



**ROAD SAFETY**  
RESEARCH, POLICING AND EDUCATION  
CONFERENCE 2013

# A Case Study of the Crash Reduction Potential of RISA on Local Rural Roads in New Zealand

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- What is **RISA**
  - **R**oad **I**nfrastructure **S**afety **A**ssessment
  - practical evidence based tool
  - assesses the contribution that road infrastructure features make to road safety
  - used on rural sealed roads in territorial local authorities
- Developed by NZ Transport Agency under Dr Ian Appleton (2002 – 2006)
  - Developed as a network risk assessment tool
  - Can also be used for corridor assessment
- Fully operational throughout NZ (2007 – 2011)
  - 50 RISAs were completed

# Case Study Locations



**Queenstown Lakes  
District Council**



# Queenstown Lakes DC

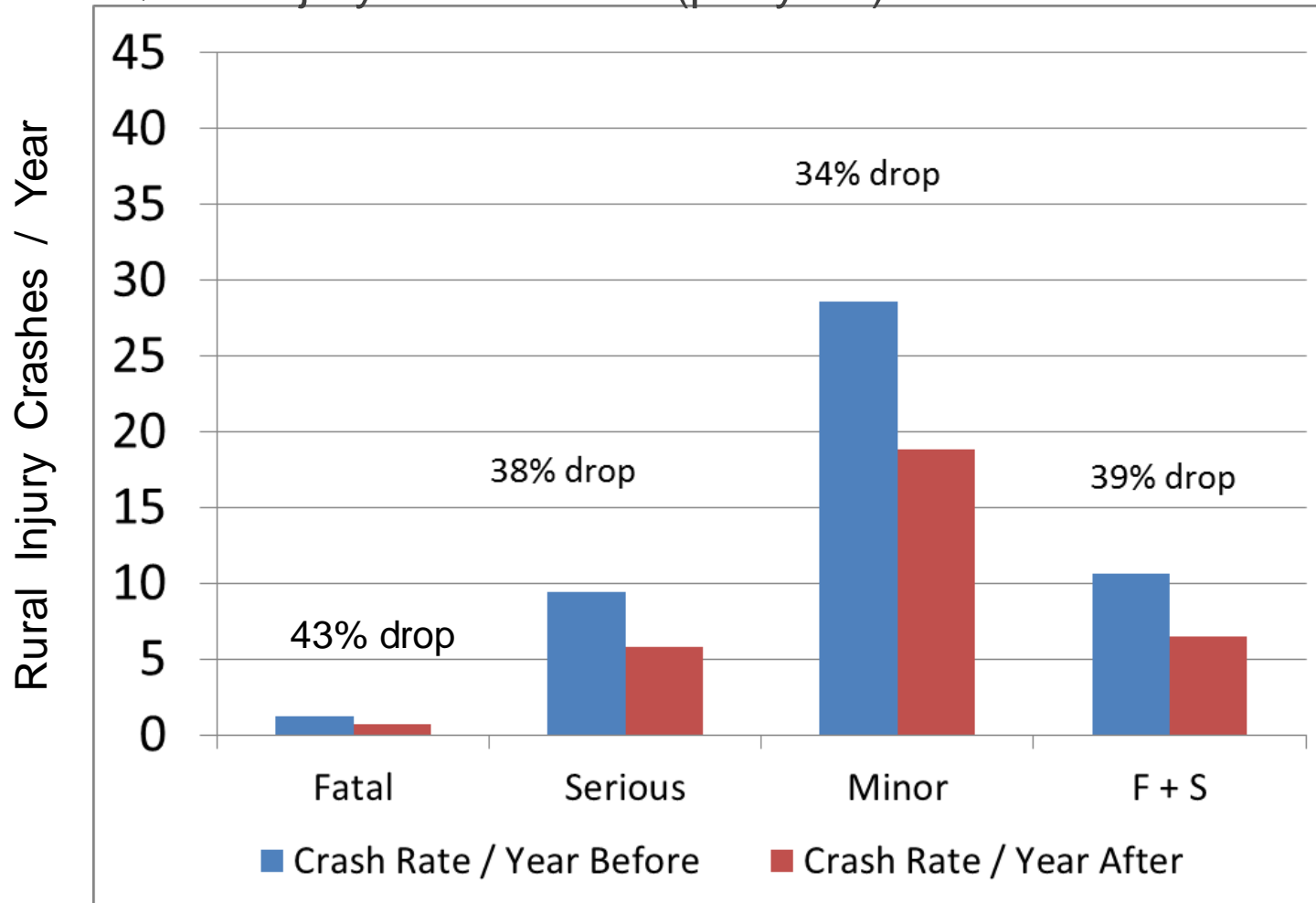


- RISA undertaken in April 2010
- QLDC's sealed rural road network amounts to 261 km
  - (34% or 89 km was assessed by the RISA Team)
- RISA Recommendations carried out
  - Shoulder widening where pavement rehabilitation carried out
  - Edge Marker Post setting out, maintenance and standards reviewed
  - Delineation upgraded throughout district
  - Out of Context Curves appropriately signed
  - Curve Warning Signs in accordance with Manual (MOTSAM)
  - Improved maintenance practices at intersections
    - Avoid loose chip
    - Avoid patchy pavement and flushing
- NZTA's Crash Analysis System (CAS) Crash Data assessed
  - Before : 5 years
  - After : 2 years 11 months (to 31 March 2013)



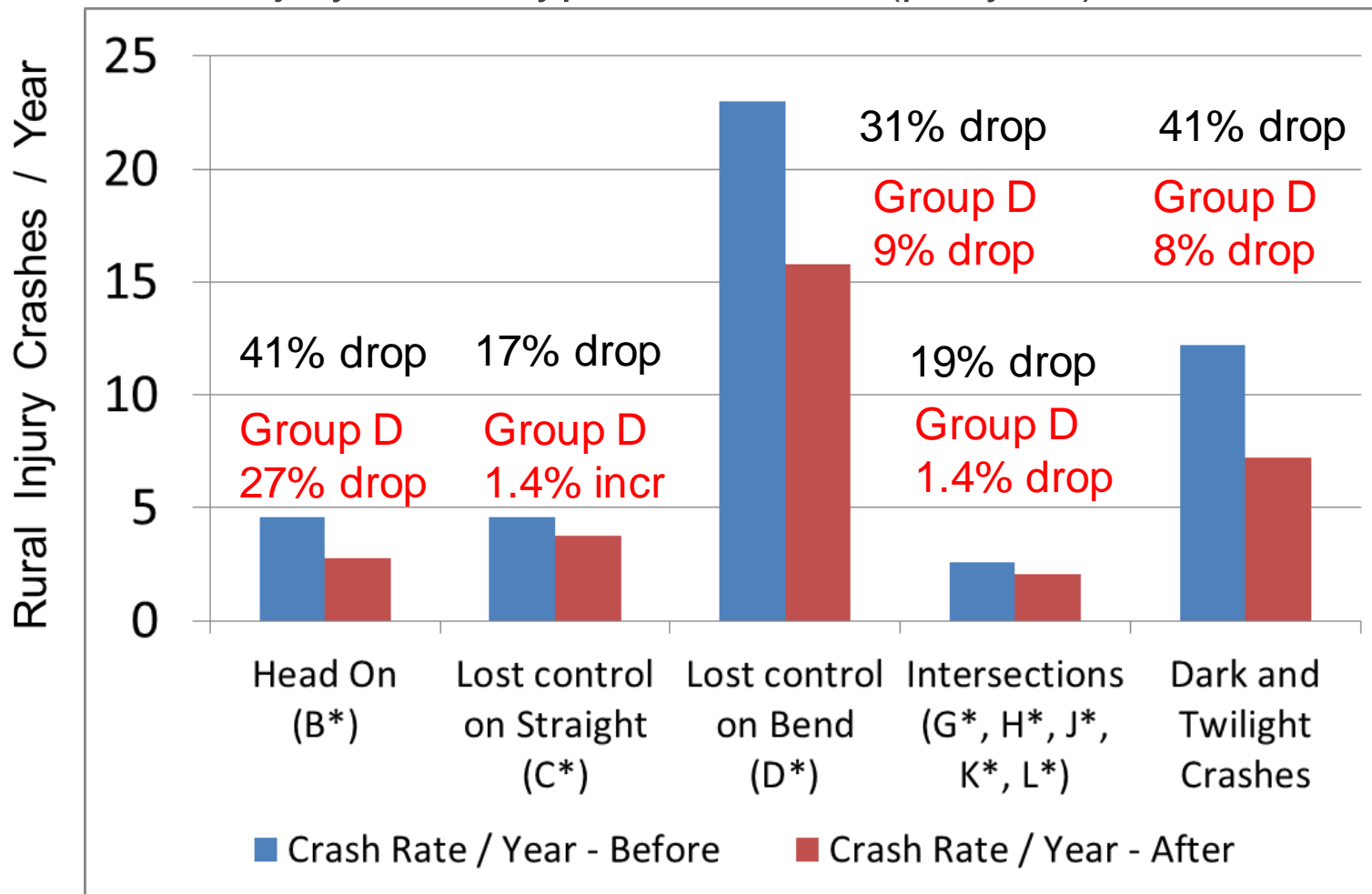
# Queenstown Lakes DC

- QLDC Injury Crash Rates (per year) before and after RISA



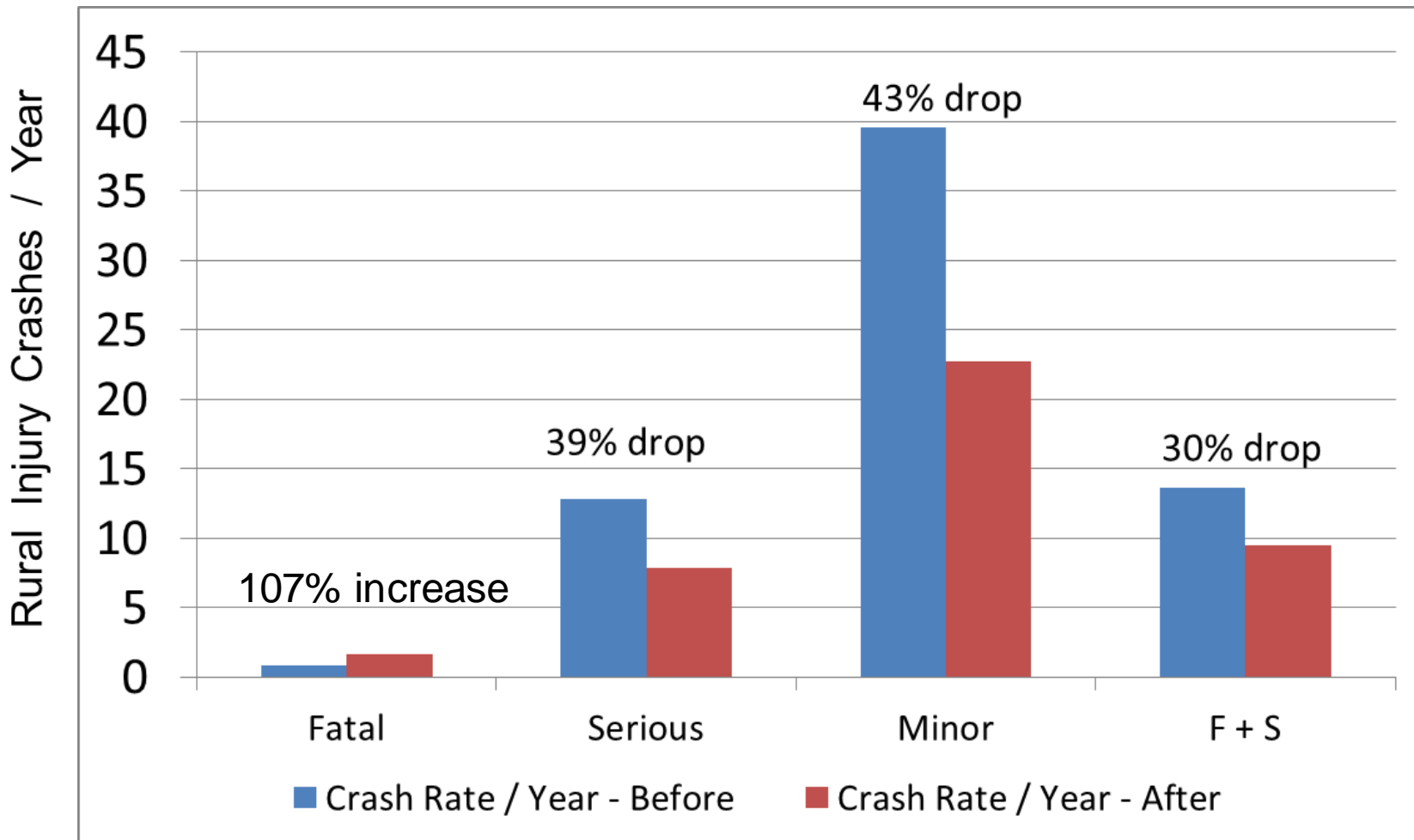
# Queenstown Lakes DC

- QLDC Injury Crash Type Crash Rate (per year) Before and After RISA



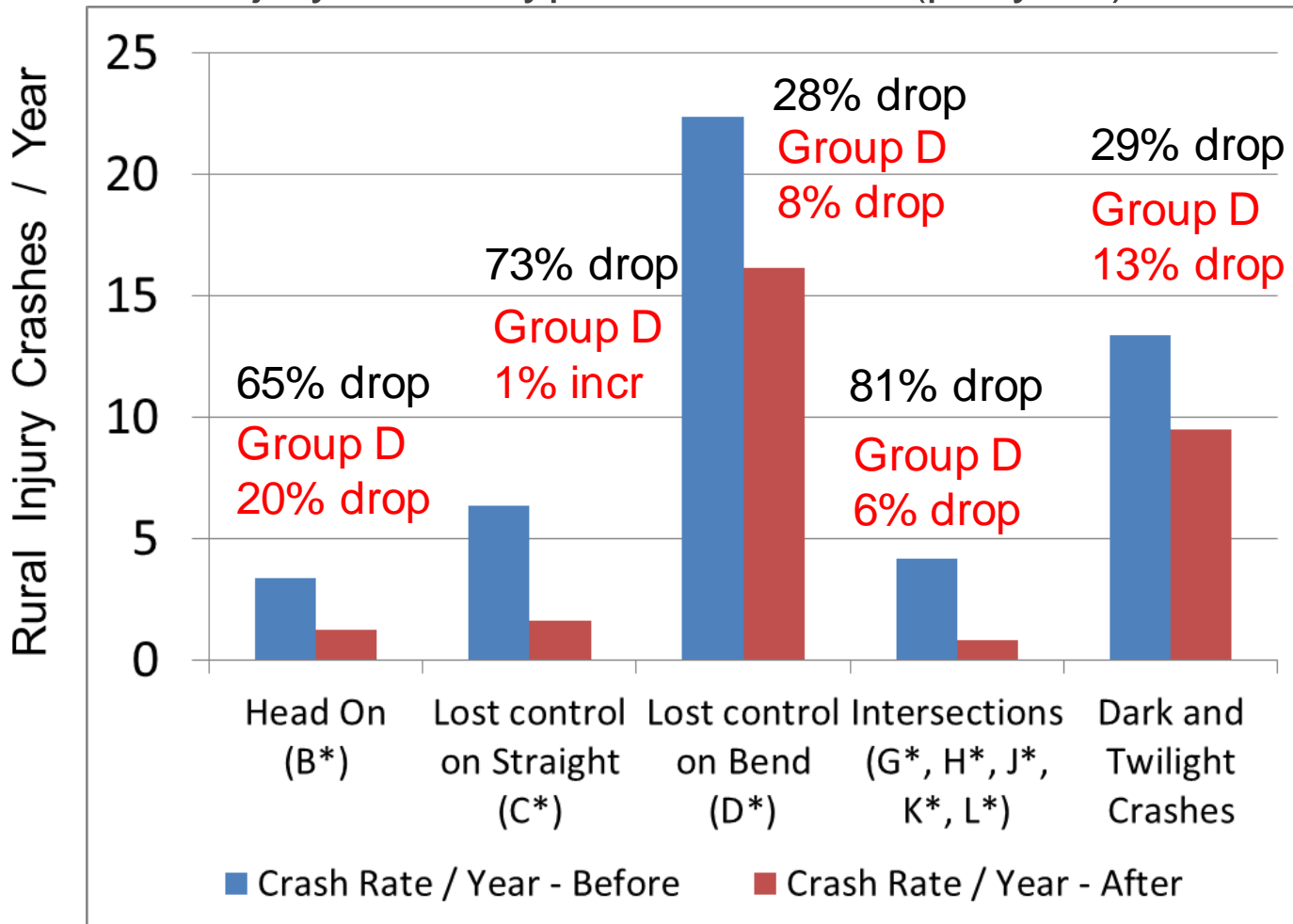
- RISA undertaken in October 2010
- DCC's sealed rural road network amounts to 389 km
  - (18% or ~ 69 km was assessed by the RISA Team)
- RISA Recommendations carried out
  - Installation of Edge Marker Posts
  - Guardrail identified, programmed and progressively installed at high risk locations
  - Reviewed when reseals are scheduled
    - particularly on routes with high volumes of tourist / visitor traffic
  - Reduced speed limits on some roads
  - All warning signage reviewed for consistency
  - Roadside hazards identified and prioritised for treatment
    - power poles, trees, drop offs, drainage features, etc.
- NZTA's CAS Crash Data assessed
  - Before : 5 years
  - After : 2 years 5 months (to 31 March 2013)

- DCC Injury Crash Rates (per year) before and after RISA

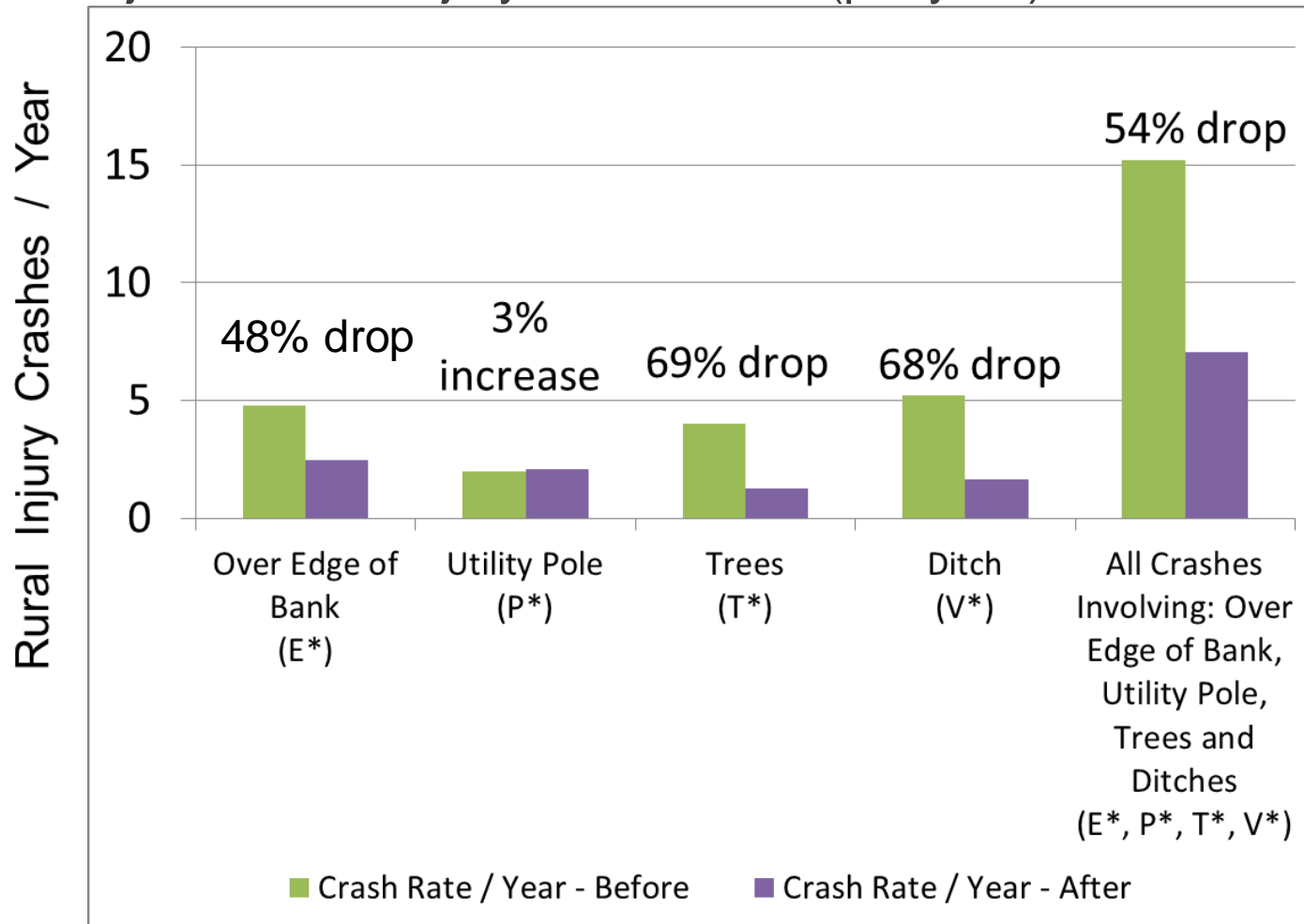




- DCC Injury Crash Type Crash Rates (per year) before and after RISA



- DCC Objects Struck Injury Crash Rates (per year) before & after RISA



# Conclusions & Recommendations



- Conclusions

- Crash data from both council areas showed a drop in crashes
  - Across all crash types
- Post RISA crash data limited by available data (between 2½ and 3 years)
- Crash reduction may be due to other factors
- RISA is a useful tool for local council staff to utilise to address crash risk on their sealed rural road network

- Recommendations

- Carry out further analysis of other local authorities
- Use longer post RISA crash data to confirm validity of data against a wider study group



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