Road safety beyond mine gates

Damir Vagaja

Manager Mining and Resources

ARRB Group

Road safety within mines

Trusted advisor to road authorities for technical input and solutions

Road safety within mines

Trusted advisor to road authorities for technical input and solutions

Road safety 'beyond mine gates'

Source: U.S. Mine Safety and Health Administration

Trusted advisor to road authorities for technical input and solutions

Mining transportation outside mines

- Secondary mining road network
  - Site access
  - Exploration
  - Railway access
  - Infrastructure access
- Public roads
  - Transportation of goods to site
  - Transportation of products from site
  - Commuting

Trusted advisor to road authorities for technical input and solutions

Hazards on roads beyond gates

- Inadequate road configuration
- Hazardous roadsides
- Substandard road surface
- Interaction with fauna
- Unsafe speed
- Fatigue
- Lack of training
- Inappropriate vehicles
- Interaction with railway traffic
- Interaction with public traffic

Managing hazards beyond gates

- Road hazards within mines are easier to control
- Challenges with managing hazards outside areas of direct control:
  - Drivers' safety attitude
  - Hard to justify expenditure
  - No control (authority) over public roads

Improving safety on public roads

- Consult and collaborate with road authorities
- A proactive approach is required
- Establish yourself as a key stakeholder

- Community and industry road safety initiatives
  - MIRSA, QLD
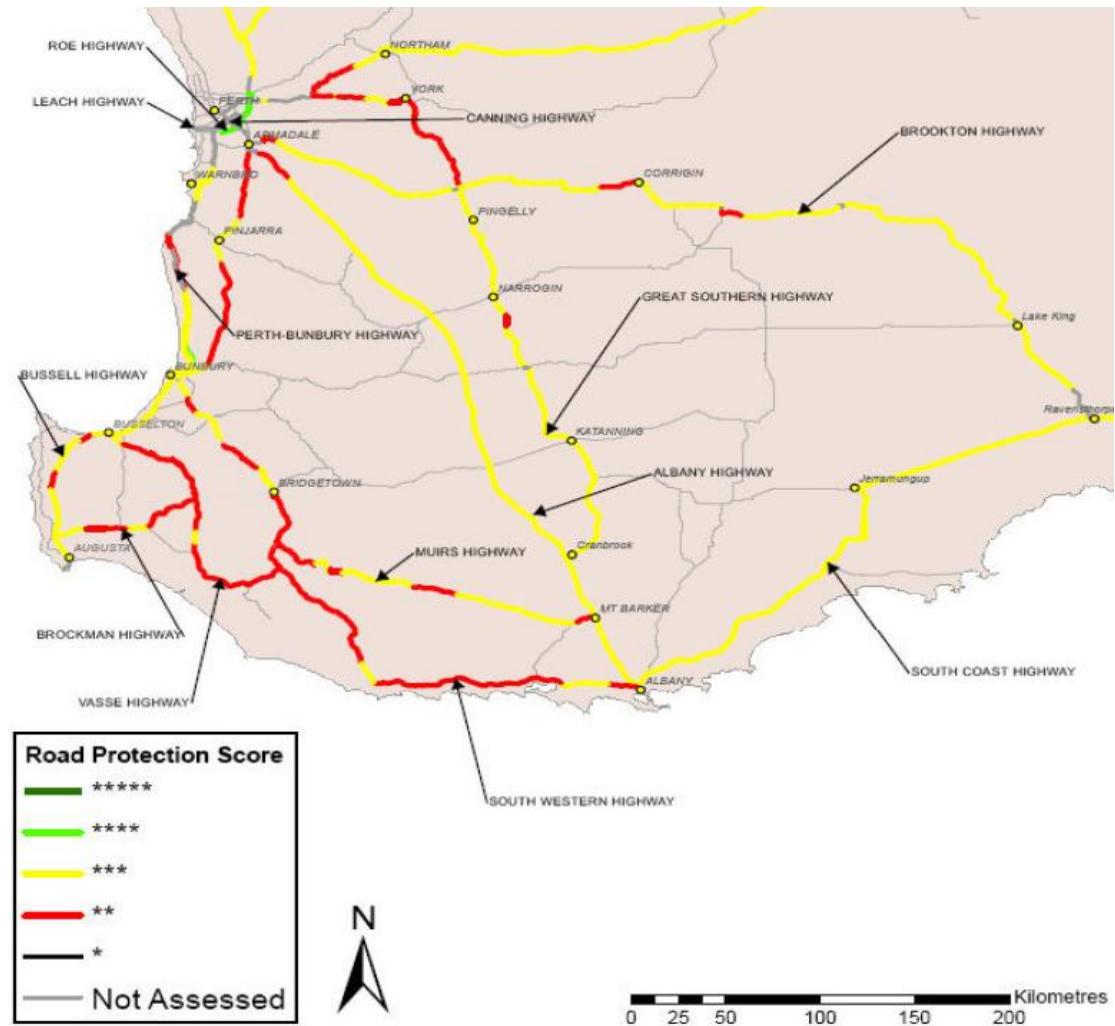 - RAAG, QLD
  - Industry Road Safety Alliance, WA

www.mirsa.com.au

Improving safety on public roads

- Route selection
- AusRAP assessments

Trusted advisor to road authorities for technical input and solutions

Improving safety on public roads

- Heavy haulage scheduling
  - Avoid daily and seasonal peaks
  - Avoid busy roads and intersections

Trusted advisor to road authorities for technical input and solutions

Improving safety on public roads

- Heavy haulage scheduling
  - Avoid daily and seasonal peaks
  - Avoid busy roads and intersections
- Interaction with railway traffic
  - Improve visibility and conspicuity
  - Educational campaigns

Trusted advisor to road authorities for technical input and solutions

Improving safety on public roads

- Heavy haulage scheduling
  - Avoid daily and seasonal peaks
  - Avoid busy roads and intersections
- Interaction with railway traffic
  - Improve visibility and conspicuity
  - Educational campaigns
- Commuting risks
  - Different for residential / FIFO / DIDO
  - Provide and promote bus service
  - Education – speed, alcohol, seatbelts, fatigue

Trusted advisor to road authorities for technical input and solutions

Improving safety on public roads

- Fatigue
  - Recent Coroner's findings in relation to two fatal crashes in central Queensland
  - Fatigue management programs should be developed for the workforce, their families and communities
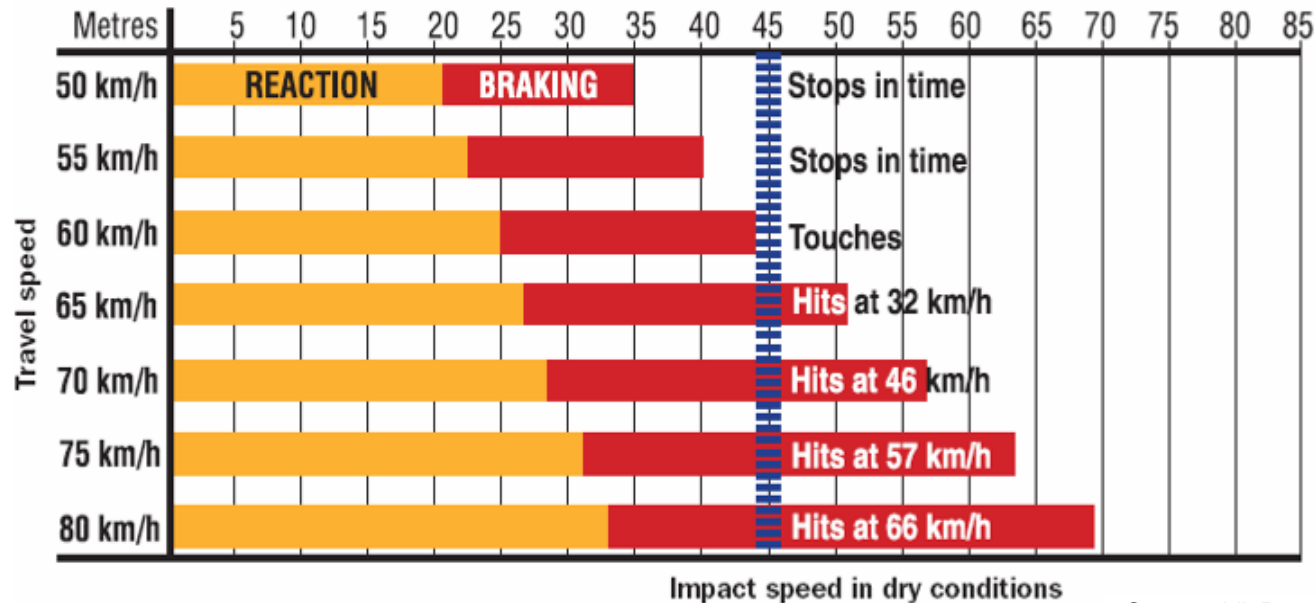
Safe System approach

- Vehicles
  - reduce the number of private vehicles used for commuting purposes
  - introduce and promote bus services for commuting
  - company vehicles and hire vehicles used for company purposes should be fit for purpose and with a minimum of five stars NCAP rating.

Trusted advisor to road authorities for technical input and solutions

Safe System approach

- Drivers
    - ensure drivers receive appropriate training for specific driving conditions (e.g. advanced 4WD training for driving on exploration tracks)
    - implement fatigue management systems and technologies
    - education about road hazards (e.g. railway crossings, speeding, fauna, etc.)
    - community engagement
    - consider the implementation of in-vehicle monitoring system (IVMS) technologies to influence positive behavioural changes amongst drivers

Safe System approach

- Speed
  - review appropriateness of speed limits (not too high and not too low)
  - implement speed enforcement on public and private roads

Source: VicRoads

Safe System approach

- Roads and roadsides
  - conduct regular inspections and audits
  - install rumble strips and enhanced delineation to improve night-time driving
  - clear roadsides of hazardous features such as large trees, power poles, rocks or steep embankments
  - provide road barriers only if hazards cannot be removed
  - ensure that road surface is suitable and safe for the intended vehicles and use

Conclusion

- Consider the full extent of your exposure to risks on the secondary road network

- Engage with road authorities and communities

- Address road safety issues in a Safe System approach
  - Vehicles
  - Drivers
  - Speed
  - Roads and roadsides

Questions ?

Damir Vagaja
Manager Mining and Resources
ARRB Group

08 9227 3024
0404 057 066
damir.vagaja@arrb.com.au

Trusted advisor to road authorities for technical input and solutions