

# **PERSONAL GEO FENCE**

# The track workers first line of defence

The Personal Geo Fence is an innovative rail worker safety product designed to enhance the safety of track workers in Australia, where the number of rail lines is increasing, leading to a higher potential for accidents. Here's an overview of how it works:

# **Precise GPS Technology**

The system relies on precise GPS technology to track the location of both the train and the track workers. This allows for accurate monitoring of the train's proximity to the work crew.

## **Alert System**

When a train or rail vehicle approaches the predetermined distance from the track workers, the Personal Geo Fence system triggers a series of alarms to warn the crew. These alarms are based on specific distances from the approaching track vehicle:



#### First Alarm (700m)

The first alarm is triggered when the train is 700 meters away from the track workers. This initial warning provides the crew with early notice of an approaching vehicle



#### Second Alarm (500m)

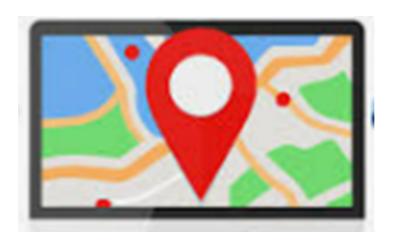
The second alarm activates when the train is 500 meters away, signalling that it's getting closer and the crew should be on high alert.



#### Third Alarm (300m)

The final alarm is triggered when the train is within 300 meters of the work crew, signifying immediate danger.

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#### **Alert Devices**

Track workers are equipped with alert devices, likely attached to their person or clothing. When an alarm is triggered, these devices notify the workers through a combination of vibration and a high-pitched noise. This multi-sensory approach ensures that the crew is alerted promptly and can take necessary precautions.

#### **Trainset or Loco NSS Device**

Each train Loco set is fitted with a Navigation Satellite System (NSS) that continuously tracks the train's location and speed as it moves along its route. This system maintains real-time communication with the wayside devices carried by track crews working within the rail reserve.

## **Track Crew Warning Device**

The track Crew warning device is a portable device specifically designed for track maintenance crew environments. It is equipped with the same Navigation Satellite System (NSS) technology, ensuring precision in tracking and alerting. This device is versatile and can be carried on a belt or clipped to a vest or shirt pocket, allowing track workers to have it within easy reach.

# **Activity Logging**

The track Crew warning device has the capability to store thousands of detailed activity logs. This logging feature can be useful for record-keeping, incident analysis, and compliance reporting.

The Personal Geo Fence system aims to significantly improve rail worker safety by providing early warnings and alerts to track workers, allowing them to take timely action to avoid interaction with oncoming trains or rail vehicles. This technology contributes to a safer work environment for track maintenance crews, especially in situations where they are working in close proximity to active rail lines.