Intent

The Human Impact Route Assessment (HIRA) tool and process aims to place safety of Vulnerable Road Users (VRUs) at the forefront of the heavy vehicle route selection process.

In this context, VRUs are defined as pedestrians and cyclists, with greater consideration given to the most vulnerable of these users including older people and children.

HIRA is intended to support and promote collaborative decision making between local and state government authorities regarding the identification and selection of truck routes during construction of major projects. The tool requires that representatives work together to discuss and agree on ratings for various route attributes in relation to the impact on vulnerable road users. The tool and process will provide an opportunity to compare potential routes and identify and record risks to VRUs along each route. This information is intended to contribute to the route selection decision making process, along with other considerations such as directness and noise impacts.

Process

HIRA relies on collaborative decision making and helps to strengthen relationships among key stakeholders. Therefore, HIRA should be done in a workshop with relevant stakeholders. These stakeholders can include local government, main road authorities, the client and the contractor. When determining who to invite to the workshop, it is important that stakeholders who are familiar with the project and the local environment participate. Ideally, workshop numbers should be limited to approximately ten people to support timely decision making.

Before the workshop, the construction client and/ or the contractor must identify potential routes to and from the work site. HIRA does not need to be done for the entire length of the route, but it should be done for the section between the site and a major traffic route such as a freeway where conflict with VRUs can be considered negligible.

The workshop will take approximately two hours. During the workshop, it is recommended that aerial imagery is used to examine sections of the route. A map with the routes drawn on it will also be useful during workshops.

At the start of the workshop, it is recommended that the construction client or the contractor runs through each of the routes before the start of the assessment to ensure that participants understand where the routes are.

Assessment should begin at the first element at the top of the spreadsheet. If more than one route is being assessed, then each route should be assessed against the element before moving on to the next element. The routes should be scored against the descriptors provided, **not** against the other routes. As well as acting as a basis for route comparison, HIRA aims to identify risks along the routes, if scoring is done by comparison, risks may not be properly captured, and the final score may not reflect the suitability of the route.

A follow-up HIRA workshop may also need to be scheduled to reassess the route after mitigation measures have been proposed. Workshop participants would then re-assess the route assuming that the proposed mitigation measures are in place. This workshop would likely be shorter than the initial HIRA workshop.

HIRA Components – Route Elements

Each route is scored against 11 elements. There are two categories of elements:

- On-Street Risks
- Off-Street Predictors of Increased Activity

The first of these two categories focuses on risks to vulnerable road users directly on the carriageway including active transport, road width and on-street public transport stops among other risks. The second category looks more at the land uses next to the roads and if they are predictors of increased vulnerable road user activity. This includes hospitals, retail and entertainment precincts and schools among other indicators.

HIRA Components – Route Scoring

To score a route against an element, participants must use the descriptors. If there are multiple locations along the route which fall under different descriptors, the worst of the locations should be used to score the route.

For each element, there are descriptors describing the performance standards for each element. Within each of the performance standards, there is a range of scores to choose from, this allows for some flexibility with scoring while still adhering to the descriptors.

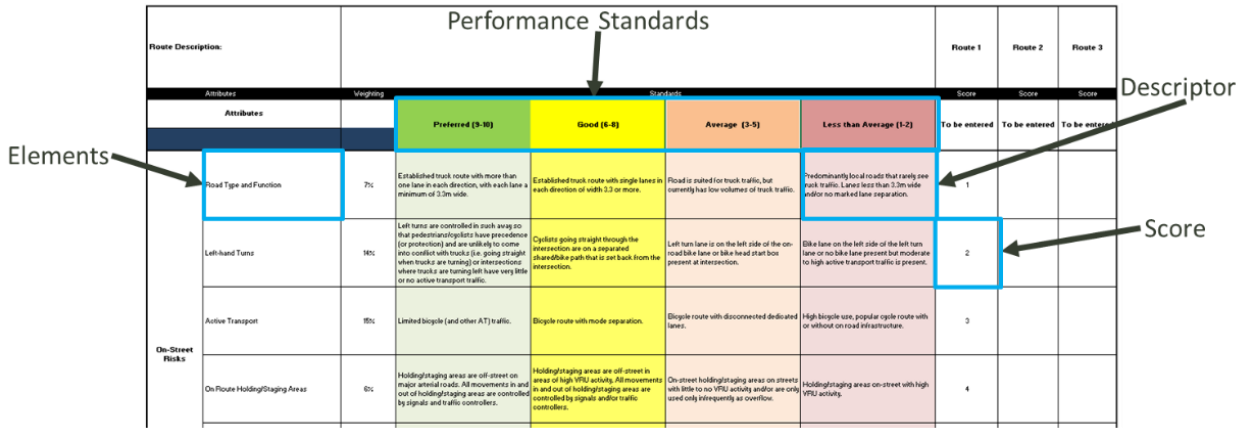

Figure 1: Parts of the HIRA tool

Participants must come to a unanimous decision as to what the score should be used for a route before moving on to the next route/element. This is to encourage discussion around the risk and why a certain score should be chosen.

If a route is scored as “Average” or “Less than Average” for an element, then participants should make a note as to why the route scored so low.

Results & Next Steps

Once the spreadsheet has been completed, an overall score is displayed at the bottom of the table for each route assessed. This can be used to determine how suitable the route is overall. However, care should be taken in using the overall score alone to assess how suited the route is with regards to VRUs. How the route scored for each element should be considered when examining the results.

The route HIRA identifies as the best may not be the final selected route due to other considerations. However, conducting a HIRA would highlight risks on that route and will have provided a proof of risk assessment for that route.

After the first workshop, participants should consider measures to mitigate the risks identified in the workshop. Facilitating this is outside the scope of HIRA. However, once mitigation measures are considered, a second HIRA workshop should be run with the assumption that these mitigation measures are in place. If the route is still not to a satisfactory performance standard (as decided by the workshop participants), then the process of mitigation consideration should be repeated.

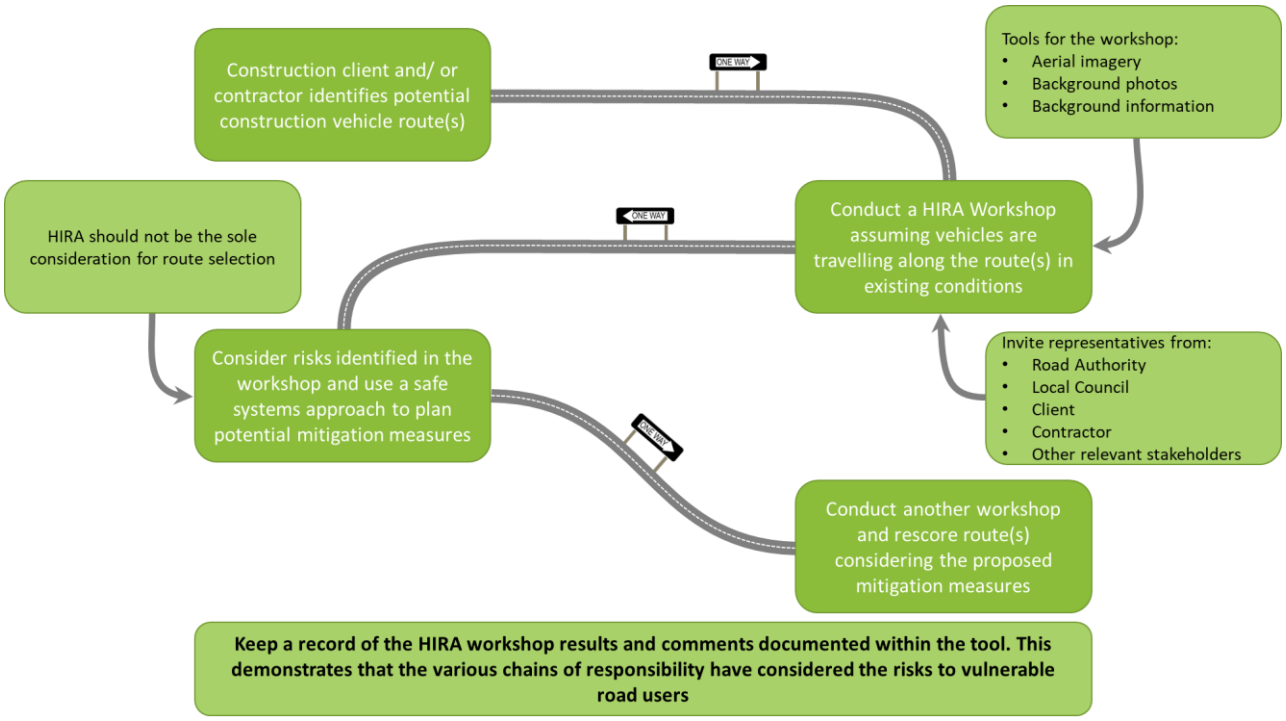

Figure 2: HIRA process flowchart