



# Ground Investigation and Difficult Access

Presented by:

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# The challenge:



# RRV with drifter drill



# Drills mounted on telebaskets and excavators



# Sled-mounted drifter drill





# Auger mounted on A-frame



# Crestline anchor systems



# Crestline anchor systems



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# Competency

## Accessing the slope

- British Standard BS7985
- IRATA considered the 'gold standard'
- No task-specific training within IRATA syllabus

# Competency

## Work task

- Existing Land Drilling NVQ for single, ground level drill system
- Need for a range of drill and mounting systems

# Competency

- **Accessing the slope**
- **Work task**

# Competency

## Accessing the slope

- Temporary anchorage systems
- Robust design / Form C
- Installation tested and certified
- Documented daily re-inspection

# Competence

## CAN's approach:

- All personnel directly employed
- Full time training manager
- Structured in-house training
- Proof of competence
- Dovetailing with existing NVQ to reflect specialist needs



# 7 day working

## Drilling behind cess barriers



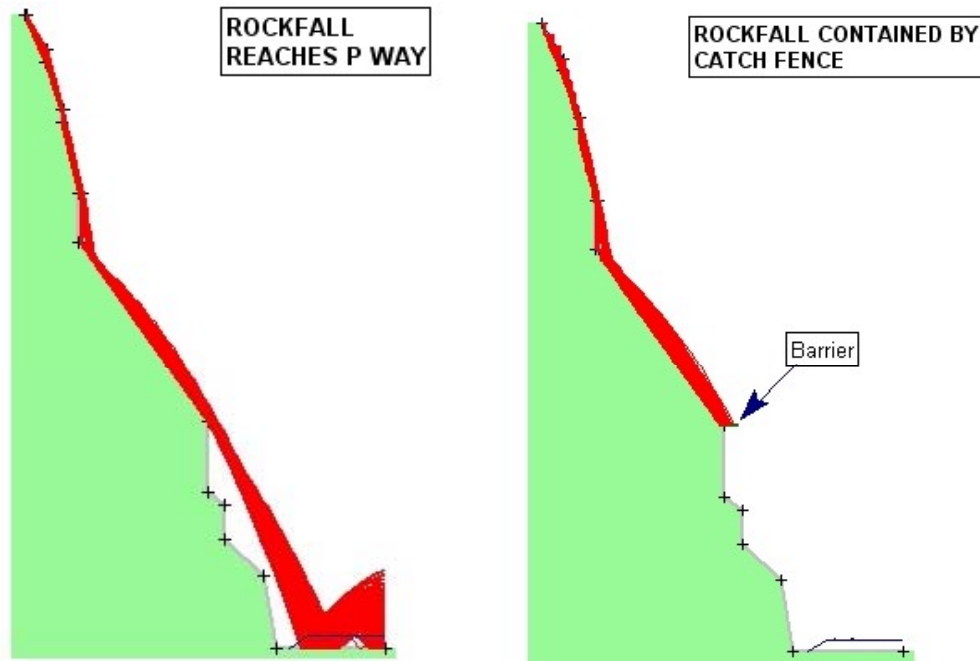
# 7 day working

## Drilling behind cess barriers



# 7 day working

## Rockfall analysis to locate barriers





# Slope Engineering and the Railway Environment

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