



11 URBAN DESIGN APPROACH

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11.1 Introduction

Urban design is the practice of shaping the built environment to improve the quality and overall liveability of cities and suburbs. While it considers development within a landscape context, it also considers how people engage with the physical places around them.

Achieving high-quality urban design is a long term and collaborative process that strives to create integrated, useful, attractive, safe, environmentally sustainable and socially equitable places that benefit local communities and Melbourne as a whole. Urban design excellence brings together practitioners across the transport, planning, architecture, landscape architecture, engineering and financial disciplines, together with local and state government stakeholders and the wider community.

This chapter provides an overview of how the Level Crossing Removal Authority (LXRA) achieves urban design excellence through a robust, program-wide process, and how this approach would provide for sensitive, responsive and engaged designs for both the Edithvale and Bonbeach level crossing removal projects. This chapter should be read in conjunction with Version 3 of the Urban Design Framework (UDF) (provided in Attachment IV *LXRA corporate policies*), the draft Edithvale Urban Design Guidelines (UDG) and the draft Bonbeach UDG, provided in Attachment VI *Draft Edithvale Urban Design Guidelines* and Attachment VII *Draft Bonbeach Urban Design Guidelines*, respectively.

11.2 Urban design and the Environment Effects Statement

Section 3.3 of the Environment Effects Statement (EES) Scoping Requirements (released September 2017) states that:

'the EES, to the extent practicable, should detail the ... approach to be taken towards urban design guidelines that would be utilised to minimise visual and landscape impacts and contribute positively to neighbourhood character.'

This chapter responds to the Scoping Requirements and details the urban design approach for the projects. This approach has guided the development of draft UDGs for the projects which enable LXRA to deliver high-quality urban design outcomes and demonstrate how the projects would respond to, and mitigate, specific risks (EPR reference UD1 and UD2) identified as part of the EES process. As such, UDGs form part of the Environmental Performance Requirements (EPRs) which can be found in Chapter 9 *Environmental Management Framework*.

The projects, through detailed design, would comply with the UDGs and provide for the following urban design outcomes:

- strengthening local neighbourhood character, including the coastal landscape
- improving connectivity to the stations
- minimising visual impact
- providing universally accessible design and improving user comfort.

During construction, the installation of hoardings should be used to minimise visual construction impacts and comply with LXRA's hoarding requirements (EPR reference UD2).

The UDGs are also referenced in EPRs relating to environmental impacts associated with ecology, historic heritage, traffic and landscape and visual impacts, further discussed in Chapter 8 *Potential local impacts at Edithvale and Bonbeach*.

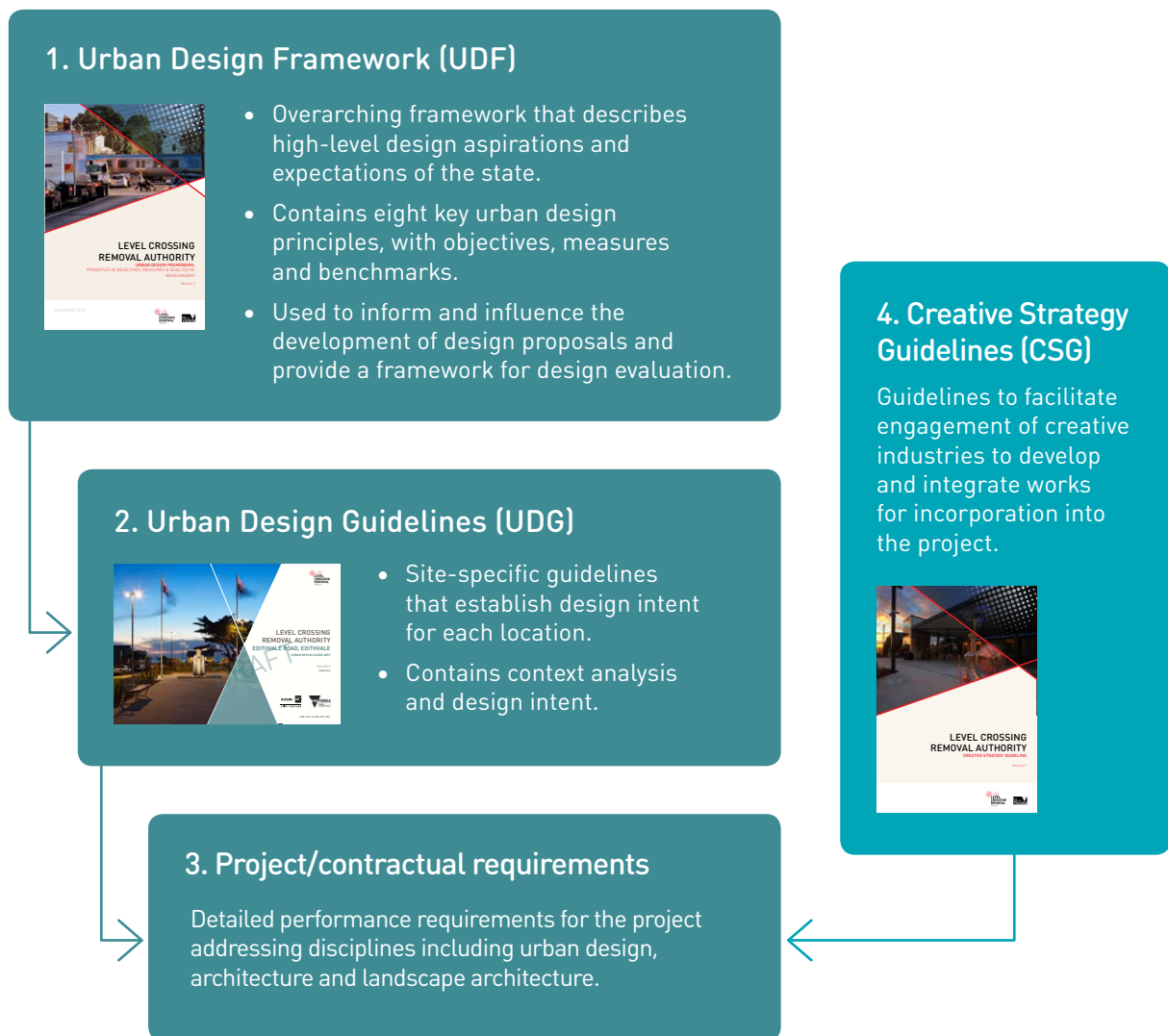
11.3 LXRA's approach to urban design

LXRA has program-wide policies and processes that guide how urban design is considered, developed and delivered for each level crossing project across the entire Level Crossing Removal Program, as well as the Mernda Rail Extension Project, the Hurstbridge Rail Line Upgrade and the Kananook Train Storage Facility Project.

These overarching policies guide the design of all projects to provide high-quality, context sensitive urban design outcomes that contribute positively to their local surrounds.

LXRA utilises the process shown in Figure 11.1 to deliver high quality urban design outcomes.

Figure 11.1 LXRA's Urban design process



The UDF is LXRA's program-wide framework that outlines the urban design approach, and guides the development of site specific urban design responses in the form of a UDG. The UDGs are then formalised through project requirements.

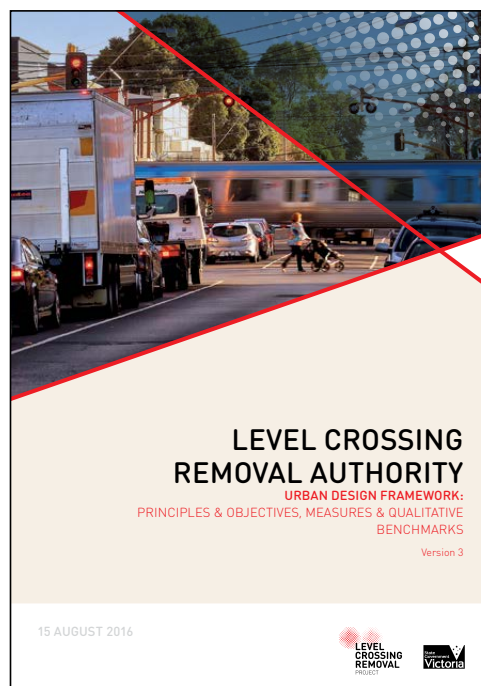
11.3.1 Urban Design Framework

The UDF sets out LXRA's expectations for how every level crossing project would achieve high-quality, context-sensitive urban design. The UDF, shown in Figure 11.2 guides each individual project through the concept, design and delivery stages, and provides LXRA with an important tool to evaluate project design.

Drawing from a program vision and design aspirations, the UDF identifies eight key principles that all projects must consider during design. Each principle contains a number of objectives that provide more specific outcomes that each project should achieve and gives effects to the principles.

Performance measures and benchmarks are also identified in the UDF. They describe more specific requirements that the design must meet and include qualitative benchmark examples that illustrate the level of quality, materials and finishes that are expected.

Figure 11.2 LXRA UDF



Design aspirations

The UDF is underpinned by aspirations that seek to:

- achieve urban design excellence that benefits all of the transport network, its users and the communities and places through which the project passes
- maximise positive impacts and minimise negative impacts resulting from the project
- provide thorough integration of high-quality urban design with best-practice technical solutions
- develop collaborative, multi-disciplinary, integrated design for the project through an urban design led process.

Principles and objectives

The UDF identifies eight key principles that guide the 50 level crossing removal projects that comprise the LXR together with LXRA's other rail projects. These principles are listed in Figure 11.3.

These key principles are derived from *Creating Places for People – An Urban Design Protocol for Australian Cities*. The principles are supported by objectives that outline more specific outcomes to be achieved, and give effect to each principle.

Measures and qualitative benchmarks

Recognising common project elements, the UDF includes a set of performance measures to assist in achieving the objectives and principles. Across the LXR and other rail projects, urban design considers, as relevant:

- | | |
|--------------------------------------|---|
| • whole of project | • pedestrian and bicycle connections |
| • train stations | • material and finishes |
| • bridges and elevated structures | • noise attenuation |
| • open cuttings | • lighting |
| • public realm and built environment | • integrated public artworks |
| • environmental sustainable design | • integrated development opportunities. |
| • landscape and natural environment | |

The inclusion of the performance measures allows for the benchmarking of common design elements across the LXR.

11.3.2 Urban Design Guidelines

UDGs are produced for each project within the LXRP, and apply the program-wide UDF to site-specific and project contexts. The UDGs, as both a process and outcome, facilitate innovative urban design outcomes and ensure that the delivery of LXRA projects result in positive urban design.

The UDGs aid in achieving urban design objectives by:

- identifying opportunities for improved connectivity, amenity, functionality and place-making with the local context and the wider urban precinct
- articulating the broader urban design vision and intents for the site
- establishing the project guidelines relating to the eight urban design principles defined in Figure 11.3 ensuring that each project design improves urban amenity through a high-quality design that responds to and is relevant for each site.

Figure 11.3 LXRA's urban design principles





Case Study: Burke Road Level Crossing Removal Project

The Burke Road Level Crossing Removal Project (the Burke Road Project) was completed in August 2016, and was the first level crossing to be removed as part of the Level Crossing Removal Program. The Burke Road Project urban design reflects a preliminary approach which has matured into the LXRA UDF and Urban Design Advisory Panel processes.

During the design of the Burke Road Project, the urban design process identified the Gardiner Station Signal Box as having both local heritage significance as well as being important to the local community.

Through an integrated urban design response, the signal box was retained within the train station context and repurposed as a bicycle storage facility.

This adaptive reuse of a locally significant building preserves the public transport function of the building, restores the condition of the building fabric, provides additional public facilities to encourage active transport and contributes to the use of the train station as a transport mode interchange.

As a successful example of high-quality urban design, the Gardiner Station Signal Box achieves multiple functional and design outcomes that contribute positively to the public realm and urban fabric.

11.3.3 Urban Design Advisory Panel

LXRA has established an Urban Design Advisory Panel (UDAP) to provide design advice and undertake incremental review of project design. UDAP facilitates workshops throughout the project lifecycle, and provides a forum within which the analysis and assumptions of the draft UDGs and project design can be tested. As a collaborative exercise, this ensures that the UDGs and project designs have properly considered a range of technical, policy and stakeholder matters.

UDAP's role is to guide and provide advice with respect to:

- testing and providing feedback for the development of UDGs including vision statements, urban context/design reports and reference designs/project proposals
- development of project briefs and urban design performance requirements
- development of concept designs
- evaluation of design proposals.

UDAP is chaired by a representative of the Office of the Victorian Government Architect (OVGA) and brings together a range of Victorian and local government stakeholders. These stakeholders ensure that the testing and development of the UDGs have considered architecture, urban design, landscape design, strategic planning, transport planning and Victorian and local government policies. The membership of UDAP is responsive to the specific context of each project. For the Edithvale and Bonbeach projects, there is a single UDAP that is comprised of representatives from:

- Office of the Victorian Government Architect (OVGA)
- Department of Land, Water, Planning and Environment (DELWP)
- Kingston City Council
- LXRA
- Metro Trains Melbourne (MTM)
- Public Transport Victoria (PTV)
- Transport for Victoria (TfV)
- Victorian Planning Authority (VPA)
- Other members as appropriate.

11.4 Edithvale and Bonbeach Urban Design Guidelines

The Draft Edithvale UDG and Draft Bonbeach UDG are project specific responses to the UDF and ensure that LXRA can deliver high-quality urban design outcomes.

The draft UDGs presented in the EES include:

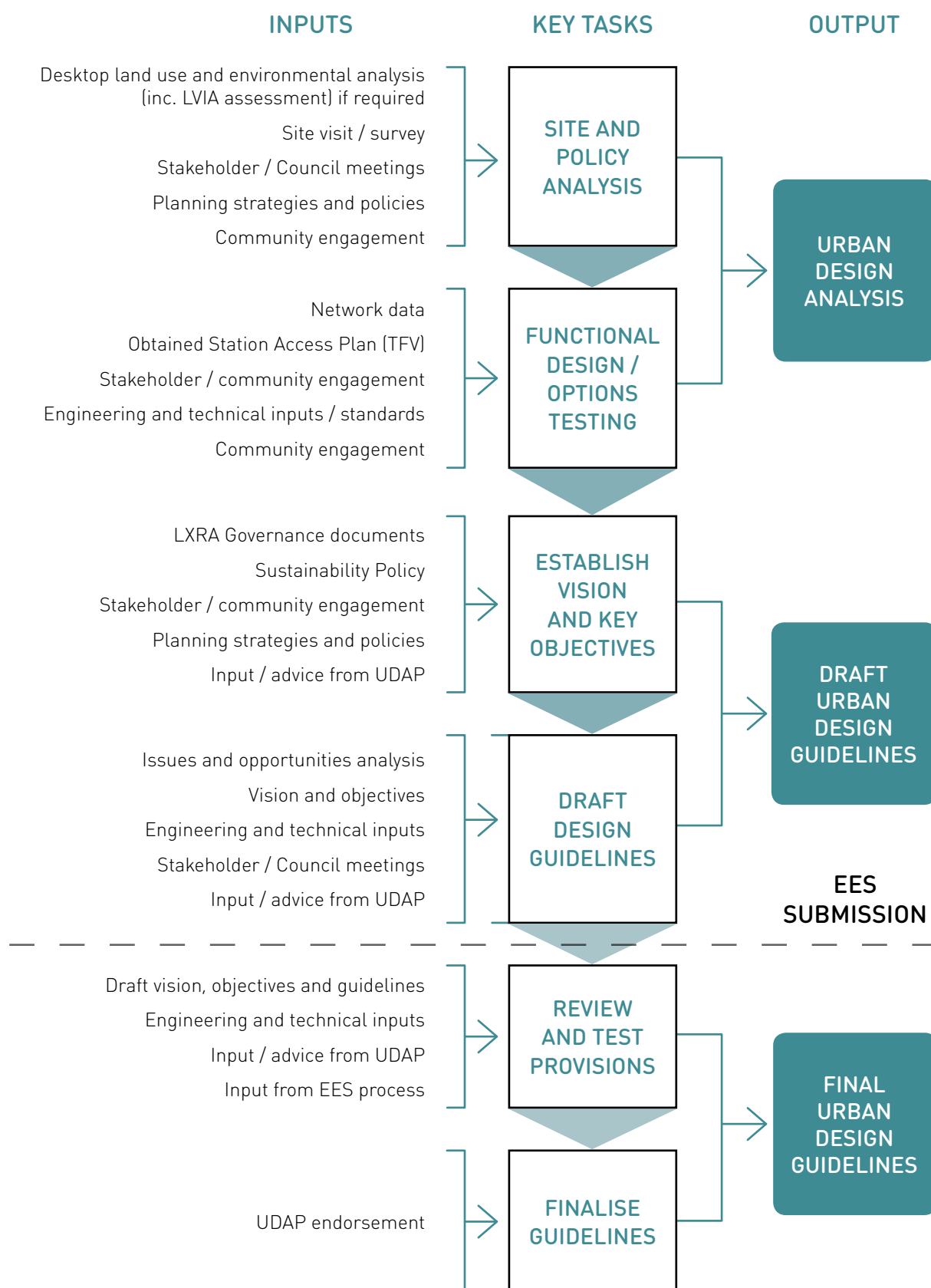
- an analysis of the site
- an analysis of strategic planning and policy contexts
- a summary of community and stakeholder engagement relevant to urban design
- urban design issues and opportunities for the projects
- guidelines for site-specific requirements for detailed design.

The draft UDGs have been informed by the analysis and consultation done so far, have been reviewed by UDAP, and would continue to be developed following the outcome of the EES process, taking consideration of any relevant recommendations.

11.4.1 Developing the Urban Design Guidelines

The UDGs are the result of a multi-staged analysis process which is informed by a number of technical, strategic, functional, stakeholder and community inputs. This process is shown below in Figure 11.4.

Figure 11.4 Development of urban design guidelines



Site and policy analysis

To provide project and site-specific urban design responses, the UDGs assess the existing landscape and urban environment. This assessment includes site visits, desktop analyses and stakeholder and community engagement to understand the issues and opportunities that arise from the existing built context and natural environment.

The UDGs have also undertaken an analysis of strategic and policy directions, including Victorian and local government policies, network plans and strategies, demographics and trends, together with the State Planning Policy Framework and the Local Planning Policy Framework from the relevant planning scheme. This analysis ensures that the UDGs have properly considered relevant strategic matters (such as demographic trends) in providing for a high-quality urban design outcome.

The analysis undertaken has been tested through UDAP and forms Chapter 2 and 3 of the draft UDGs. The analysis should be read in conjunction with the following technical reports:

- Technical Report B *Ecology: Wetlands and Groundwater Dependent Ecosystems*
- Technical Report D *Ecology: Project Areas*
- Technical Report F *Land Use*
- Technical Report J *Landscape and Visual*
- Technical Report N *Historic Heritage*.

Community and stakeholder engagement

To ensure that the design of the projects responds to, and has considered, public transport users and community needs, the UDGs have been informed by community workshops and consultation.

At a community workshop held on 14 September 2017, urban design was discussed for the projects. The workshop was open to all community members and was widely promoted. The workshop engaged the respective local communities about their future train station precincts. Participants were asked to provide feedback on how each existing station precinct could be improved.

Subsequent to the September 2017 workshop, LXRA sought further comment on project design through the Your Level Crossings websites.

Through consultation, the projects have identified the following themes as important to their respective communities:

- The importance and value of landscape character and further enhancement along the whole of the rail corridor
- The desire to balance user needs so that all users and all transport modes are catered for equitably to ensure that the solution benefits a broad cross section of the community
- The need for the design and materials to respond to and reflect the valued natural coastal setting and emerging architecture.

This feedback has been considered and forms part of the draft UDGs. Refer to Chapter 12 *Stakeholder and community engagement* for further detail.

Urban design vision statements for Edithvale and Bonbeach

'The Edithvale Road, Edithvale Level Crossing Removal Project will create a high quality and lasting local landmark that will strengthen the coastal and landscape character of the rail corridor and enhance the attractiveness of the Edithvale Neighbourhood Centre.

Once complete, the project will enhance surrounding public spaces by improving walking and cycling connections and other transport access.' – Edithvale UDG Vision.

'The Station Street/Bondi Road, Bonbeach Level Crossing Removal Project will create a high quality and lasting local landmark that will strengthen the landscape character of the rail corridor.

Upon completion, the project will connect the surrounding public spaces, enhance the attractiveness of the Bonbeach Neighbourhood Centre, and improve transport access and amenity across Bonbeach.' – Bonbeach UDG Vision.

Vision through to guidelines

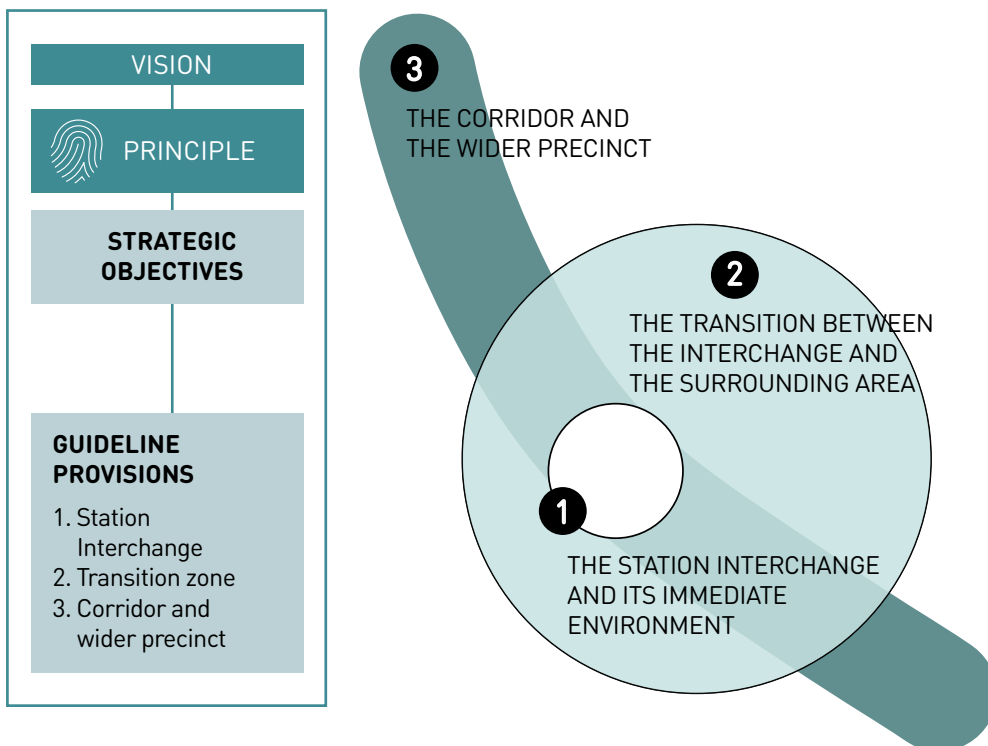
Once the site analysis and policy analysis has been completed, and the stakeholder and community engagement has commenced, the urban design process is able to begin developing a vision statement for the project. The vision statement provides an aspirational urban design outcome that is refined through the eight key principles, strategic objectives and finally, guidelines. These guidelines ensure that as projects progress through detailed design, that urban design remains part of core project considerations and provide LXRA with a tool to ensure that project design would achieve high-quality outcomes.

Considering how the projects are located and informed by their local environments, and the way in which each project forms a component of the wider metropolitan rail network, the guidelines address three urban contexts for the project:

- the station, station forecourt, entrance and public transport facilities (called an 'interchange') and its immediate environment
- the transition between the interchange and the surrounding area
- the corridor and the wider precinct.

These components and contexts of the UDGs are shown in Figure 11.5.

Figure 11.5 UDG structure and contexts





11.5 Design Guidelines

The draft UDGs respond to all eight principles in the UDF, and are arranged in five thematic groupings. Each of these principles are supported by strategic objectives, and further refined by design guidelines.

Each draft UDG is the result of context-specific analysis that acknowledges, as part of the wider LXRP, the shared commonalities between public rail infrastructure projects. The following sections outline how each project would achieve the urban design principles and strategic objectives through targeted guidelines.

While each project is unique, the projects share a number of similarities in built form, urban context, design solution and strategic policy. In responding to the eight principles, the draft UDGs share many similar strategic objectives and guidelines.

11.5.1 Identity and urban integration

Identity and urban integration are key principles to achieving high-quality and site responsive urban design that has considered, and responded to, the existing built form and landscape conditions.

Edithvale project

The strategic objectives for the Edithvale project identify strengthening the local neighbourhood character, protecting and strengthening the coastal landscape, integrating the station with the neighbourhood centre and minimising visual amenity impacts, as appropriate responses to the key principles of identity and urban integration.

Responding to the issues and opportunities, the guidelines direct that the scale, materials, textures and colours of the built form respond to the low scale, modest coastal character of the surrounding area. Though there is opportunity to maintain design consistency with other elements from nearby Level Crossing Removal Programs, the built form and landscape response to Beeson Reserve is critical to addressing the central organising element of the Edithvale Neighbourhood Centre. The opportunities to reinstate or establish landscaping using coastal tree species exist within the station forecourt, along the rail corridor, and Nepean Highway and Station Street. The guidelines acknowledge that the use of high-quality public realm materials, treatments and details would provide for positive visual outcomes.

The built form and landscape component of the urban design outcome for the Edithvale project would mitigate the following identified risks:

- Ecology (risks E50, E56, E57)
- Historic Heritage (risk HH6)
- Landscape and Visual (risks LV37, LV 38, LV 40, LV 41)
- Traffic (risk T27).

Bonbeach project

Similar to the Edithvale project, the strategic objectives for the Bonbeach project identify strengthening the local neighbourhood character, protecting and strengthening the coastal landscape, integrating the station with the neighbourhood centre and minimising visual amenity impacts as appropriate responses to the key principles of identity and urban integration.

Responding to the context of the Bonbeach Station, the guidelines direct that the scale, materials, textures and colours of the built form respond to the low-scale, modest coastal character of the surrounding area. Importantly, the opportunity is identified to extend elements of the project's design (particularly landscaping), into local streets that integrates with key elements of the existing coastal identity. The guidelines acknowledge that the use of high-quality public realm materials, treatments and details would provide for positive visual outcomes.

The built form and landscape component of the urban design outcome for the Bonbeach project would mitigate the following identified risks:

- Ecology (risks E50, E56, E57)
- Landscape and Visual (risks LV37, LV 38, LV 40, LV 41)
- Traffic (risk T27).

11.5.2 Connectivity, wayfinding and accessibility

Connectivity, wayfinding and accessibility relate to how projects integrate and improve existing pedestrian and bicycle infrastructure and provide for intuitive, navigable and easy to understand places that are inclusive and universally accessible. High-quality urban design outcomes encourage active transport and improve connectivity across and along the rail corridor.

Edithvale project

The strategic objectives for the Edithvale project identify the improvement of connectivity to and from the station as key to encouraging active transport modes. The design and location of the station and facilities would provide for a universally-accessible design.

Responding to the project context within the Edithvale neighbourhood activity centre, the guidelines direct the provision of dedicated walking and cycling infrastructure to the station and along and across the rail corridor. The provision of bicycle parking in visible and accessible locations in close proximity to the station would encourage access to the station via bicycle. To ensure the project is universally accessible, the location and width of car parking, bus bays and pedestrian overpasses would be designed to achieve *Disability Discrimination Act 1992* (DDA) compliance. The guidelines identify that sightlines to Beeson Reserve and the foreshore be maintained and enhanced.

The connectivity, wayfinding and accessibility components of the Edithvale project would provide for a high-quality urban design outcome that improves upon the existing conditions, encourage active transport modes, and would mitigate the following identified risks:

- Landscape and Visual (risk LV41)
- Traffic (risk T27).

Bonbeach project

The strategic objectives for the Bonbeach project identify the improvement of connectivity to and from the station as key to encourage active transport modes. The design and location of the station and facilities would provide for a universally accessible design.

Similar to the Edithvale project, the guidelines direct the provision of dedicated walking and cycling infrastructure to the station and along and across the rail corridor. The provision of bicycle parking in visible and accessible locations would encourage access to the station via active transport modes. To ensure the project is universally accessible, the location and width of car parking, bus bays and pedestrian overpasses would be designed to achieve DDA compliance. The legibility of the public space and project would be enhanced through the provision of clear, intuitive and suitably wide paths and through a design that maintains and enhances sightlines through to the foreshore.

The connectivity, wayfinding and accessibility components of the Bonbeach project would provide for a high-quality urban design outcome that improves existing conditions and encourages active transport modes within a universally accessible context, and would mitigate the following identified risks:

- Landscape and Visual (risk LV41)
- Traffic (risk T27).

11.5.3 Amenity and safety

Safety and amenity relate to how projects provide for a safe and comfortable experience of public transport infrastructure and in the public realm. These principles recognise that public transport users need to feel safe and secure within and close to stations, and conversely, that projects minimise opportunities for unsafe spaces, excessive light spill and opportunities for graffiti. High-quality urban design outcomes would provide for appropriate levels of passive surveillance, weather cover, visual connectivity and minimise impacts on adjoining properties

Edithvale project

The strategic objectives for the Edithvale project identify the improvement of user comfort and the enhancement of sense of safety as the measure of high-quality urban design outcomes.

The guidelines respond to the rail trench design of the Edithvale project, particularly with regards to ensuring that the platform environment is well-lit and provides for appropriate weather protection, as well as directing that there be opportunity for passive surveillance from the street level onto the platforms. The careful consideration of the built form of pedestrian overpasses would provide a high level of visibility for users of overpasses.

A high-quality, amenable and safe urban design outcome would feel safe for both users of the station and the local community, as well as providing a comfortable user experience. This would mitigate the following identified risks:

- Landscape and Visual (risk LV37)
- Traffic (risk T27).

Bonbeach project

The strategic objectives for the Bonbeach project identify the improvement of user comfort and the enhancement of sense of safety as the measure of high-quality urban design outcome.

Similar to the Edithvale project, the guidelines respond to the rail trench design of the Bonbeach project and pay particular attention to the platform environment. The guidelines direct that the platform be well-lit and appropriately sheltered from the weather, and acknowledge the opportunities for passive surveillance from street level. Similarly, the design and detail of pedestrian overpasses would provide a high level of visibility for users of overpasses.

A high-quality, amenable and safe urban design outcome would feel safe for both users of the station and the community in which the project is located, as well as providing a comfortable user experience. This would mitigate the following identified risks:

- Landscape and Visual (risk LV37)
- Traffic (risk T27).

11.5.4 Vibrancy

Vibrancy relates to how projects respond to and enhance the public realm and assist in activating key spaces. This principle recognises that as public infrastructure, high-quality urban design outcomes would ensure that projects contribute in a meaningful and diverse manner to the social and cultural experience of local communities.

Edithvale project

The strategic objectives for the Edithvale project identify linkages and the public realm as key to ensuring that the project better integrates with the existing Edithvale Neighbourhood Activity Centre.

The guidelines respond to the local context of the Edithvale project, particularly with regards to Beeson Reserve, and direct that the location of the main station entrance maintains physical and visual links to the activity centre and key beach access points. The enhancement of pedestrian connectivity from the station to Beeson Reserve, and the response of the built form to the neighbourhood context would maximise active inter-modal spaces and contribute in a positive manner to the existing activity centre.

A high-quality and vibrant urban design outcome would mitigate the following identified risks:

- Ecology (risks E50, E56, E57)
- Historic Heritage (risk HH6)
- Landscape and Visual (risks LV37, LV 38, LV 40, LV 41)
- Traffic (risk T27).

Bonbeach project

The strategic objectives for the Bonbeach project identify the integration of the station with existing uses as key to provision of a high-quality and functional public realm.

The guidelines respond to the modest scale of the local neighbourhood uses surrounding the Bonbeach project, and direct that the location of the main station entrance maintains its current position. Enhancement of pedestrian connectivity and infrastructure from the station through to the foreshore and the existing local retail uses are identified as important, and would complement the station forecourt.

A high-quality and vibrant urban design outcome would mitigate the following identified risks:

- Ecology (risks E50, E56, E57)
- Landscape and Visual (risks LV37, LV 38, LV 40, LV 41)
- Traffic (risk T27).



11.5.5 Resilience and sustainability

Resilience and sustainability relates to how projects would provide for enduring public transport infrastructure that recognise the immediate social and environmental context, as well as responding to anticipated future requirements. High-quality urban design outcomes would employ environmentally sustainable components and design to provide for enduring infrastructure that reduces environment impact.

Edithvale project

The strategic objectives for the Edithvale project identify the promotion of sustainable and site responsive design as key to providing a lasting station precinct.

Responding to the local context of the Edithvale project, the guidelines direct that the selection of material palette be durable, low maintenance, minimise opportunity for graffiti and be resilient to the coastal setting. The landscaping response would be appropriate for the climatic and environmental conditions with appropriate plant species. The guidelines identify the importance of natural daylight to the station platforms to reduce reliance on artificial lighting.

A resilient and sustainable urban design outcome would mitigate the following identified risks:

- Ecology (risks E50, E52, E53, E54, E56, E57)
- Landscape and Visual (risks LV37, LV40, LV41).

Bonbeach project

The strategic objectives for the Bonbeach project identify the promotion of sustainable and site responsive design as key to providing a lasting station precinct.

Similar to the Edithvale project, the guidelines for the Bonbeach project direct that the material palette be durable, low-maintenance, minimise opportunity for graffiti and be resilient to the coastal setting. The landscaping response would be appropriate for the climatic and environmental conditions with appropriate plant species. The guidelines identify the importance of natural daylight to the station platforms to reduce reliance on artificial lighting.

A resilient and sustainable urban design outcome would mitigate the following identified risks:

- Ecology (risks E50, E52, E53, E54, E56, E57)
- Landscape and Visual (risks LV37, LV40, LV41).



11.6 Conclusion

LXRA has a robust process which provides for excellent urban design outcomes across the Level Crossing Removal Program. LXRA's UDAP ensures that project specific UDGs are guided by discussion with local community, key industry and Victorian and local government stakeholders, and in response to the eight principles in the UDF.

Once finalised, the UDGs provide LXRA with an assessment framework that ensures that LXRA's Alliance partners and detailed project design respond to the UDF and UDGs, and deliver projects that make great places, and which are prosperous, safe and vibrant. This approach responds to the EES Scoping Requirements as they apply to urban design.

Draft UDGs have been developed for both the Edithvale and Bonbeach projects, and provide clear direction as to the manner in which the landscape and built form for each project respond to the identified issues and opportunities. LXRA would continue to develop the UDGs once the EES process has been completed, and would work together with the community and stakeholders to provide excellent urban design outcomes.