

Transport  
for NSW

# iRAP ViDA Star Rating Demonstrator tool

## Quick user guide

March 2024



[transport.nsw.gov.au](https://transport.nsw.gov.au)

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# 1. Background

One of the key outcomes of the Road Safety Program 2023/24-2025/26 is to raise the standard of roads to a minimum 3 Star rating.

The iRAP ViDA Star Rating Demonstrator tool (the Tool) can be used to provide the required documentation for a project nomination to demonstrate AusRAP Star Rating.

This document is a step-by-step guide on how to produce an AUSRAP Star Rating using the Tool.

Transport for NSW (Transport) has developed the current state AusRAP Star Rating for State and Regional Roads across all of NSW. This AusRAP Star Rating is accessible through the Safer Roads Portal (the Portal) and is automatically populated via the mapping platform within the Portal.

The iRAP ViDA Star Rating Demonstrator tool can be used to provide the required documentation for a project nomination to demonstrate AusRAP Star Rating, either *before* treatment, *after* treatment, or both *before* and *after* treatments.

## 2. Project scenarios and outputs required for a project nomination

Transport has identified three scenarios for project nominations, and the required outputs for each scenario:

- Scenario 1: *Before* treatment Star Rating available in Portal
- Scenario 2: *Before* treatment Star Rating not available/unknown in Portal
- Scenario 3: Recommended option for projects involving Vulnerable Road Users (Motorcyclist, Pedestrian and/or Cyclist)

### Scenario 1: *Before* treatment Star Rating is available on the Portal

If the Transport provided Star Rating is available across the entire length of your project segment, the Star Rating (in kilometres) will be automatically populated within the “AusRAP Star Ratings by project segments” table in the Portal (see screenshot below).

You can determine whether the entire segment has a Star Rating by checking if the value in the “Unknown” column is showing nil (0) kilometres.

AusRAP Star Ratings by project segments

Project Segment	1 Star (km)	2 Stars (km)	3 Stars (km)	4 Stars (km)	5 Stars (km)	Unknown (km)
8408-P-1	0	0	1.071	0	0	0
Total	0	0	1.071	0	0	0

Total pre-treatment AusRAP Star Ratings

	1 Star	2 Stars	3 Stars	4 Stars	5 Stars	Unknown
Length (m)						

## Considerations

- If a section of your project appears within the "Unknown" category and the road conditions of that section are significantly different to the Star Rated section(s), you will need to follow Scenario 2 steps to develop a *before* Star Rating for this unknown section.
- If the road conditions within the unknown section are similar to the Star Rated sections of the project, continue following this Scenario (Scenario 1).

## Process

1. Enter the total distance in kilometres in the "Total pre-treatment AusRAP Star Ratings" table for the calculated Star Rating.  
If the road conditions within the unknown section are similar to the Star Rated sections of the project, add the length of the unknown and known sections, then enter the total length into the corresponding table column.
2. Follow the rest of this guide from Step 1 to 3 to develop an *after* Star Rating. However, for the *after* Star Rating, adjust the road attribute selections to reflect what the road cross section will be after the project treatments are installed (include new barriers, line marking etc.)

Tip: use a typical stretch of road (or the cross-section with the highest risk/impact) to produce the *after* Star Rating.

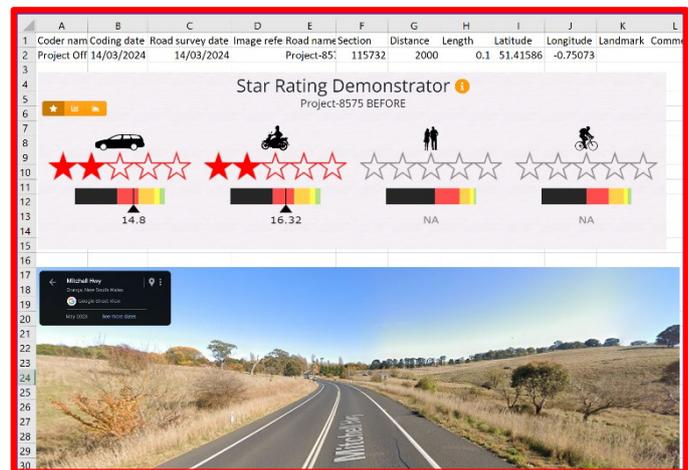
3. Enter the *after* Star Rating calculated using the ViDA tool into the "Total post-treatment AusRAP Star Ratings" table in the Portal.

## Outputs checklist

Further information on how to do these steps is found later in this guide.

If your project falls under this scenario, the outputs required for a project nomination are:

- An *after* coding data.CSV file saved as an excel workbook .xlsx including:
  - a screenshot of the ViDA Star Rating
  - an image of the road section used to develop the Star Rating.
- The calculated *after* Star Rating using the ViDA tool, entered into the "Total post-treatment AusRAP Star Ratings" table in the Portal.
- The excel file uploaded into the Attachments section (under Notes and Attachments tab) in the Safer Roads Portal.



## Scenario 2: Before Star Rating is not available/unknown in the Portal

If the Transport provided Star Rating is not available across the entire length of your project segment, the kilometres of the unknown segment will appear under the “Unknown” column (see *screenshot* below).

You will need to develop a *before* and *after* Star rating for the unknown section using the ViDA tool.

AusRAP Star Ratings by project segments

Project Segment	1 Star (km)	2 Stars (km)	3 Stars (km)	4 Stars (km)	5 Stars (km)	Unknown (km)
8408-P-1	0	0	0	0	0	1.071
Total	0	0	0	0	0	1.071

Total pre-treatment AusRAP Star Ratings

	1 Star	2 Stars	3 Stars	4 Stars	5 Stars	Unknown
Length (m)						

### Considerations

- If a section of your project appears within the unknown and Star Rated category, and the road conditions of the unknown section are significantly different, you will need to continue to follow the steps in this scenario ([Scenario 2](#)) to develop a *before* Star Rating.
- If the road conditions within the unknown section are similar to the Star Rated sections of the project, follow [Scenario 1](#) instead.

### Process

1. Follow the rest of this guide twice from Steps 1 to 3 to develop a *before* Star Rating and then an *after* Star Rating.  
Tip: use the most typical stretch of road if the road cross section and environment is generally consistent, if it varies significantly along the project route then provide multiple sections clearly within the attachments to produce the *before* and *after* Star Rating.
2. For the *after* Star Rating, adjust the road attribute selections to reflect what the road cross section will be after the project treatments are installed (include new barriers, line marking etc.).
3. Enter the *before* Star Rating calculated using the Tool into the "Total pre-treatment AusRAP Star Ratings" table in the Portal.
4. Enter the *after* Star Rating calculated using the Tool into the "Total post-treatment AusRAP Star Ratings" table in the Portal.

### Outputs checklist

Further information on how to do these steps is found later in this guide.

- The *before* coding data.CSV file saved as an excel workbook .xlsx including:
  - a screenshot of the Star Rating
  - an image of the road section used to develop the Star Rating.
- An *after* coding data.
  - Copy the *after* CSV file coding data saved into the same Excel workbook as the *before* coding data including:
    - a screenshot of the Star Rating.
- Enter the *before* and *after* Star Rating calculated using the Tool into the Total pre-and Total post-treatment AusRAP Star Ratings tables in the Portal.
- The excel file should then be uploaded into the Attachments section (under Notes and Attachments tab in the Safer Roads Portal).

Further information on how to do these step is found later in this guide.

The below picture shows users the *before* and *after* tabs where Star Ratings should be uploaded.

A	B	C	D	E	F	G	H	I	J	K	L	
1	Coder nam	Coding date	Road survey date	Image refe	Road name	Section	Distance	Length	Latitude	Longitude	Landmark	Comme
2	Project Off	14/03/2024	14/03/2024		Project-85	115732	2000	0.1	51.41586	-0.75073		

**Scenario 3: Recommended option for projects involving Vulnerable Road Users (Motorcyclist, Pedestrian and/or Cyclist).**

The Transport developed current state AusRAP Star Rating for State and Regional Roads across all of NSW only applies to vehicles. As a result, the produced Star Rating does not reflect the Star Rating for vulnerable road users such as motorcyclists, pedestrians, or cyclists.

Projects with treatments focused on safety improvements for vulnerable road users like motorcyclists (e.g. motorcycle underrun) or pedestrians and/or cyclists (e.g. shared paths, footpaths, wombats) will therefore not result in a populated Star Rating for that user group.

You can include the Star Rating for the relevant vulnerable road user group as additional supporting evidence for your nomination. If the interventions also improve the Star Rating for vehicles in the cross section used for the vulnerable road user Star Rating, enter the highest improvement in Star Rating (for any road user group) into the Pre and Post-Treatment tables in the SRP Portal. Road Safety Program 2023/24-2025/26 sub-programs do not mandate a Star Rating, but it is recommended to undertake a star rating where relevant for vulnerable users as additional supporting evidence for your project nomination.

## Considerations

- The Transport developed Star Rating does not include accurate counts or flow for road user groups of motorcyclists, pedestrians or cyclists.  
If the Star Rating is generated on the Portal for your project length, note that it is only applicable for vehicles and therefore does not reflect a complete and comprehensive Star Rating of your project.

## Process

1. Follow the remainder of this guide twice from Steps 1 to 3 to develop the *before* and *after* Star Rating for the road user group your project is most relevant to.  
Tip: use the most typical stretch of road (or the cross-section with the highest risk/impact) to produce the *before* and *after* Star Rating unless the road environment and road cross section varies significantly along the project route, in which case multiple sections will be required.
2. Reminder: ensure that the counts or flow of the user group are selected in the Tool in order to develop a Star Rating for that road user group.
3. For the *after* Star Rating, adjust the road attribute selections to reflect what the road cross section will be *after* the project treatments are installed (include new barriers, line marking etc.).
4. Enter the *before* Star Rating calculated using the Tool into the "Total pre-treatment AusRAP Star Ratings" table in the Portal.
5. Enter the *after* Star Rating calculated using the Tool into the "Total post-treatment AusRAP Star Ratings" table in the Portal.

## 3. Step by step guide

### Step 1. Registration and background information

- Register for an account with iRAP ViDA Star Rating Demonstrator tool at <https://vida.irap.org/en-gb>
- Enter details to complete account registration –you will receive an email and be required to activate your account. Ensure you check your spam/junk mail folders if you don't receive the email.
- Logging in will automatically take you to the ViDA Dashboard page.

#### Supporting information

- A demonstration of the Tool is also available on YouTube:  
[https://www.youtube.com/watch?v=fh1Bw\\_6OBz4](https://www.youtube.com/watch?v=fh1Bw_6OBz4)
- A manual with detailed explanations of coding characteristics is also available at:

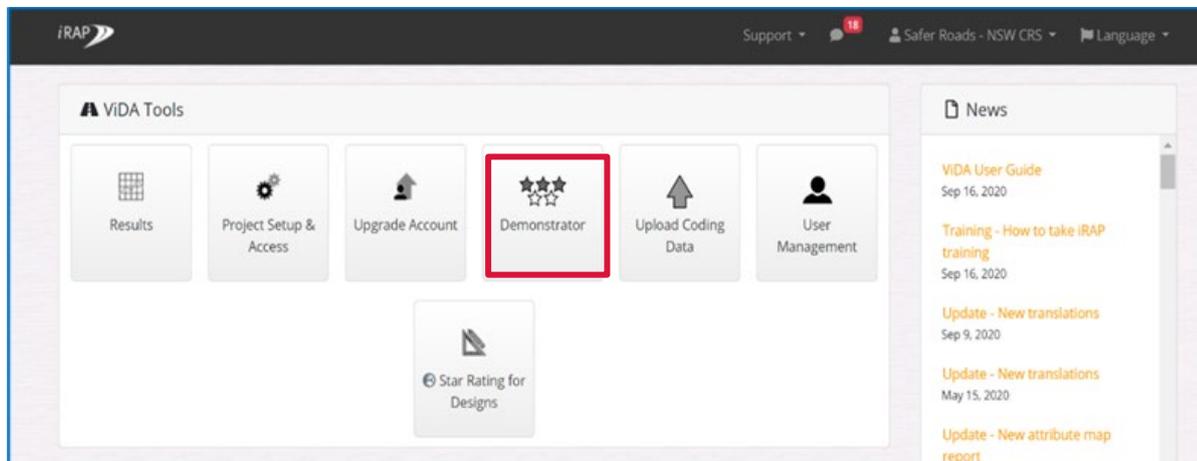
[https://resources.irap.org/Specifications/iRAP\\_Coding\\_Manual\\_Drive\\_on\\_Left.pdf](https://resources.irap.org/Specifications/iRAP_Coding_Manual_Drive_on_Left.pdf)

- Note: this is a downloadable PDF which will need to be saved to a device to access.
- For details or explanations of the specifications of entries/selections throughout, please refer to the User Guide from the Support drop down at top right of the iRAP ViDA page.



### Step 2. Accessing the Star Demonstrator tool

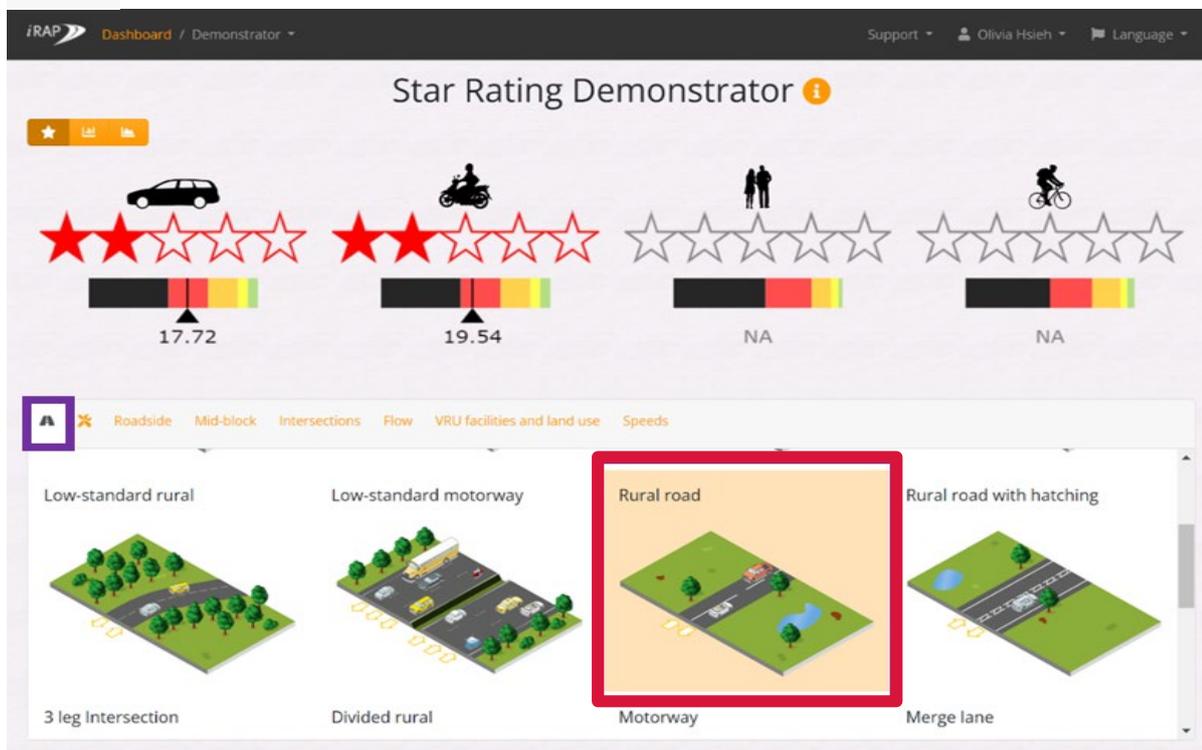
- Select “Demonstrator” from the Dashboard. This will take you to the Star Rating Demonstrator page.



### Step 3. Inputting data to achieve a *before* treatment Star Rating



Click on the Road icon to select the standard cross-section most relevant to your project/road. Your selection will appear highlighted in orange (e.g. Rural road).



Then, you will need to input information to each of the following tabs:

- Roadside
- Mid-block
- Intersections –optional
- Flow
- Vulnerable Road Users (VRU) facilities and land use
- Speeds

For detailed information on characteristics and attributes in these tabs refer to:

[https://resources.irap.org/Specifications/iRAP\\_Coding\\_Manual\\_Drive\\_on\\_Left.pdf](https://resources.irap.org/Specifications/iRAP_Coding_Manual_Drive_on_Left.pdf)

Note: this is a downloadable PDF which will need to be saved to a device to access.

Enter characteristics of a stretch of road within project boundaries that depict the most typical or highest risk/worst condition.

Use a typical stretch of road (or the portion with the poorest safety conditions) to produce the Star Rating. Star Rating does not need to be provided for every segment of the subject road/project.

If the road cross section or roadside environment changes significantly along a project length, it is recommended to submit additional cross sections and note the length each cross section generally applies.

If you have multiple objects, choose the characteristics and objects that are highest impact/risk.

The **Roadside tab** allows selection of the most relevant roadside characteristics of your project/ road. The Star Rating adjusts dynamically as you select different options for each category.

Star Rating Demonstrator

Car: 17.72, Motorcycle: 19.54, Pedestrian: NA, Cyclist: NA

**Roadside** | Mid-block | Intersections | Flow | VRU facilities and land use | Speeds

Roadside severity - driver-side distance: 1 to <5m

Roadside severity - driver-side object: [Red box highlights this field]

Roadside severity - passenger-side distance: 1 to <5m

Roadside severity - passenger-side object: Tree >= 10cm dia.

Shoulder rumble strips: Not present

Paved shoulder - driver-side: None

Distance is measured from edge line (if not present, use pavement line) to the hazardous roadside object.

The **Mid-block tab** allows selection of the characteristics of your project/ road.

Star Rating Demonstrator

Car: 17.72, Motorcycle: 19.54, Pedestrian: NA, Cyclist: NA

**Mid-block** | Roadside | Intersections | Flow | VRU facilities and land use | Speeds

Carriageway label: Undivided road

Upgrade cost: Low

Median type: Centre line

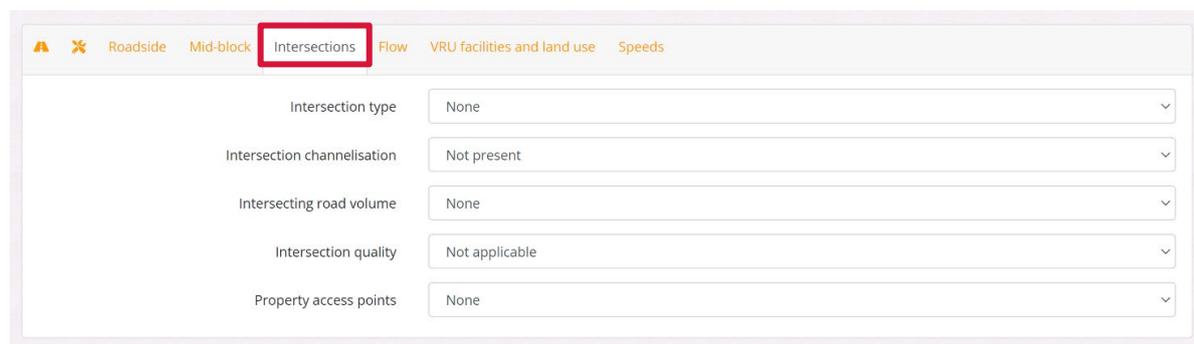
Centreline rumble strips: Not present

Number of lanes: One

Lane width: Medium (>= 2.75m to < 3.25m)

\*(Number of lanes per direction)

The **Intersections tab** allows selection of the characteristics of your intersection project. This step is only needed if it is applicable to your project.



Intersection type: None

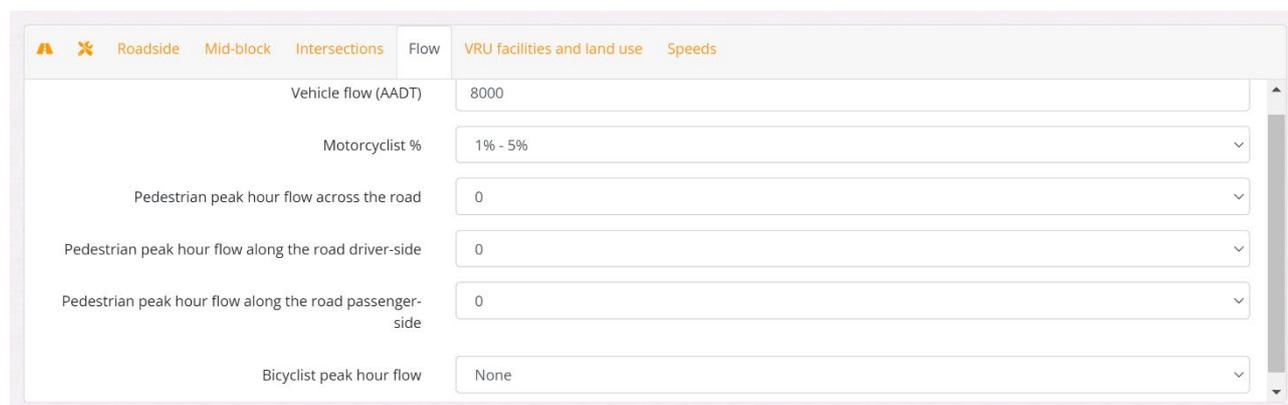
Intersection channelisation: Not present

Intersecting road volume: None

Intersection quality: Not applicable

Property access points: None

The **Flow tab** allows entry of your project/road's AADT/vehicle flow. If actual AADT is unknown, enter the best estimate. If known or applicable, numbers for vulnerable road users (Motorcyclists, Pedestrians and Cyclists) can also be selected



Vehicle flow (AADT): 8000

Motorcyclist %: 1% - 5%

Pedestrian peak hour flow across the road: 0

Pedestrian peak hour flow along the road driver-side: 0

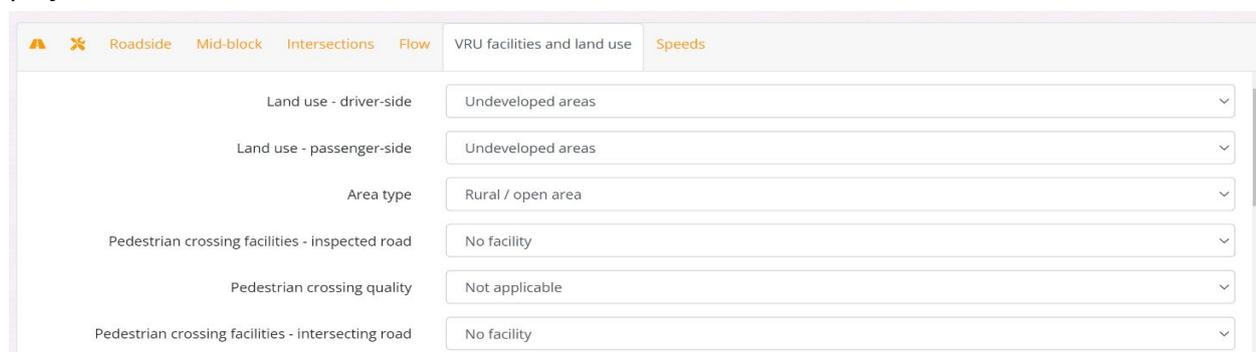
Pedestrian peak hour flow along the road passenger-side: 0

Bicyclist peak hour flow: None

Note: select a value above 0 for motorcyclist, pedestrian and/or cyclist if you wish to produce a Star Rating for these road user categories. Once a flow value is selected, star ratings will appear for the corresponding user groups (example below).



The **VRU facilities and land use tab** allows selection of the most relevant land use attributes of your project/road.



Land use - driver-side: Undeveloped areas

Land use - passenger-side: Undeveloped areas

Area type: Rural / open area

Pedestrian crossing facilities - inspected road: No facility

Pedestrian crossing quality: Not applicable

Pedestrian crossing facilities - intersecting road: No facility

The **Speeds tab** allows selection of the speed limit/s of your project / road. If unknown, keep Operating Speed (85th Percentile) the same as speed limit. Differential speed limits refers to if there are any school zones within the project.



Once all the relevant entries have been made, select the arrows icon on the top right of the page.

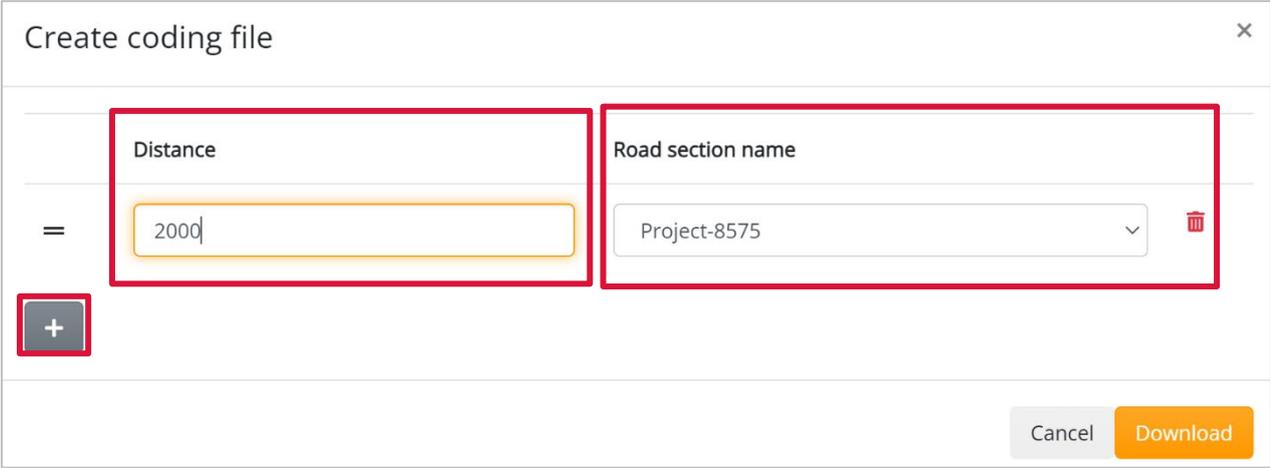
A dialogue box will appear.

The dialogue box has two very important icons that are critical for saving your data.

- 
 By clicking the Roads icon you can save the current road attribute data you have put into the Tool. You can provide a name for the file upon saving. e.g. SRP Project ID is a sensible file name.
- 
 allows you to download the current road attribute data you have selected as a CSV file. This CSV file is an important and **required** document for your nomination.

To export/download the data as a CSV file, select  and a dialogue box called “Create Coding File” will appear.

- Select the  icon on the bottom left.
- Distance must be entered. The distance is in metres so make sure to enter the correct figure (not in kilometres).
- Select the most appropriate road section name (your saved data name should appear).
- Select Download
  - A pop up should prompt you to save a CSV file onto your device.  
Save the CSV file with the SRP Portal Project ID to help Transport for NSW identify.



The screenshot shows a dialog box titled "Create coding file" with a close button (X) in the top right corner. On the left side, there is an equals sign (=) and a plus sign (+) icon. The dialog contains two main input areas, both highlighted with red boxes:

- The first area is labeled "Distance" and contains a text input field with the value "2000".
- The second area is labeled "Road section name" and contains a dropdown menu with the selected value "Project-8575" and a trash icon to its right.

At the bottom right of the dialog, there are two buttons: "Cancel" (grey) and "Download" (orange).

- Find and open the exported CSV file that has been saved onto your device.
- Take a screenshot of the Star Rating from the Tool and insert it under the data.
- Insert an image of the cross section/project site which the star rating was based on. Google Street View screenshot will suffice if no project site photos have been taken yet.
- Save the file as an excel (XLSX ) file format (otherwise the images won't appear in CSV format).

	A	B	C	D	E	F	G	H	I	J	K	L
1	Coder nam	Coding date	Road survey date	Image refe.	Road name	Section	Distance	Length	Latitude	Longitude	Landmark	Commer
2	Olivia Hsieh	14/03/2024	14/03/2024		Project-85	115732	2000	0.1	51.41586	-0.75073		
3												
4												
5												
6												
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You have now completed the *before* treatment requirement.

#### Step 4. Inputting data to achieve an *after* treatment Star Rating (scenario 2 or recommended for projects involving vulnerable road users)

Steps 1 to 3 need to be repeated, detailing the state of the road with the treatments your project is proposing. This will give you the projects *after* treatment Star Rating.

#### Step 5. Uploading before and *after* Star Rating to the Safer Roads Portal

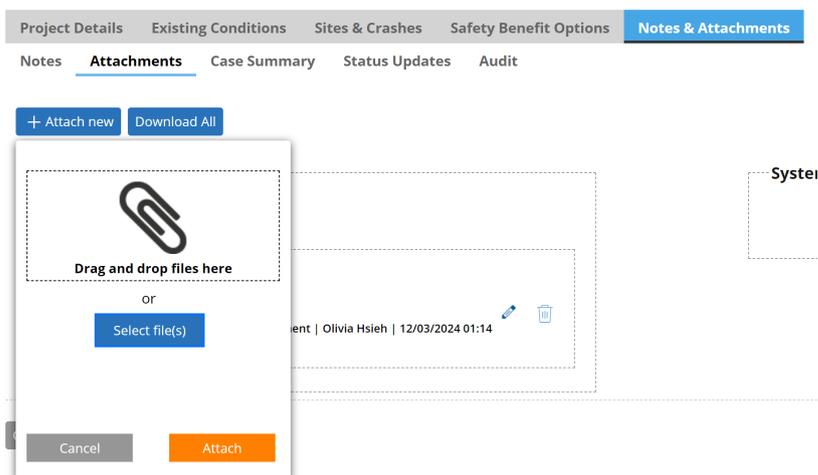
Repeat the entire process (steps 1 to 3) to populate the *after* treatment Star Rating for your project.

- When repeating step 3, take a screenshot of the *after* Star Rating and insert.
- Copy the *after* file into the before excel file as a secondary sheet.
- Save this file as excel (XLSX) format with your project name and Star Rating.
- Upload the file into the Attachments tab of the Safer Roads Portal.

	A	B	C	D	E	F	G	H	I	J	K	L
1	Coder nam	Coding date	Road survey date	Image refe	Road name	Section	Distance	Length	Latitude	Longitude	Landmark	Commer
2	Olivia Hsieh	14/03/2024	14/03/2024		Project-85	115732	2000	0.1	51.41586	-0.75073		
3												
4	Star Rating Demonstrator											
5	Project-8575 BEFORE											
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7												
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11												
13	14.8                      16.32                      NA                      NA											
17												
18												
19	Mitchell Hwy											
20	Orange, New South Wales											
21	Google Street View											
22	May 2023    See more dates											
23												

## Step 7. Uploading the Star Rating to the Safer Roads Portal

Upload your excel spreadsheet into the Attachments tab of the Safer Roads Portal (the single completed excel file containing both the *before* and *after* sheets).





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