

# LEVEL CROSSING REMOVALS

## LESSONS LEARNED

VICTORIAN  
DESIGN  
REVIEW  
PANEL

THE OFFICE OF THE  
VICTORIAN GOVERNMENT  
ARCHITECT CHAMPIONS THE  
QUALITY OF THE BUILT  
ENVIRONMENT, WORKING  
ACROSS VICTORIA TO  
IMPROVE SIGNIFICANT  
PROJECTS.

The Victorian Design Review Panel (VDRP) offers independent and expert advice to clients, design teams and key decision makers of significant public or private projects, at key stages of the design and development process.

The Office of the Victorian Government Architect (OVGA) seeks to capture and share common issues of particular project types which are seen through the VDRP, as part of their design advisory role. The Design Review: Lessons Learned series offers a short summary of issues for project teams and clients to consider as they brief and develop designs for these complex projects.

The VDRP was established by the Office of the Victorian Government Architect to provide constructive advice to clients and statutory decision makers to improve the design quality of development proposals in the interests of the Victorian public.

The Design Review process draws experience from the OVGA team and built environment industry professionals from the fields of architecture, urban design, landscape architecture and planning, as well as specialists in sustainability, accessibility, health, place making and masterplanning. The structured peer review process has been proven to assist projects realise their full potential, giving confidence to key decision makers to choose good design.

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### STRATEGIC ISSUES

The VDRP has reviewed five level crossing removal projects, including reference designs and options.

This document brings together some of the key lessons learned from these reviews. The OVGA is also involved in the procurement and competitive selection processes of many transport projects across Victoria.

- **A level crossing removal is more than an engineering project which physically separates road and rail.** An intervention of this scale will have a significant impact on the condition and amenity of an established urban area. It is typically a complex urban project.
- **View the project as a catalyst for urban renewal.** These projects present a real opportunity for a major public investment to be leveraged to unlock opportunities for urban regeneration and redress poor existing conditions.
- **Establish a vision for the site that is broader than improving transport efficiency.** Consider the long-term opportunities for the place and community at a broader scale than just the project. It is not an additional cost to the project to apply this type of thinking, and may unlock great opportunities.
- **Include the expertise of urban design professionals in the development of the design.** An urban design framework should be undertaken at the outset. This allows urban constraints and opportunities to be overlaid with the engineering strategy.
- **Develop site-specific urban design guidelines.** This is particularly important for level crossing removal projects with indirect procurement routes to reinforce the ambition for urban design excellence before going to market. Guidelines can also be used during the evaluation of bidding teams and to monitor design progress.
- **Allow a reference design to be revised and challenged by the project/bidding team.** Creative urban design solutions can be generated if bidders are not penalised for deviating from, and improving, the reference design. This is an opportunity for the client to improve value for money. The opportunity to improve the reference design must be explicit in the documentation.

## LEVEL CROSSING REMOVAL OPTIONS

- Consider more than construction cost when deciding on the approach to the grade separation. Don't ignore the broader costs and benefits of the project and long-term legacy of a once-in-a-generation infrastructure intervention.
- Integrate urban design thinking in the early optioning process. This needs to be considered prior to the development of any reference design.
- A greater upfront spend on construction is not poor value for money. It unlocks much greater economic and social opportunities for a community, and enables renewal and development opportunity.
- Level crossing removal projects can introduce barriers that can sever the connections of a place for people. A highly considered, site-specific design solution that considers all contextual conditions of a place is required to avoid a poor urban outcome. Harsh interventions preclude the natural capacity of a place to 'heal'.
- An elevated road or rail structure will have a significant physical presence and impact on a place and is typically not a preferred solution. New elevated structures, including ramps and retaining walls, can impact on visual amenity, permeability, viability of activity areas, the value of land and appetite for future private development. They often provide a cheaper solution but a poorer outcome and therefore a false economy.
- Where an elevated road or rail structure is the only solution, a commitment to the highest quality outcome for the place is required. Only the most considered and integrated elevated structure that contributes to the form and network of the place is acceptable. Carefully consider and design how the space under the elevated structure will be used and how the surrounding urban realm will adapt.
- Lowering a section of the rail corridor under an at-grade road is the most supportable solution in most circumstances. This solution can be designed to have the least impact on the urban environment, is a more discreet intervention, offers improved social and economic outcomes, and enables opportunities for development over the rail corridor in the future. However, a large rail cutting can become a barrier if not designed well.

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## DESIGN ISSUES

- Avoid replacing one problem with another. An increase in vehicular efficiency as a result of the grade separation has the potential to exacerbate problems for pedestrians if the urban condition is not considered carefully. Reduce the impact of a road 'barrier' by designing a well considered and high quality public realm
- Design for the pedestrian. Level crossing removal projects typically occur in high pedestrian areas (e.g. train station, activity areas and near high streets). Analyse key pedestrian circulation paths and desire lines and consider pedestrian comfort, legibility and safety.
- Draw the level crossing removal proposal in section and from the perspective of the pedestrian. This will more accurately demonstrate the affect of the intervention on the place and people.
- Consider the masterplan for the area. Identify important future network links and development opportunities to ensure they are not precluded as a result of the project and remain 'on the radar'.
- Acknowledge the civic opportunity of a train station and its surrounds. Stations have a strong role and presence within a community and this should be reflected in the design ambition of the buildings and public spaces.



This document is available as a PDF at [www.ovga.vic.gov.au](http://www.ovga.vic.gov.au)

For more information on the VDRP visit [www.ovga.vic.gov.au](http://www.ovga.vic.gov.au)

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