# Templates

## Template 1: Safe System Site Assessment Table (Austroads, 2016)

Provide a brief description of the existing conditions at the project site by filling out the table below.

|  |  |
| --- | --- |
| **Prompts** | **Comments** |
| What is the reason for the **project**? Is there specific crash type risk? Is it addressing specific issues such as poor speed limit compliance, road access, congestion, future traffic growth, freight movement, amenity concerns from the community, maintenance/asset renewal, etc. |  |
| What is the **function** of the road? Consider location, roadside land use, area type, speed limit, intersection type, presence of parking, public transport services and vehicle flows. What traffic features exist nearby (e.g. upstream and downstream)? What alternative routes exist? |  |
| What is the **speed** environment? What is the current speed limit? Has it changed recently? Is it similar to other roads of this type? How does it compare to Safe System speeds? What is the acceptability of lowering the speed limit at this location? |  |
| What **road users** are present? Consider the presence of elderly pedestrians, school children and cyclists. Also note what facilities are available to vulnerable road users (e.g. signalised crossings, bicycle lanes, school speed limits, etc.) |  |
| What is the **vehicle** composition? Consider the presence of heavy vehicles (and what type), motorcyclists and other vehicles using the roadway.  |  |

## Template 2: SSAM Template (SSA Matrix, VicRoads *Rapid Safe System Assessment Report Template*)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|   | **Run-off road** | **Head-on** | **Intersection** | **Other** | **Pedestrian** | **Cyclist** | **Motorcyclists** |
| **Exposure Comments:** |  |  |  |  |  |  |  |
| **Exposure Score:** | /4 | /4 | /4 | /4 | /4 | /4 | /4 |
| **Likelihood Comments:** | List factors that increase/decrease the likelihood of crash type: | List factors that increase/decrease the likelihood of crash type: | List factors that increase/decrease the likelihood of crash type: | List factors that increase/decrease the likelihood of crash type: | List factors that increase/decrease the likelihood of crash type: | List factors that increase/decrease the likelihood of crash type: | List factors that increase/decrease the likelihood of crash type: |
| **Likelihood Score:** | /4 | /4 | /4 | /4 | /4 | /4 | /4 |
| **Severity Comments:** | List factors that increase/decrease the severity of crash type: | List factors that increase/decrease the severity of crash type: | List factors that increase/decrease the severity of crash type: | List factors that increase/decrease the severity of crash type: | List factors that increase/decrease the severity of crash type: | List factors that increase/decrease the severity of crash type: | List factors that increase/decrease the severity of crash type: |
| **Severity Score:** | /4 | /4 | /4 | /4 | /4 | /4 | /4 |
| **Product** **(multiply scores above for crash type)** | **/64** | **/64** | **/64** | **/64** | **/64** | **/64** | **/64** |
| **TOTAL** | **/448** |

# Examples

The worked examples in this section are sourced from pages 47-52 of Austroads’ [AP-R509-16 *Safe System Assessment Framework* (2016)](https://austroads.com.au/publications/road-safety/ap-r509-16) and demonstrate the application of the Safe System Assessment templates.

This pre-intervention scenario worked through in examples 1 and 2 considers a priority-controlled intersection on a major urban arterial (80 km/h) with U-turn facilities in both directions.

Example 3 considers a post-impact scenario where the same intersection is modified to a partially signalised intersection with a fully controlled right-turn signal, a separate U-turn facility and the introduction of a no right turn.

Please note, these examples are for illustrative purposes only.

## Example 1: Safe System Site Assessment Table (Austroads, 2016)

|  |  |
| --- | --- |
| **Prompts** | **Comments** |
| What is the reason for the **project**? Is there specific crash type risk? Is it addressing specific issues such as poor speed limit compliance, road access, congestion, future traffic growth, freight movement, amenity concerns from the community, maintenance/asset renewal, etc. | * High number of intersection casualty crashes
* Some issues with speed limit compliance (especially travelling east as it is downhill)

EXAMPLE |
| What is the **function** of the road? Consider location, roadside land use, area type, speed limit, intersection type, presence of parking, public transport services and vehicle flows. What traffic features exist nearby (e.g. upstream and downstream)? What alternative routes exist? | * Signalised T-intersection with local road with restricted turning movements
* U-turn facility for east direction only
* Residential land use, urban, parking available in service lanes
* Bus services with stops near the intersection
 |
| What is the **speed** environment? What is the current speed limit? Has it changed recently? Is it similar to other roads of this type? How does it compare to Safe System speeds? What is the acceptability of lowering the speed limit at this location? | * Major arterial (Highway)
* High speed environment (80 km/h), high flows (> 10 000 vehicles per day)
 |
| What **road users** are present? Consider the presence of elderly pedestrians, school children and cyclists. Also note what facilities are available to vulnerable road users (e.g. signalised crossings, bicycle lanes, school speed limits, etc.) | * Elderly drivers due to presence of retirement village in
* vicinity
* Some specialised vehicles (due to tip nearby)
* No school children present
* Low volumes of cyclists (who regularly use the service
* lane) and pedestrians.
 |
| What is the **vehicle** composition? Consider the presence of heavy vehicles (and what type), motorcyclists and other vehicles using the roadway.  | * Moderate proportion of heavy vehicles, although it is expected that larger vehicles would use an alternate route for east-west travel
* Low volumes of motorcyclists
 |

## Example 2: SSAM Pre-intervention Assessment Example (Austroads, 2016)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|   | **Run-off road** | **Head-on** | **Intersection** | **Other** | **Pedestrian** | **Cyclist** | **Motorcyclists** |
| **Exposure Comments:** | * High volume
 | * High Volume
 | * High vol. on Burwood Hwy
* Moderate vol. on Terrara Rd –
 | * High Volume
 | * Low Pedestrian volumes
 | * Low cyclist volumes
 | * Low motorcyclist volumes
 |
| **Exposure Score:** | 4/4 | 4/4 | 4/4 | 4/4 | 1/4 | 1/4 | 1/4 |
| **Likelihood Comments:** | * Steep grade
* Deceleration lane
* Presence of intersection
* No shoulders Moderate clear zone
* No barriers
 | * Divided, wide/raised median
* Intersection movements/conflict points minimal for head on crash
 | * % turning movements

EXAMPLE* No. of lanes and conflict points
* High speed
* Poor sight distance
* Protected turn lanes
 | * High no. of lanes
* Protected turn lanes
* Short deceleration lanes
* Buses stopping
 | * Service lane with footpath
* No crossing facilities at intersection
* Many lanes to cross
 | * Service lane – some separation
* No crossing facilities at intersection
 | * No delineation
* Well surfaced
* Straight road
 |
| **Likelihood Score:** | 3/4 | 4/4 | 3/4 | 3/4 | 4/4 | 4/4 | 3/4 |
| **Severity Comments:** | * High speed
* No barriers
* Steep grade
* Poles and trees to hit
 | * High speed
* Low speed in side road
 | * High speed
* Bad conflict angles
 | * High speed
 | * High speed
* No crossing facilities
 | * High speed
 | * High speed
* Some roadside hazards
 |
| **Severity Score:** | 3/4 | 3/4 | 4/4 | 3/4 | 4/4 | 4/4 | 4/4 |
| **Product** **(multiply scores above for crash type)** | **36/64** | **12/64** | **48/64** | **36/64** | **16/64** | **16/64** | **12/64** |
| **TOTAL** | **176/448** |

## Example 3: SSAM Post-Impact Assessment Example (Austroads, 2016)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|   | **Run-off road** | **Head-on** | **Intersection** | **Other** | **Pedestrian** | **Cyclist** | **Motorcyclists** |
| **Exposure Comments:** | * High volume
 | * High Volume
 | * High vol. on Burwood Hwy
* Moderate vol. on Terrara Rd –
 | * High Volume
 | * Low Pedestrian volumes
 | * Low cyclist volumes
 | * Low motorcyclist volumes
 |
| **Exposure Score:** | 4/4 | 4/4 | 4/4 | 4/4 | 1/4 | 1/4 | 1/4 |
| **Likelihood Comments:** | * Steep grade
* Deceleration lane
* Presence of intersection
* No shoulders Moderate clear zone
* No barriers
 | * Divided, wide/raised median
* ~~Intersection movements/conflict points minimal for head on crash~~
* No intersection conflict points that could result in head-on crash
 | * % turning movements
* No. of lanes and conflict points
* High speed
* Poor sight distance
* Protected turn lanes
 | * High no. of lanes
* Protected turn lanes

EXAMPLE* ~~Short deceleration lanes~~
* Buses stopping
* Extended deceleration lanes
* Need to stop at signals
 | * Service lane with footpath
* ~~No crossing facilities at intersection~~
* ~~Many lanes to cross~~
* No crossing facility (low speed)
* Zebra crossing
 | * Service lane – some separation
* No crossing facilities at intersection
 | * No delineation
* Well surfaced
* Straight road
 |
| **Likelihood Score:** | 3/4 | 0/4 | 3/4 | 4/4 | 2/4 | 4/4 | 3/4 |
| **Severity Comments:** | * High speed
* No barriers
* Steep grade
* Poles and trees to hit
 | * High speed
* Low speed in side road
 | * High speed
* ~~Bad conflict angles~~
* Reduced conflict angles
 | * High speed
* Visible intersection
* Resurfaced
 | * High speed
* No crossing facilities
 | * High speed
 | * High speed
* Some roadside hazards
 |
| **Severity Score:** | 3/4 | 3/4 | 2/4 | 2/4 | 4/4 | 4/4 | 4/4 |
| **Product** **(multiply scores above for crash type)** | **36/64** | **0/64** | **24/64** | **32/64** | **8/64** | **16/64** | **12/64** |
| **TOTAL** | **128/448** |