Meet HIRA

The Human Impact Route Assessment Tool, a Decision Support tool for Major Construction Project Traffic Planning

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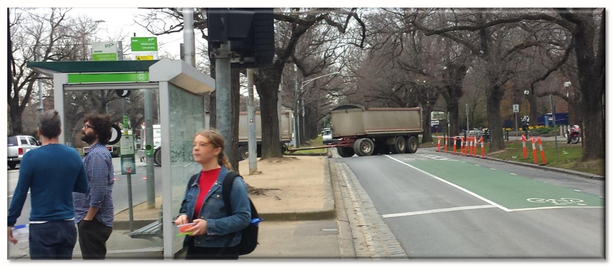
Danger on our roads

A common consequence of large urban construction sites is the increase in heavy vehicle traffic. As part of construction traffic management planning, engineers tend to choose the most direct route to the constructions site. However, the most direct route may not be the safest route, especially for Vulnerable Road Users (VRUs) such as pedestrians and cyclists. There is no recommended process for selecting a suitable truck route. Route planners may refer to the B-Double gazetted network maps, but these do not always reflect the current suitability of the road for heavy vehicles, nor does it reflect the surrounding land uses. As part of a wider VRU safety taskforce, the Heavy Vehicle Route Selection Working Group have developed the Human Impact Route Assessment (HIRA) tool and process to better capture the suitability of heavy vehicle routes with regards to VRUs.



Example of Conflicts Between Trucks and VRUs along a B-Double Gazetted Road

Royal Parade in Melbourne is a gazetted B-Double route. However, in one section it passes between a high school, a hospital and a university. It is also a busy cyclist route, tram route and bus route. Trucks using this section of road need to be separated from VRUs and aware of the increased risk.

Source: TRL PPR639

The HIRA Process

HIRA has been designed to be used in a workshop with all relevant stakeholders. This may include, but not exclusively, local government, road authorities, clients and contractors. Participants use HIRA to score routes against pre-defined elements. Descriptors are provided to ensure that scoring is consistent across all routes. If an element scores poorly, participants can record comments as to why it did so. HIRA then rates the routes as preferred, good, average or less than average.

HIRA Elements

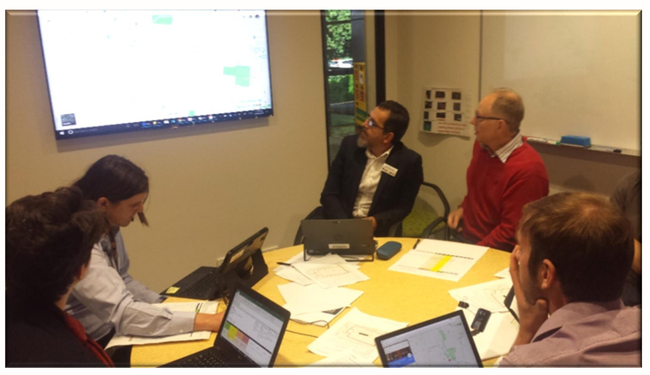
HIRA focuses on how proposed heavy vehicle routes will impact VRUs directly. First, it focuses on risks on the carriageway. This includes risks to cyclists, bus and tram users. The focus then shift to predictors of increased off-street activity. This section looks at places that may generate VRU traffic such as schools, shopping centres and hospitals.

Collaboration

HIRA is a collaborative decision support process that has been developed to evaluate the risks to VRUs from construction trucks on route to and from a work site. By systematically going through potential hazards along the route, HIRA helps identify risks for heavy vehicles and VRUs, initiating discussions on mitigation techniques. While often the route selection process is conducted by an individual, HIRA takes a collaborative approach to the decision-making process. Stakeholders at the HIRA workshop would each have their own contribution and area of knowledge which can be used to aid in the route selection. HIRA aims to capture information on VRU safety on proposed routes by encouraging discussion between these stakeholders.

Risk Identification

In late 2017 and early 2018, HIRA was piloted with Melbourne's Metro Tunnel Project and a local city council. Almost all the participants of the pilot study found that conducting a HIRA aided in the identification of risks along the proposed routes that may have otherwise been overlooked. Many commented that the multi-agency discussion that took place during the HIRA workshops resulted in information sharing between agencies, alerting others to potential risks arising from the heavy vehicles. One of the other benefits of HIRA is that it provides a proof of risk assessment. Although route planners may subconsciously consider some aspects that HIRA covers, HIRA records these considerations and provides the basis for discussions on mitigation measures along the route.



Intent of HIRA

HIRA is not intended to perform the entire route selection process, but to complement existing techniques and bring VRU safety to the forefront of the decision making process.

Acknowledgements:

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