

Introduction

This guideline has been prepared by John Holland Rail (JHR) to assess and manage the risks associated with blasting operations in close proximity to CRN infrastructure.

In addition to the direct effects of blasting on CRN infrastructure, the effects of blasting on operations also needs to be considered. This will include consideration of the risk to both CRN and non CRN infrastructure which supports operations e.g. signalling cables, overhead power lines, third party assets.

The over-riding premise of this guideline is that blasting operations must not have any long-term detrimental effect on CRN assets or operations, and not heighten the level of risk to the safety of people within the rail corridor.

JHR will assess risks from blasting in two stages as required:

- Stage 1 JHR will undertake an initial appraisal and provide either 'in principle' approval to blast in close proximity to CRN Infrastructure, or, reject the proposal.
- • Stage 2 Detailed assessment and approval if required.

Stage 1 Initial Appraisal - – (Prior to JHR “IN PRINCIPLE” approval To Blast IN CLOSE PROXIMITY to CRN INFRASTRUCTURE)

Prior to JHR granting an approval “In Principle” to blast where it has been identified that mining/quarrying operations may impact on CRN infrastructure, operations or safety, the following information will be required by JHR to assess the likely impacts.

1. Proposed date(s) and time(s) for blasts.
2. Proximity to CRN infrastructure.
3. Type of blasting (e.g. Prestrip or Highwall).
4. Number of BCM's.
5. The extent or area from which the blast will be visible.
6. The area to which the effects of blasting are likely to be observed by the train drivers and passengers e.g. flyrock, vibration and air-blast.
7. Dilapidation Survey (Condition Report) of the Track and adjacent Structures by rail qualified consultant.
8. A PDF copy of the Mine EIS.

Stage 2 Detailed Assessment - (After JHR “IN PRINCIPLE” approval To Blast in close proximity to CRN RAIL INFRASTRUCTURE)

After JHR granting an approval In Principal to blast in close proximity to CRN infrastructure, the following procedure shall generally apply so as to enable JHR to assess the likely impact on infrastructure, operations and safety.

- A blasting Risk Management Workshop shall be held between JHR and the Mine/Quarry representative(s), (and other stake holders as appropriate) to assess risks and risk management strategies with respect to CRN infrastructure, commercial interests and safety; and to develop a tailored Risk Management Plan which may require further Engineering Assessments. Review of the tailored Risk Management Plan shall be undertaken at an agreed time interval.
- The tailored Risk Management Plan shall be agreed and signed off by the relevant JHR Maintenance Superintendent or their nominated representative(s) prior to any blasting within close proximity to CRN infrastructure.

As a guide (subject to a detailed Risk Assessment and development of a tailored Risk Management Plan), the tailored Risk Management Plan may comprise one or more of the following:

Category A type Blasting (blasting which has been assessed as not posing a risk to CRN infrastructure, operations or safety)

- If a visual impact on rail services is apparent then blasting is only to occur when the rail line is clear of trains between the interlocking each side of the blasting site (i.e. between controlled signals each side of the blasting site in signalled areas, and between train order locations in non-signalled areas).

Category B type Blasting (blasting which has been assessed as posing a risk to CRN infrastructure, operations or safety)

Prior to Blasting

- All blasting shall only be undertaken during pre-planned Track Occupancy Authority (TOA) possession (to be organised by the Mine/Quarry in consultation with the appropriate CRN Network Operations Access Manager rep and Maintenance Superintendent). Refer to attachment.
- The relevant JHR Maintenance Superintendent shall be notified both 7 days and 24 hours prior to the intention to blast.
- The Mine/Quarry shall take possession of the track by way of a suitably qualified and JHR recognised Protection Officer (at least a PO2 qualified) prior to blasting.
- The Mine/Quarry is to ensure that the railway corridor is clear of all personnel, which may include the provision of signage or sentries.

blast inspections and/or monitoring.

After Blasting

- The railway corridor shall be inspected and the track and structures certified as fit for traffic by a suitably qualified person (infrastructure certification) prior to the Protection Officer fulfilling the TOA (possession hand back).
- Any changes / damage to CRN infrastructure or safety incidents shall be reported immediately to the relevant Maintenance Superintendent (including instance where flyrock lands in the rail corridor). The Maintenance Superintendent shall be responsible for arranging and managing repairs to CRN infrastructure (in consultation with the Mine/Quarry rep), with the costs associated with the repairs to be borne by the Mine/Quarry.

NOTES

- Each individual case should be analysed on its own merits, taking into account the predicted/measured effects of ground vibration, air-blast and the possibility of flyrock affecting the track and other structures and trains. The abovementioned risk management measures are presented as a guide only, and will be subject to modification to the satisfaction of the appropriate JHR Maintenance Superintendent or their nominated representative(s) through the process of the Risk Management Workshop.
- Any costs accrued by JHR personnel in relation to safe working, track inspection, remedial works etc, in association with blasting operations shall be borne by the organisation conducting the blasting operations.
- JHR will provide the Mine/Quarry with a list of relevant contacts e.g. Manager Routine Maintenance, Team Manager (Superintendent), Network Ops coordinator, Safety Officer etc.
- JHR is to be indemnified by the Mine/Quarry conducting the blast of all liabilities resultant from damage by blasting operations.

As a Guide:

- Blasting between 600m and 200m is considered Category A type blasting.
- Blasting between 200m and 100m is considered Category B type blasting
- Blasting Less than 100m is considered Category B with specific engineering assessments and post