UNIT-8

Construction Site Traffic Management

Learning Outcomes

By the end of this unit the learner will be able to:

- ✓ Explain the importance of effective and efficient site traffic management
- ✓ Understand the safety implications of poor site traffic management
- ✓ Create and implement an effective site traffic management plan

Unit 8
Construction Site Traffic Management
Introduction

Managing traffic at a construction workplace is an important part of ensuring the workplace is without risks to health and safety. Vehicles including powered mobile plant moving in and around a workplace, reversing, loading and unloading are often linked with death and injuries to workers and members of the public.

Traffic includes cars, trucks and powered mobile plant like forklifts, and pedestrians like workers and visitors.

The most effective way to protect pedestrians is to eliminate traffic hazards. This can be done by designing the layout of the workplace to eliminate interactions between pedestrians and vehicles. Examples include prohibiting vehicles from being used in pedestrian spaces or providing separate traffic routes so pedestrians cannot enter areas where vehicles are used.

Where this is not possible the risks must be minimised so far as is reasonably practicable. This can be done by careful planning and controlling vehicle operations and pedestrian movements at the workplace.

Key issues to consider for managing traffic at construction workplaces include:

- keeping pedestrians and vehicles apart including on site and when vehicles enter and exit the workplace
- minimising vehicle movements
- eliminating reversing vehicles or minimising the related risks
- ensuring vehicles and pedestrians are visible to each other
- using traffic signs, and
- Developing and implementing a traffic management plan.

A person conducting a business or undertaking has a duty to ensure, so far as is reasonably practicable, workers and others are not exposed to health and safety risks arising from the business or undertaking. This duty includes implementing control measures to prevent people being injured by moving vehicles at the workplace.

A person conducting a business or undertaking involved in carrying out high risk construction work has extra duties. These include ensuring a safe work method statement (SWMS) is prepared before work starts and preparing a Work Health and Safety (WHS) management plan for construction work costing £250 000 or more.

Information, training, instruction and supervision

A person conducting a business or undertaking has a duty to provide any information, training, instruction or supervision necessary to protect all persons from risks to their health and safety. A person conducting a business or undertaking must also ensure construction induction training is provided to workers who carry out construction work.

A person conducting a business or undertaking of a workplace must ensure, so far as is reasonably practicable, workers have the necessary training, qualifications or licenses to operate the vehicles, plant and attachments they use, for example:

- checking for licensing, qualifications and fitness for work when engaging drivers or operators or when hiring contractors
- managing the activities of visiting drivers, and
- training drivers and operators.

Incidents can also occur when untrained or inexperienced workers drive construction vehicles. Access to vehicles should be managed and workers alerted to potential risks.

A person conducting a business or undertaking must ensure, so far as is reasonably practicable, workers including contractors know and understand the traffic rules, safety policies and procedures for the workplace. Visitors to the workplace should also be aware of the site traffic safety rules and procedures. Visiting drivers should be aware of restrictions on vehicle size or type and where they are to make deliveries before going to the workplace.

Site-specific health and safety rules must be included in the WHS management plan.

> Other people at the workplace, like customers and visitors, must take reasonable care for their own health and safety and must take reasonable care not to adversely affect other people's health and safety. They must comply, so far as they are reasonably able, with reasonable instructions given by the person conducting a business or undertaking to allow that person to comply with the WHS Act.

Keeping pedestrians and vehicles apart

Consider implementing the following control measures to keep pedestrians and vehicles apart at the construction workplace and when vehicles enter or exit the workplace:

- Providing separate traffic routes for pedestrians and vehicles, where possible.
- Providing separate clearly marked pedestrian walkways that take a direct route.
- Creating pedestrian exclusion zones where powered mobile plant is operating.
- Creating vehicle exclusion zones for pedestrian-only areas, for example around tearooms, amenities and pedestrian entrances.
- Securing areas where vehicles and powered mobile plant operate by installing pedestrian barriers, traffic control barricades, chains, tape or bollards. Where needed ensure a competent person with the necessary training or qualifications directs powered mobile plant when it operates near workers or other plant.
- Designating specific parking areas for workers' and visitors' vehicles outside the construction area.
- Providing clearly signed and lit crossing points where walkways cross roadways, so drivers and pedestrians can see each other clearly.
- Using traffic controllers, mirrors, stop signs or warning devices at site exits to make sure drivers can see or are aware of pedestrians before driving out onto public roads.
- Avoiding blocking walkways so pedestrians do not have to step onto the vehicle route.
- Scheduling work so vehicles, powered mobile plant and pedestrians are not in the same area at the same time.

Minimising vehicle movements

Planning can help minimise vehicle movement around a workplace.

To limit the number of vehicles at a workplace consider:

- planning storage areas so delivery vehicles do not have to cross the site .
- providing vehicle parking for workers and visitors away from the work area
- controlling entry to the work area e.g. by using boom gates, and
- scheduling work to minimise the number of vehicles operating in the same area at the same time.

Reversing vehicles

Where possible, avoid the need for vehicles to reverse as this is a major cause of fatal incidents.

One-way road systems and turning circles can minimise risks, especially in storage areas.
Where this is not possible other control measures should be considered including:

- using mirrors, reversing warning alarms, sensors and cameras
- ensuring a signal person wearing high visibility clothing assists the driver who cannot see clearly behind their vehicle – the driver should always be able to see the signaller
- ensuring workers and other people are familiar with reversing areas and these areas are clearly marked, and
- ensuring plant operators are aware of workers who may be in the vicinity of the swing radius, articulation points and overhead load movement of their vehicle.

Signs, warning devices and visibility

Signs should be used to alert workers and pedestrians to potential hazards from vehicles entering and exiting the construction workplace and other requirements like pedestrian exclusion zones.

Traffic routes should be clearly signed to indicate restricted parking, visitor parking, headroom, speed limits, vehicle movement, key site areas and other route hazards. Standard road signs should be used where possible and speed limits should be implemented and enforced.

A person conducting a business or undertaking must not allow powered mobile plant to collide with a pedestrian. If there is a possibility of powered mobile plant colliding with pedestrians or other powered mobile plant, the person with management or control of the plant must ensure the plant has a device to warn people at risk from the movement of the plant.

A person conducting a business or undertaking must also ensure, so far as is reasonably practicable, lighting is provided to allow workers to carry out their work without risk to health and safety. Bad weather, shadows from plant and blind spots can reduce visibility.

The following control measures should be considered to manage risks:

- installing mirrors, reversing cameras, sensors and alarms to help drivers see or be aware of movement around the vehicle.
- installing visual warning devices like flashing lights and high-visibility markings for powered mobile plant
- implementing safe systems of work to stop loads being carried forward where they impair clear vision
- appointing a trained person to control manoeuvres
- ensuring high-visibility or reflective clothing is worn by workers, plant operators and pedestrians at the workplace

Traffic Management:

- using communication methods like:
- radio – however ensure a back-up communication process is in place if it fails
- line of sight communication e.g. hand signals or cap lamp light signals. The person receiving the message should acknowledge the message has been received and understood, and
- verbal commands and confirmation of warnings and signals.

Traffic management plans

A traffic management plan documents and helps explain how risks will be managed at the construction workplace. This may include details of:

- designated travel paths for vehicles including entry and exit points, haul routes for debris or plant and materials, or traffic crossing other streams of traffic
- pedestrian and traffic routes
- designated delivery and loading and unloading areas
- travel paths on routes remote from the workplace including places to turn around, dump material, access ramps and side roads
- how often and where vehicles and pedestrians interact
- traffic control measures for each expected interaction including drawings of the layout of barriers, walkways, signs and general arrangements to warn and guide traffic around, past or through the workplace or temporary hazard
- requirements for special vehicles like large vehicles and mobile cranes
- requirements for loading from the side of road onto the site
- the responsibilities of people managing traffic at the workplace
- the responsibilities of people expected to interact with traffic at the workplace
- instructions or procedures for controlling traffic including in an emergency, and
- how to implement and monitor the effectiveness of a traffic management plan.

The traffic management plan should be monitored and reviewed regularly including after an incident to ensure it is effective and takes into account changes at the workplace.

Workers should be aware of and understand the traffic management plan and receive information, instruction, training and supervision. Site induction should include the traffic management plan.

Further Reading:

- ✓ *Barbara J. Jackson, (2010), Construction Management JumpStart*