. Appendix B provides links to position statements, guidance notes and other useful documents that have informed the UDF and are relevant to urban design.
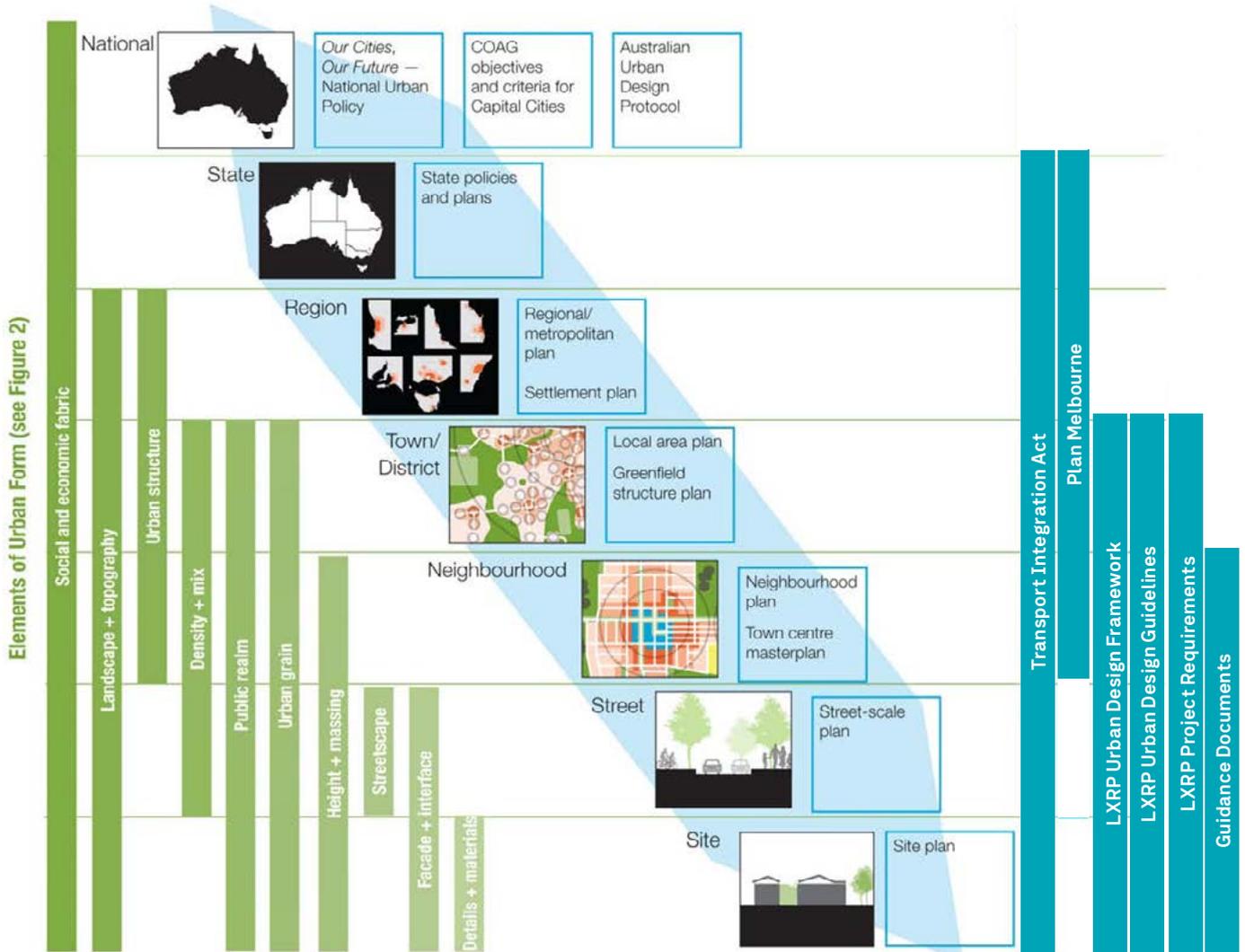
Figure 3 Line of sight from national to site level

Diagram adapted from Creating Places For People: an urban design protocol for Australian cities, published by Australian Sustainable Built Environment Council, 2011.

1.4   LOCAL CONSIDERATIONS

Each project site is viewed as an opportunity to improve a local place, the precinct, rail corridor and associated journey.

Each site, whether it be a level crossing removal, new station, road or associated development site, has its own unique character, sense of place and challenges. To make the most of each site's potential, consideration should be given to the evolving needs of communities and those who live in or may use these areas.

Key considerations for each place are informed by Local Structure Plans that address each council area's unique conditions and give effect to the policies and objectives set out for activity centres in state policy. They guide the major changes to land use, built form and public spaces that together can achieve economic, social and environmental objectives for the centre. This process also includes timely discussions with council and the community as part of consultation for the projects. Early engagement supports the successful delivery of the project through sharing detailed local knowledge and strategic aspirations for the community as well as requirements as a future asset owner.

While the UDF provides program-wide guidance, local considerations are identified in the UDG prepared for each project site.

UDGs articulate the vision and design intent, identify key opportunities and issues, and establish guidelines for the site consistent with UDF principles. They are also developed in consultation with local councils and key agency stakeholders.

Project teams undertake careful analysis through site investigation and research to understand local issues and opportunities. The proposed design solution demonstrates how it responds to these issues and opportunities to enhance local outcomes. This includes examining each site, associated precincts and the corridor as a whole to establish a sound basis for a responsive design solution. When multiple sites are delivered together or along the same corridor, project teams should consider a consistent line-wide approach or a distinct standalone design for each site, aiming for cohesion while respecting local context. When engagement with Traditional Owners for Indigenous Design outcomes is sought, project teams refer to the principles and process outlined in the LXRP Indigenous Design Guidelines.

2. FRAMEWORK STRUCTURE

The UDF will be used to assess and evaluate a design proposal at each phase, from inception through to delivery.

High quality design will be achieved through the holistic application of the principles, objectives, measures and benchmarks contained within the UDF and subsequent site-specific UDG.

VISION AND ASPIRATIONS	The vision and aspirations describe the goal to achieve high quality urban design outcomes for the whole project and align with the strategic intent for the precinct and place.
PRINCIPLES	The principles and objectives provide overarching expectations for high quality design across the whole project, and are used to inform preferred options, the development of solutions, as well as the evaluation of proposals and built outcomes.
	The eight principles of the UDF are derived from the Australian National Urban Design Protocol 'Creating Places for People'. These principles outline the expected results for achieving good urban design outcomes.
OBJECTIVES	The objectives clarify the principles and describe specific outcomes to be achieved to give effect to each principle.
MEASURES AND BENCHMARKS	The measures provide performance requirements, demonstrating achievement of the principles and objectives. For further details, please refer to Section 5.

3. URBAN DESIGN VISION AND ASPIRATIONS

3.1 VISION

A collaborative, interdisciplinary approach integrates technical and design aspects in project solutions, and enables urban design, architectural and landscape architectural outcomes that focus on creating great places for people and the environment.

3.2 ASPIRATIONS

Our aspirations to support the vision are that:

- design excellence will be achieved to benefit all of the transport network, its users and the communities and places through which the project passes
- the project will maximise positive impacts on the environment, community and local economy
- high quality urban design will be closely integrated with best practice technical solutions
- opportunities to provide added community benefits will be pursued, including health and wellbeing through urban amenity and comfort
- collaborative, multi-disciplinary integrated design thinking will be achieved through an urban design led process
- we implement a climate-resilient design process with sustainability experts to define project sustainability goals and integrate innovative solutions to mitigate impacts of climate change

4. PRINCIPLES AND OBJECTIVES

Urban design outcome ENHANCING	Urban design outcome DIVERSE

Principle 1
IDENTITY

A well-defined identity and sense of place is key to creating strong and vibrant communities.

Principle 2
URBAN INTEGRATION

A well-integrated environment is a fundamental framework for the successful development of a great place.

Objective 1.1 Journey

Enrich the civic identity of the road and rail corridor to enhance the journey to create engaging and memorable experiences.

Objective 2.1 Integration

Provide an integrated design aligned with context analysis, local government and community vision and relevant broader government policies.

Objective 1.2 Responsiveness

Integrate infrastructure to respond and contribute to the aspirations and valued social, cultural and physical qualities of the local area.

Objective 2.2 Reconnection

Reconnect communities and places previously severed by infrastructure (such as a rail line) and foster community cohesion.

Objective 1.3 Heritage

Respect and respond to both historic cultural heritage and, through engagement with Traditional Owners, Aboriginal cultural values.

Objective 2.3 Urban renewal

Demonstrate how the new works will integrate with and support existing civic and commercial activity, and act as a catalyst for future urban renewal.
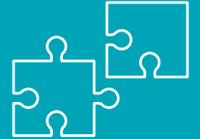
Objective 1.4 Sense of place

Recognise, maintain and enrich the identity of the local neighbourhood. Develop a design that embodies the precinct character and its relationship to local communities to provide a distinctive sense of place.

Objective 2.4 Future-proofing

Respond to strategic transport and land use planning for the networks and broader precincts.

Objective 1.5 Consultation

Enhance the quality of project outcomes by working closely with stakeholders and communities to identify and prioritise key local issues and opportunities.

Urban design outcome	Urban design outcome
CONNECTED	**WALKABLE**

Principle 3
CONNECTIVITY & WAYFINDING

A well-connected and legible environment contributes significantly to a strong economy, the use of public and active transport, and an integrated community.

Objective 3.1 Connectivity

Improve connectivity and enable ease of movement between places for all users by providing direct connections and clear sightlines throughout the station precinct, road and rail corridor.

Objective 3.2 Legibility

Design for legibility and intuitive wayfinding by providing a clear hierarchy of community links, paths and spaces that reduces reliance on signs.

Objective 3.3 Multi-modal transport

Provide a range of transport options and facilitate efficient intermodal connections that avoid conflict between all users.

Principle 4
ACCESSIBILITY

A highly accessible and inclusive environment provides a positive user experience and contributes to health and wellbeing of the community.

Objective 4.1 Universally inclusive

Improve precinct and station accessibility for all users by designing for universal accessibility, promoting equity, and minimising perceived and physical barriers in public spaces within and beyond the precinct.

Objective 4.2 Prioritise pedestrians

Prioritise walkability by coordinating with existing networks and land use patterns, providing high quality and generous connections and pedestrian friendly road environments.

Objective 4.3 Active transport

Design to encourage and prioritise walking, cycling and using public transport within and beyond the precinct.

| Urban design outcome
SAFE | Urban design outcome
COMFORTABLE |

Principle 5
SAFETY

A safe environment is essential for a strong and connected community.

Principle 6
AMENITY

High quality urban amenity associated with the experience of a great public place contributes to a successful, equitable and prosperous community.

Objective 5.1 Personal safety

Apply Crime Prevention Through Environmental Design (CPTED) principles to design places that improve community safety and wellbeing, and reduce opportunities for crime and antisocial behaviour.

Objective 5.2 Natural surveillance & access

Maximise visual connections and passive surveillance opportunities in stations, corridors, and public spaces. Provide clear, accommodating and legible routes, entries and exits.

Objective 5.3 Perception of safety

Inform the design through an understanding of how all users perceive places.

Objective 6.1 Comfort

Design for the physical comfort of all users with access to good quality daylight, artificial lighting and shelter.

Objective 6.2 Wellbeing

The design contributes to people's wellbeing by providing an enjoyable environment with access to nature and opportunities for social interaction.

Objective 6.3 High quality

Provide a high quality design outcome that makes a positive contribution to the local area through a well-resolved concept, design development and quality-built construction.

Objective 6.4 Impact mitigation

Avoid and/or minimise the impacts of noise, spilled light, visual bulk, overshadowing and visual clutter.

Urban design outcome **VIBRANT**	Urban design outcome **ENDURING**

Principle 7
VIBRANCY

Activation and diversity of experience supports an engaged and broad cross-section of community.

Principle 8
RESILIENCE & ENVIRONMENTAL SUSTAINABILITY

Places and corridors must be sustainable, enduring and resilient to support and nurture current and future generations.

Objective 7.1 Put people first

Provide an integrated, welcoming and inclusive design that facilitates social interaction and positive engagement between people, spaces and activities.

Objective 8.1 Climate resilience

Design infrastructure and precincts that are resilient to extreme weather events and long-term climate change.

Objective 7.2 Engaging public space

Create memorable and inspiring places that encourage people to interact.

Objective 8.2 Biodiversity

Facilitate conservation and biodiversity through the protection and creation of contextually appropriate environments and regenerative landscapes.

Objective 7.3 Range of experiences

Provide opportunities for a range of uses and experiences that are accessible at different times of the day and the year.

Objective 8.3 Carbon reduction

Reduce our carbon footprint through conscious design choices, consideration of project carbon impacts and utilisation of low carbon alternatives.

Objective 7.4 Creative applications

Explore opportunities to integrate art in response to local context to enhance activation and sense of place.

Objective 8.4 Durability and endurance

Create a positive built legacy through precincts that endure in quality, contribute to the circular economy, are easily maintainable and age gracefully.

5. MEASURES AND BENCHMARKS

INTRODUCTION

The following measures provide performance requirements for a range of elements that demonstrate how the principles and objectives are achieved.

The benchmarks provide a series of images that show an appropriate and high standard of design quality expected for project elements, drawn from relevant level crossing removals and other precedent projects (refer to B1 to B57).

The benchmarks provide a reference to demonstrate the level of quality required to meet or exceed the measures in terms of conceptual and detailed design integration, innovation and detailed resolution.

Together, the measures and benchmarks set aspirations for projects to achieve the principles and objectives of the UDF. A successful design will respond to the relevant measures and benchmarks.

Three spatial contexts (Figure 4) describe the different scales of level crossing removal projects:
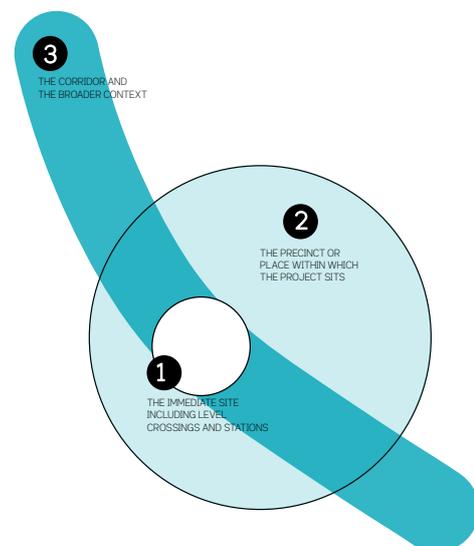
1. the immediate site including level crossings and stations

2. the precinct or place within which the project sits

3. the corridor and broader context.

The UDF principles, objectives, measures and benchmarks apply to all three contexts.

Contents

Figure 4 Urban design spatial contexts

3 THE CORRIDOR AND THE BROADER CONTEXT

2 THE PRECINCT OR PLACE WITHIN WHICH THE PROJECT SITS

1 THE IMMEDIATE SITE INCLUDING LEVEL CROSSINGS AND STATIONS

5.1 PROGRAM-WIDE MEASURES

This section applies to all projects across the program.

M1.1 The design delivers a **high quality, well-resolved, innovative outcome** that is enduring in expression and timeless in nature.

M1.2 The design addresses **visual impact** through integration with topography and landscape.

M1.3 The design creates a welcoming, **safe** environment by:

– maximising passive surveillance through integration with the neighbourhood

– avoiding entrapment

– supporting openness through integrated lighting design and daylight.

M1.4 The design is joyful, delightful and playful, resulting in a **visually engaging and interactive experience**.

M1.5 The design contributes to the **line-wide identity** as well as legibility of the corridor.

M1.6 The design aligns with **DTP's 20-minute neighbourhood strategy**.

M1.7 The design minimises **visual clutter** and delivers a consistent palette of design elements.

M1.8 The design is adaptable for **future infrastructure** needs in the precinct.

M1.9 **Early engagement** occurs when pursuing design opportunities in collaboration with Traditional Owners.

M1.10 Structural, functional and **service elements** are integrated with the landscape, land use and character of the precincts.

B1 Carnegie Station, Carnegie ⭐
Elevated rail allows public space to be created under the viaduct

B2 Craigieburn Bypass, Lalor
High quality design outcome enhances Melbourne's cultural identity and reputation for design innovation and excellence

B3 Carrum Station, Carrum ⭐
Beach-side identity reinforced with urban marker, textured concrete, and palm trees

M1.11 The design supports **climate resilience and environmental sustainability** by reducing embodied carbon, maximising energy efficiency and minimising urban heat island impacts.

M1.12 **New interfaces** are integrated and positively contribute to the neighbourhood.

M1.13 The design uses high-quality **precedents** to inform the development of large and small-scale elements.

B4 Coburg Station, Coburg ⭐
Contemporary station design responds to heritage precinct

B5 Merinda Park Station, Cranbourne North ⭐
Precinct layout is intuitive and ramps, lifts and stairs are well integrated

B6 Cherry Street underpass, Werribee ⭐
Pedestrian connection at removed level crossing is re-established, generously proportioned and integrated with the neighbourhood

5.2 INFRASTRUCTURE MEASURES

This section applies to the alignment or rail and road infrastructure, and elements such as bridges, viaducts and retaining walls.

M2.1   Within site constraints, the horizontal and vertical **alignment** of the rail or road geometry responds positively to the local context by:

- **integrating** with adjacent activity centres, local street geometry and public space.

- considering any impacts of **construction methodologies** on landscape and urban design.

- aligning rail and road to maximise retention of **existing vegetation**.

- considering how the solution aligns with activity centre **structure plans**.

- maximising **active transport** links across and along corridors for improved directness, amenity and safety for users.

- **consolidating infrastructure** to minimise footprint and maximise landscape opportunities.

- promoting intuitive **wayfinding**.

- aligning CSR and underground services to **maximise deep soil zones** for canopy trees.

- reducing the need for screening to **mitigate overlooking** to adjacent neighbours, overshadowing and light spill issues.

B7 Olympic Sculpture Park, Seattle, USA
A high quality public space is created through grade separation

B8 Bell Station, Preston
Elevated rail reconnects precincts and communities

B9 Cardinia Road, Pakenham
Design solution provides pedestrian connection to all four quadrants of the precinct, and to the station

M2.2 Rail and road alignments are designed to strengthen **connectivity** by:

– visually and physically **connecting precincts** that were previously disconnected

– supporting multi-modal access to enable and encourage **growth** in sustainable transport modes

– providing direct and universally accessible **cross-corridor connectivity** to increase permeability along the corridor

– demonstrating the potential for **integrated development opportunities**.

M2.3 The design of new and modified bridges, viaducts, or ramps should respond to **local context** appropriately.

M2.4 Elevated structures are aligned to **minimise visual bulk** to adjacent sensitive interfaces and public space.

M2.5 Bridge pier **alignments and crosshead clearances** provide comfortable pedestrian environments and maximise public space opportunities.

M2.6 Maximise **extent of open spans** in elevated structures to support direct cross corridor pedestrian movement.

M2.7 Elevated structures maximise **daylight** to the ground plane and public space, while minimising overshadowing to adjacent sensitive interfaces.

M2.8 Maximise bridge spans for improved pedestrian amenity and clear sightlines to improve **passive surveillance**.

M2.9 Align containment barriers on road bridges along back of kerb to increase pedestrian and cyclist **safety** and amenity.

M2.10 Maximise **visual permeability** on road bridges between paths and vehicles by reducing concrete barrier heights.

B10 Skate Park at Werribee Street, Werribee
Generous bridge spans enable a significant public space legacy with access to daylight

B11 Glen Huntly Station, Glen Huntly
Trench wall is well-considered and appropriately treated

B12 Melton Highway, Sydenham
High quality bridge abutment with pleated, textured full height concrete walls

M2.11 Provide high quality **retaining walls** to adjacent land uses by maximising textured relief and colour in response to local context.

M2.12 Ensure rail trenches are sufficiently lowered to allow at-grade, high-quality, seamless **cross-corridor universal pedestrian access**.

M2.13 Adjacent **future development** should be enabled by appropriate retaining wall systems in rail or road cuttings.

M2.14 Expose natural **rock in cuttings** where stable to celebrate local geology and contribute to corridor identity.

M2.15 Ensure **structural props** in rail trenches are designed to contribute positively to platform environment.

M2.16 Maximise **opportunities for tree planting** where barriers are required in road reservations.

M2.17 **Roadside barriers, anti-throw screens and corridor fencing** positively contribute to the station precinct and corridor.

M2.18 **Integrate WSUD** with landforming and infrastructure for stormwater management and biodiversity.

B13 Caufield to Dandenong corridor, Clayton
WSUD is functional and provides a buffer between residential areas and rail infrastructure

5.3 PUBLIC SPACE MEASURES

This section applies to the design of public spaces outside the paid concourse, such as forecourts, parkland and activity nodes.

M3.1 Accessibility and general amenity for the community is improved through a **coherent, legible and continuous public space**.

M3.2 Public spaces are **comfortable and inclusive** with good access to daylight, shade, shelter and seating.

M3.3 Public spaces support a diversity of **active and passive uses**.

M3.4 The design enhances **visibility and surveillance** through clear sightlines and minimising visual clutter.

M3.5 Station forecourts are interchanges that allow for **seamless movement of pedestrians and cyclists** during peak times while accommodating spaces for people to wait.

M3.6 **Street furniture** is comfortable, robust and appropriately located.

B14 Karrum Karrum Bridge, Carrum
Inclusive and welcoming space acknowledges local First Nations history

B15 Centre Road activation node, Clayton
Height and design of rail bridge provides openness and connectivity across corridor

B16 Mentone Station heritage deck, Mentone
Creation of new deck serves as an event space, creating public space in a narrow corridor while showcasing heritage buildings

5.4 LANDSCAPE MEASURES

This section applies to the natural and modified landscape including planting, biodiversity habitat and maintenance.

M4.1 **Habitat value and the biodiversity** of flora and fauna communities along the corridor and public spaces are enhanced and increased in response to ecological vegetation communities where appropriate.

M4.2 The **corridor landscape** is enhanced through a coherent, well resolved planting design with consideration of diversity, densities, form, colour and texture.

M4.3 The design of new infrastructure, car parks and ancillary buildings are aligned to **minimise loss of mature trees**, remnant vegetation, significant landscapes and open space.

M4.4 Assess existing trees and vegetation for **significance and ecological value and retention**. Assessment to be undertaken by appropriately qualified specialists prior to finalising alignment options.

M4.5 **Significant existing trees** are integrated with the design of new infrastructure.

M4.6 Maximise **tree canopy coverage** to enhance the immediate and surrounding landscape through shade, wind protection, comfort and visual amenity.

M4.7 **Cut and fill batter slopes** are no steeper than 3:1 to enable good plant growth, reduce risk of erosion and improve visual amenity.

M4.8 **Plant species selection**, densities and layout are resilient to changes in climate and suit the micro-climate.

M4.9 Planting design should provide **visual buffers** to service infrastructure from sensitive receptors.

B17 Hoppers Crossing Station, Hoppers Crossing
Low maintenance species are selected appropriate to local micro-climate

B18 Seaford Road, Seaford
Landscape embankment with good plant coverage and diversity of species

B19 Mernda Rail Extension, Mernda
Retained trees and ground covers as part of the rail alignment

M4.10 **WSUD and drainage basins** are integrated into the landscape with shallow sided batters for improved planting outcomes and reduced fencing requirements.

M4.11 Planting design for feature and raised beds in station environments considers the need for **irrigation** early in the design process.

M4.12 Indigenous, **native and exotic species** are specified relevant to context, and in regard to environmentally sensitive zones.

M4.13 **Vertical greening opportunities** are considered where there is limited space for deep soil planting.

M4.14 Ensure high quality **plant stock** is used to maximise long term durable plant health.

M4.15 **Maintenance practices** support the landscape design intent and are agreed with maintainers to ensure ongoing healthy plant growth.

M4.16 Appropriate **site preparation** is implemented to enable successful plant growth.

M4.17 Tree planting, lighting and CCTV layouts are coordinated to **maximise the number of trees** whilst addressing safety concerns.

M4.18 Diverse and layered planting increases safe passage, shelter and food sources for abundant species and creates **visually dynamic landscapes**.

B20 Toorak Road, Kooyong
Well considered groundcover planting allows for sight lines between cyclists and pedestrians

B21 Cherry Street, Werribee
Terraced embankment shows diverse planting palette

B22 Bayswater Station, Bayswater
Built form responds to local topography

5.5 ACTIVE TRANSPORT MEASURES

This section applies to pedestrian and cyclist elements such as paths, underpasses and bicycle parking.

M5.1 The design promotes efficient, comfortable, safe and legible **active transport** with:

– priority modes accommodated

– walking and cycling paths that cater for desire lines

– intuitive wayfinding through visual and physical connectivity

– cycling facilities that are safe, robust and an integral part of the station design.

M5.2 Existing pedestrian and cyclist connections are re-established at locations that increase **cross-corridor connectivity** and retain local desire lines. New paths build on and feed into existing and proposed networks.

M5.3 **Wayfinding** is intuitive and consistent.

M5.4 Bridges provide direct connections for pedestrians between precinct quadrants.

M5.5 Road bridges with pedestrian and cycling paths minimise the need for landings to provide a **comfortable walking and cycling experience**.

M5.6 The **existing pedestrian and cycling network** along and across the rail corridor and to the station precinct is enhanced for all users.

M5.7 Pedestrian and cycle **paths are safe and clearly delineated** through the station precinct.

M5.8 **Pedestrian road crossings** are raised, where possible, and are safe and appropriately located.

M5.9 Transition between levels along pedestrian and cycle paths are designed to **minimise ramps and stairs**.
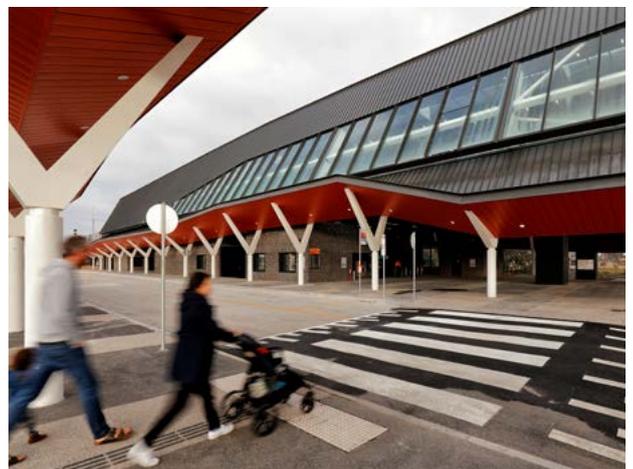

B23 Carrum Station, Carrum
High quality paving enables intuitive wayfinding and responds to coastal context

B24 Bell to Moreland corridor, Coburg
Separated paths enhance safety for pedestrians and cyclists

B25 Mernda Station, Mernda
Raised pedestrian crossing increases safety and connectivity

M5.10 Pedestrian and cycle routes are designed to **minimise conflict** with other modes of transport.

M5.11 Pedestrian and cyclist **underpasses** are designed to:

– **maximise width and height and minimise length**

– provide clear sightlines to the approaches and through the underpass to maximise safety and passive surveillance

– maximise **daylight** and supplement with well-integrated lighting through and to the local street network

– positively contribute to amenity with **generous open approaches**

– ensure planting design supports identity and maintains clear sightlines

– ensure access is **well connected**, integrated with landscape and maximises passive surveillance

– maximise openness between underpass and adjacent road or rail, avoiding bridge piers between them

– ensure drainage and inspection openings are carefully resolved.

M5.12 **Bicycle storage** is safe, comfortable, visually permeable and appropriately located.

M5.13 The **alignment of paths** minimises vegetation removal and is coordinated with utility placement.

B26 Ginifer Station parkiteer, St. Albans
Parkiteer is visually permable and in close proximity to station

B27 Aircraft Station, Laverton
Approach to pedestrian underpass is wide, welcoming and naturally lit for comfort

B28 Bell to Preston corridor, Preston
Clear and integrated signage improves wayfinding

5.6 STATION MEASURES

This section applies to station buildings and areas inside the paid concourse, such as platforms waiting areas, and vertical transport.

M6.1 Architectural and structural design are integrated to achieve high quality design outcomes and **reduce excess materials**.

M6.2 The station design responds to **user needs** including functionality, safety, amenity, ease of access, cleanliness and weather protection at all times.

M6.3 Station facilities provide **welcoming** and efficient services for all users.

M6.4 The station is **integrated** to:

– support the existing movement network and responds to **future access needs**

– maximise opportunities to **activate adjacent activity centres**

– provide suitable interfaces to, and increase amenity of, **surrounding areas**.

M6.5 The station is designed to support its role in the neighbourhood as a **transit interchange**.

M6.6 The design maximises **daylight** and user comfort in station environments.

M6.7 **Station concourses** are comfortable places to wait that provide access to daylight, high visual amenity and intuitive wayfinding.

M6.8 The **bridge undercroft** is considered as a high quality interior space with a good amenity and an appropriate level of lighting.

M6.9 Location and number of **station entries** considers passenger convenience, local movement, and land uses.

M6.10 Stations enable a cohesive and enjoyable commuter experience from **street to platform**.

B29 Carrum Station, Carrum
Platform canopy design integrates with station architecture and maximises ocean views

B30 Moreland Station, Coburg
Cladding to stairs provides visibility through perforated material to surrounding streets

B31 South Morang Station, South Morang
Welcoming and legible station entrance provides access to daylight

M6.11 Design **waiting areas** for good visual connection, amenity and support safe modal interchange.

M6.12 Provide appropriately scaled **decks above trenches** for consolidated station buildings to minimise footprint and visual barriers along the corridor.

M6.13 New **demi-trench stations** facilitate visual and physical integration with good connectivity between the station precinct and adjacent activity centre.

B32 Frankston Station, Frankston
Station entrance provides direct and universal access

B33 Reservoir Station, Reservoir
Undercroft offers comfortable shelter for commuters between transit modes

B34 Glen Huntly Station, Glen Huntly
Generous space with high roof and brick wall provides high levels of amenity

5.7 CAR PARK MEASURES

This section applies to car parking, including multi-decks.

M7.1 The car park design minimises the **removal of** mature and significant **vegetation**.

M7.2 The car park design maximises **tree canopy coverage** to mitigate urban heat, enhance user comfort and contribute to surrounding context.

M7.3 Car parks are strategically integrated with local activity centres to support **passive surveillance** and commercial activity.

M7.4 **Building massing** and articulation responds positively to the surrounding context.

M7.5 The design of multi-deck car parks provides a sufficient **offset from site boundaries** to enable landscaping in deep soil.

M7.6 The design minimises **negative impacts** (light, noise, overshadowing) to adjacent sensitive interfaces.

M7.7 **Pedestrian paths** through car parks are clearly delineated and protected through well-defined landscape planting.

M7.8 **Natural light** into multi-deck car parks is maximised.

M7.9 **Vertical circulation** is provided to the outside of the building wherever possible, to increase passive surveillance, intuitive wayfinding and articulation.

M7.10 **Ground floors** are future-proofed for sleeved IDOs or community spaces to support activity and passive surveillance.

M7.11 The design maximises **permeable surfaces**, incorporates car park-specific WSUD and supports passive irrigation.

B35 Hawkstowe Station, South Morang
Tree and tussock planting opportunities are maximised between parking rows

B36 Hallam Station, Hallam
Safe pedestrian path through carpark bordered by trees and ground covers
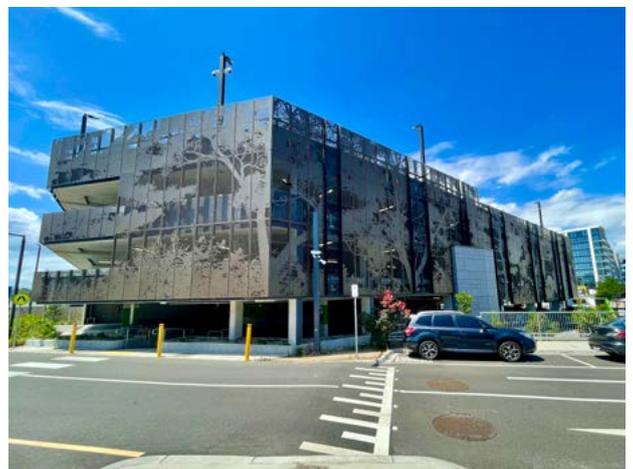
B37 Cheltenham Station multi-deck car park, Cheltenham
Perforated metal façade reflects local ecology

5.8 SUBSTATION AND UTILITIES MEASURES

This section applies to substations and elements associated with utilities, such as conduits, pit lids and service boxes.

M8.1   Substations and utilities should contribute positively to sensitive adjacent land uses through **architectural screening and landscape**.

M8.2   The **scale and access** to substations is reduced for improved amenity to users of the corridor.

M8.3   Substations and ancillary structures are **built at ground-level**, wherever possible, to minimise the need for stairs, balustrades, additional screening and noise attenuation.

M8.4   **Pit lids** are integrated with paving materials and strategically placed to avoid visual clutter and maximise landscape opportunities.

M8.5   **Services are integrated and concealed** within structures or building fabric to reduce visual clutter.

B38 South Yarra utility building, South Yarra
High quality architectural screen and brick forming part of the service building provide amenity to the precinct

B39 Murrumbeena substation, Murrumbeena
Stepped fencing screens substation and minimises visual bulk

B40 ANZAC Station utility building, Melbourne
Utility buildings articulated with a high quality concrete shell and corten fin infills

5.9 LIGHTING MEASURES

This section applies to lighting design, including functional, feature, and day lighting.

M9.1 A cohesive and **integrated approach** to functional and feature lighting responds to location, user experience, and land use.

M9.2 Lighting is designed sensitively to **reduce light spill** to neighbours and impacts to fauna.

M9.3 Lighting enhances navigation, identity, safety, and the user experience.

M9.4 Integrate new lighting with **existing neighbourhood lighting** to provide a safe and seamless user experience.

M9.5 Lighting design in **undercroft areas**, including platforms and underpasses, increase safety, amenity, and comfort.

M9.6 **Enhance identity** through feature lighting of prominent infrastructure, architecture or landscape.

M9.7 Promote **daylight** to undercroft or trench environments through high quality, transparent skylights.

M9.8 Enhance lighting, both artificial and natural, to promote **safer and more accessible walkability** for all users at night.

M9.9 Energy efficient, vandal proof and easily maintained light fixtures are used.

M9.10 Engage **lighting design specialists** with demonstrated experience to ensure a safe and high-quality user experience for all times of day.

B41 Coburg Station, Coburg
Integrated lighting celebrates structural form and façade detail

B42 Noble Park Station concourse, Noble Park
Integrated lighting accentuates design elements and contributes to commuter experience
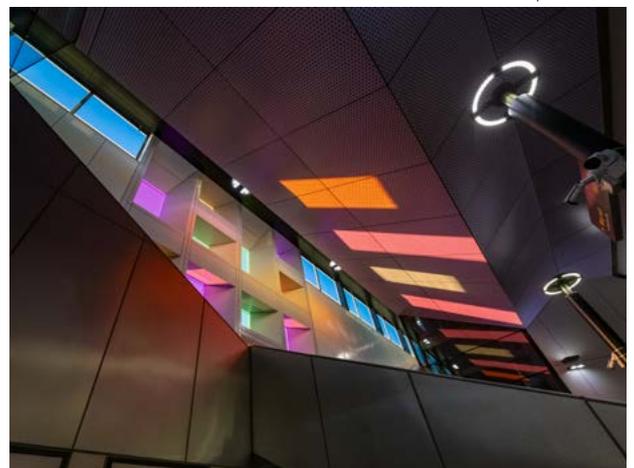
B43 Bell Station, Preston
Design maximises natural light and coloured glass to enhance commuter experience and delight

5.10 SCREENS AND BARRIERS MEASURES

This section applies to screening elements, such as privacy screens, anti-throw screens, noise walls and barriers.

M10.1 Screening elements are **coordinated with the overall design** and respond positively to adjacent interfaces.

M10.2 The design **responds to users** immediately adjacent to the screening element as well as from the broader context.

M10.3 The screening elements are well integrated with the structure to minimise **extent and visual bulk**.

M10.4 Screening elements **minimise overshadowing** of sensitive land uses including residential properties, open space, waterways, and valuable habitat.

M10.5 **Visual permeability** of anti-throw screens and barriers is maximised to increase passive surveillance and visibility for all corridor users, particularly cyclists and pedestrians.

M10.6 Screening elements are designed to discourage vandalism and enable **efficient maintenance** through articulation and texture.

B44 Bell to Preston corridor, Preston
Pleated screen celebrates major street crossing and adds interest with shadows
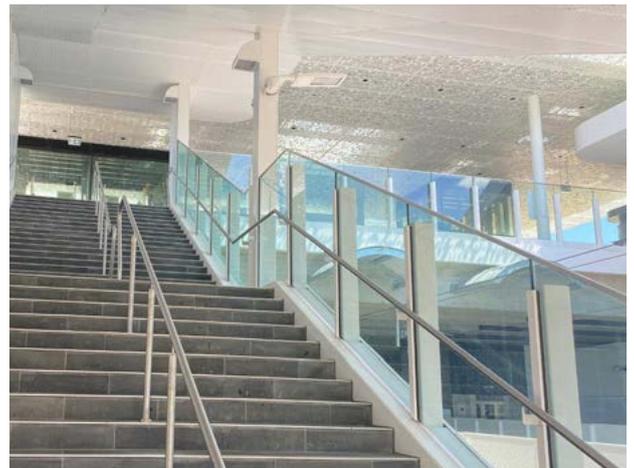
B45 Union Station, Mont Albert
Use of glass provides visual permeability and increases passive surveillance
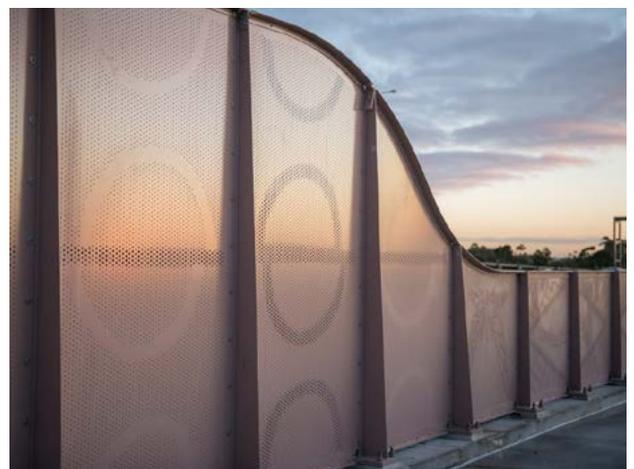

B46 Fitzgerald Road, Ardeer
Durable, robust and visually permeable anti-throw screen reflects local First Nations history with Indigenous artworks

5.11 MATERIALS AND FINISHES MEASURES

This section applies to materials and finishes such as cladding, paving and treatments to trench walls.

M11.1 The material palette is **context sensitive**, responding to the local environment, and supporting the precinct identity and wayfinding strategy for the corridor.

M11.2 A **palette of materials, treatments and finishes** is developed for the whole corridor and key precincts as part of the urban design concept, including:

– public transport interchanges, roads, bridges and elevated structures

– noise barriers, retaining walls, abutments, fencing and barriers

– pedestrian and cycle paths and infrastructure

– land forming, trenches, cut and fill batters

– activation nodes, playgrounds and undercroft spaces

– associated elements including signage, lighting and furniture.

M11.3 The materials and finishes are high quality, durable, safe, robust, **easy to maintain and age well over time**.

M11.4 Consideration is given to using a **preferred solution** when selecting materials and finishes.

M11.5 **Vandalism and graffiti opportunities** are deterred through thoughtful material surface articulation, material quality, texture and colour.

M11.6 **Construction methodology** supports high quality detailing and application of finishes.

M11.7 Materials have a low embodied energy, are **sustainable** and locally sourced, where possible, including use of recycled or reused material.

M11.8 The palette of landscaping elements aligns with **local government strategy** or palette where relevant.

M11.9 Where **shotcrete** is agreed as a suitable finish, it is consistently treated to provide a positive visual contribution to the station environment.
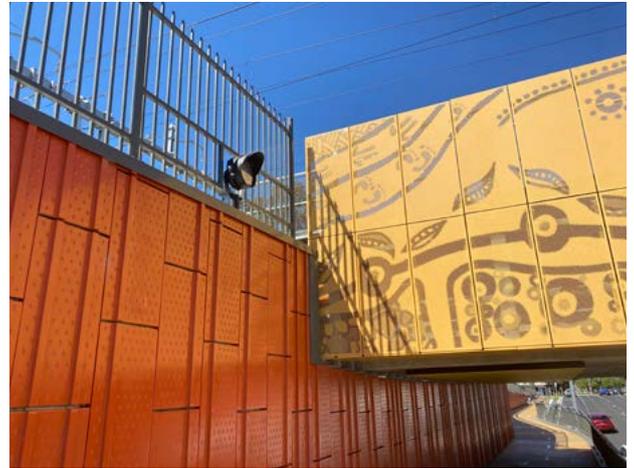
B47 Gap Road, Sunbury
Textured surfaces on architectural panels minimises the potential for graffiti
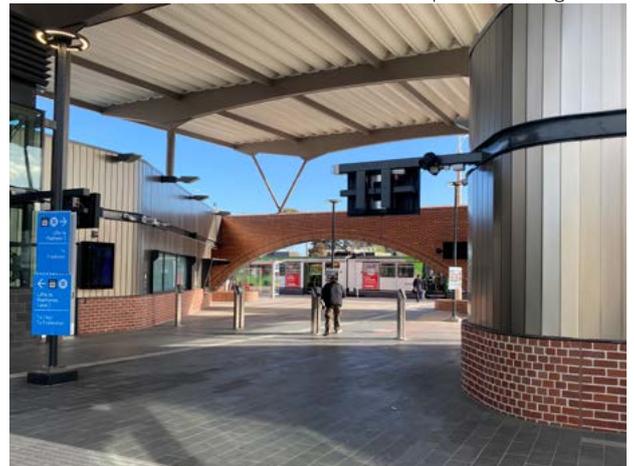
B48 Glenhuntly Station, Glenhuntly
Use of bricks reflect local identity

B49 Middle Gorge Station, South Morang
Gabion walls celebrate local rock from rail cuttings

5.12 INTEGRATED ART MEASURES

This section applies to public art opportunities.

M12.1 Artwork is **located** to provide vibrancy and interest, particularly for:

– areas that attract a high volume of visitors, such as stations

– threshold or gateway locations that serve as welcoming points

– places nominated as sites of interest by key stakeholders.

M12.2 Artwork is **engaging**, playful, interactive, surprising and leaves a lasting impression.

M12.3 Artwork is **integrated** with and complements the overall design of the project.

M12.4 Artwork is **high quality** and contemporary.

M12.5 Artwork is **unique**, supporting a variety of artists, approaches, and mediums.

M12.6 Where applicable, artwork respects Traditional Owner cultural values and responds to **local vision, character, themes and heritage**.

B50 Lilydale Station, Lilydale
Artwork on tower is well integrated with infastruture
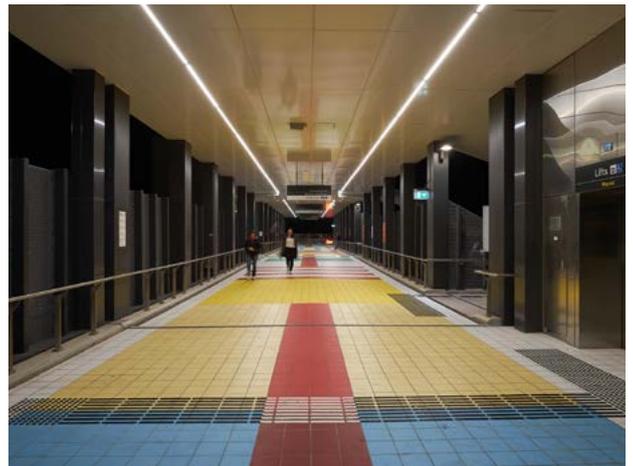
B51 Hoppers Crossing Station, Hoppers Crossing
Artwork provides visual interest within pedestrian overpass through colour and reflections

B52 North Williamstown Station, Williamstown
Artwork is visible during day and night

5.13 COMMERCIAL OPPORTUNITIES MEASURES

This section applies to kiosks and Integrated Development Opportunities (IDOs).

M13.1 Commercial developments **integrate with existing activity centres** that extend beyond the station precinct.

M13.2 The proposed built form and land uses of the IDO have **regard to the policy context of the site** and location, including relevant Plan Melbourne policy objectives that encourage higher density development in and around activity centres and at transport hubs.

M13.3 The IDO siting, design and uses integrate with the existing and proposed public transport infrastructure to support safe, legible and desirable **intermodal connectivity**.

M13.4 Kiosks and IDOs contribute to the **activation of the precinct** and complement the station operation and function.

M13.5 **Landscaping** at IDO sites provides a high quality outcome through permeable surfaces, viable green infrastructure, such as climbers, and maximised tree canopy coverage.

M13.6 Alignment of IDO and **interfaces** integrate well with the public space within the station precinct. Maintenance of interface landscape is coordinated with appropriate stakeholders to sustain the functionality of the space.

M13.7 Location of **building services** (including waste management and loading/unloading areas) minimises conflict with pedestrian and cycling connections and minimises amenity impacts on adjacent public spaces.

M13.8 **Built form and fenestration** supports safety of the station precinct and provides surveillance of the area.

B53 Fish Lane, Brisbane
Successful transformation of a rail undercroft

B54 Kiosks at St Albans Station, St Albans
Retail opportunities are integrated with the station precinct

B55 IDO at Gardiner Station, Glen Iris
Residential development connects directly to the station forecourt

M13.9 Buildings facing public space are activated at the ground floor and provide **passive surveillance and interest for pedestrians**.

M13.10 **Blank walls** at IDO sites are avoided, or their visual impact mitigated, through methods like art, landscape screening or articulation of built form.

M13.11 Where portable and **temporary commercial activities** are feasible, utilities, waste services and storage facilities are located to support them and are integrated into the station design.

M13.12 Existing buildings with **heritage** importance are reactivated for commercial or other opportunities, where relevant.

M13.13 Design decisions for **heritage asset** reuse include early consideration of future ownership and management expectations.

B56 Rouse Hill, New South Wales
IDOs act as a catalyst for urban renewal

B57 Kiosk at Rosanna Station, Rosanna
Kiosk provides activation to the streetscape

6. DELIVERING THE UDF

Quality design and built outcomes are delivered throughout the project's lifecycle using the following mechanisms:

6.1 URBAN DESIGN ADVISORY PANEL

LXRP's Urban Design Advisory Panel (UDAP) includes members working in government who have particular expertise in design, planning or transport planning. A representative from the Office of the Victorian Government Architect (OVGA) is the Chair of UDAP. UDAP drives high quality outcomes and integrated design for the projects.

UDAP champions and advises on the design quality of LXRP projects. It provides stewardship for achievement of the principles, objectives and measures articulated in this UDF throughout design, development and delivery of each project.

UDAP provides expert, timely and valued advice and support to ensure high quality and integrated outcomes are achieved.

UDAP facilitates workshops and design advisory processes at key points (before major decisions are made) throughout the project lifecycle. It plays an important role in supporting decision-making by identifying and managing conflicting requirements and design outcomes.

This design-led approach is positive and iterative, promoting site responsive designs that are consistent with the aspirations of each site and adjacent neighbourhoods, and adds value to the outcomes of the program.

6.2 QUALITY ASSURANCE

Activities that support the delivery of urban design, landscape and architectural requirements include:

– review of design drawings, specifications and documentation

– review of relevant management plans by qualified design personnel

– inspection and test plans are developed for all construction activities, including landscape and architectural activities

– confirming expected design outcomes prior to construction

– encouraging active engagement of qualified and skilled landscape architects and architects to undertake verification activities during construction.

ABBREVIATIONS

The table below provides a list of acronyms used in this document:

Acronym	Definition
CPTED	Crime Prevention Through Environmental Design
IDO	Integrated Development Opportunity
LXRP	Level Crossing Removal Project
OVGA	Office of the Victorian Government Architect
PTV	Public Transport Victoria
TIA	Transport Integration Act (2010)
UDAP	Urban Design Advisory Panel
UDF	Urban Design Framework
UDG	Urban Design Guidelines
VIDA	Victorian Infrastructure Delivery Authority
WSUD	Water Sensitive Urban Design

GLOSSARY

The table below provides a definition of certain terms used in this document:

Term	Definition
All users	All users refers to the diversity of Australia's peoples: all people including Aboriginal & Torres Strait Islander peoples, people of all ages, culturally and linguistically diverse, gender and sexually diverse, and people with disabilities. This is as defined in the Australian Government Style Manual (2023).
Biodiversity	As defined by the Department of Energy, Environment and Climate Action, biodiversity refers to "all components of the living world: the number and variety of plants, animals and other living things across our land, rivers, coast, and ocean. It includes the diversity of their genetic information, the habitats and ecosystems within which they live, and their connections with other life forms and the natural world." (p. 3, Planning for Biodiversity Guidance, DEECA 2017)
Demi-trench station	A station located at a shallow section of a lowered rail alignment with a partially elevated concourse and elevated connections over trench.
Fenestration	The arrangement, proportioning, and design of windows and doors in a building.
Preferred Solution	A process or design implemented on a project that has been considered by LXRP and Alliances as recommended for further use across the LX program.
Public Space	All spaces that are publicly accessible and provide for public use and/or recreation, such as parks, plazas and street spaces. Excluding areas within station buildings or beyond the ticket line.
Registered Aboriginal Party (RAP)	The primary source of advice and knowledge for matters relating to Aboriginal cultural heritage for their area. RAPs are appointed by the Victorian Aboriginal Heritage Council, established under the Aboriginal Heritage Act 2006.
Shotcrete	A construction technique that applies liquid concrete through a hose at high velocity onto primarily vertical or overhead surfaces. Also known as sprayed concrete or gunite.
Siting	The process of selecting the optimal location for a building or structure based on factors such as land availability, topography, environmental impact, surrounding structures and intended use.
Traditional Owner (s)	An Aboriginal person with particular knowledge about traditions and the person that has responsibility under Aboriginal tradition for significant places from an area; or a person that is a member of a family or clan group that is recognised as having responsibility under Aboriginal tradition for significant places or objects originating from an area.
Walkable	As defined in the Australian Urban Design Protocol (2015), walkable refers to places that "prioritise people walking or riding before vehicles" and are "easy to get around on foot, bike, wheelchair, pushing a pram or wheeling luggage."

APPENDIX A –
FIGURE AND BENCHMARK SOURCES

All images supplied by LXRP unless identified in the tables below.

Figure	Title	Page	Source
1	Design quality and delivery stages	3	OVGA
3	Line of sight from national to site level	8	LXRP, adapted from Creating Places for People: an urban design protocol for Australian cities, Australian Sustainable Built Environment Council, 2011: https://www.urbandesign.org.au/downloads/"
4	Urban design spatial contexts	17	VicRoads (Urban Design)

B	Title	Page	Source
2	Craigieburn Bypass, Melbourne	19	Project designed by Taylor Cullity Lethlean and Tonkin Zulaikha Greer, for VicRoads. Photograph by John Gollings. inhabitat.com/wp-content/blogs.dir/1/files/2013/09/corten-steel-craigieburn-bypass1.jpg
7	Olympic Sculpture Park, Seattle, USA	21	Project designed by WEISS/MANFREDI, for Seattle Art Museum. Photograph by Benjamin Benschneider. www.weissmanfredi.com/projects/386-seattle-art-museum-olympic-sculpture-park
31	South Morang Station, Melbourne	29	Project designed by Cox Architecture, for Public Transport Victoria. Photograph by Dianna Snape. coxarchitecture.com.au/project/south-morang-rail-extension/
49	Middle Gorge Station, South Morang	35	Project designed by Grimshaw, KBR, Beca, Wood Marsh, Tract and John Holland, for the Level Crossing Removal Project. Photograph by Michael Kai. grimshaw.global/sustainability/mernda-station-cs/
53	Fish Lane, Brisbane	37	Project designed by Richards & Spence, for Aria Property Group. Photograph by David Chatfield. richardsandspence.com/fish-lane/42nyq7eo1akswaxp88bkhl7o09ihy2
56	Rouse Hill, New South Wales	38	Project designed by AJC (leading architect Keith Cottier) in association with Rice Daubney, Group GSA and Oculus, for GPT Group. Photograph by Brett Boardman. architectsajc.com/project/rouse-hill-town-centre/#

APPENDIX B - REFERENCES AND USEFUL DOCUMENTS

Document Name	URL
Creating Places for People: An Urban Design Protocol for Australian Cities, Australian Sustainable Built Environment Council	urbandesign.org.au/content/uploads/2015/08/INFRA1219_MCU_R_SQUARE_URBAN_PROTOCOLS_1111_WEB_FA2.pdf
Government as Smart Client, OVGA, 2013	ovga.vic.gov.au/government-smart-client
Network Development Plan - Metropolitan Rail, Public Transport Victoria, 2012	ptv.vic.gov.au/footer/legal-and-policies/growing-our-rail-network-2018-2025/
Plan Melbourne 2017-2050, Metropolitan Planning Strategy, Department of Environment, Land, Water & Planning (DELWP), 2017	planning.vic.gov.au/guides-and-resources/strategies-and-initiatives/plan-melbourne
Public Transport Guidelines for Land Use Development, Department of Economic Development, Jobs, Transport and Resources, 2008	vic.gov.au/public-transport-guidelines-land-usedevelopment
Transport Integration Act 2010 (Victoria)	legislation.vic.gov.au/in-force/acts/transport-integration-act-2010/073
Urban Design Guidelines for Victoria, DELWP, 2017	planning.vic.gov.au/guides-and-resources/guides/urban-design-guidelines-for-victoria
Victorian Cycling Strategy 2018-2028, Transport for Victoria, 2018	transport.vic.gov.au/getting-around/walking-and-cycling#strategy
Victoria's Recycled First Policy, ecologiq, 2020	bigbuild.vic.gov.au/about/ecologiq/recycled-first-policy
Design resources	
LXRP Indigenous Design Guidelines, 2021	bigbuild.vic.gov.au/projects/level-crossing-removal-project/benefits/urban-design/indigenous-design
AILA Position Statements	aila.org.au/iMIS_Prod/AILAWeb/Advocate/Position_Statements/AILAWeb/National_Policy_Statements.aspx
OVGA Resources for High-quality Design	ovga.vic.gov.au/ovga-resources

Document Name	URL
LXRP internal references	
LXRP Crime Prevention Through Environmental Design Guideline, LXRP, 2021	dtpli.sharepoint.com/sites/LXRP-X-Sustainability
LXRP Integrated Art Guidelines, 2023	dtpli.sharepoint.com/sites/LXRP-X-UrbanDes

Document Review/Approval Flow

Review Stage	Name	Position Title	
Document Owner	Lisa Dunlop	Senior Manager Urban Design and Urban Planning	
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	Carla Valdivia Pizarro	Senior Urban Designer	
Reviewer	Cathy Philo	Director Land, Planning & Environment	
QA check	Christina Gordan	Coordinator Controlled Documents - Engineering and Program Services	
Approver	Matthew Gault	CEO	
E&PS Recommended Location	Urban Design Hub	**Approved Version**	V6.0
Content Manager Ref (if applicable)	DOC/20/142202		
		Approved Date	July 2024

Revision History

Version	Date	Reason for change
V1.0	August 2015	Initial issue
V2.0	March 2016	General update with new chapter for Integrated Development Opportunities
V3.0	August 2016	General update with inclusion of Implementation section
V4.0	May 2018	General update and amended/new measures and benchmarks
V5.0	October 2020	General update and amended/new measures and benchmarks
V6.0	July 2024	General update and amended/new measures and benchmarks