Construction Management Plan

Palmyra Apartments West

47 McGregor Rd, Palmyra

Hanssen Pty Ltd
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1. General

1.1 Background

Palmyra Apartments West project is situated at 47 McGregor Rd, Palmyra. The residential development features 130 apartments and associated facilities contained within four 3 storey buildings.

Hanssen Pty Ltd has been engaged by the landowner for the construction of this development. This Construction Management Plan is a detailed document which outlines the methods and procedures which will be implemented to manage construction activities to ensure the impact on the environment and surrounding community and infrastructure is minimised.

1.2 Site Layout

Appendix A includes a general site layout for reference. This Construction Management Plan covers all phases of the development.

2.1 Construction Sequence

Building construction is an entire process from ground works to finishes including not limited to superstructure, internal finishes, external works.

2.1.1 Site Clearing & Ground Works

Clearing & removal of existing vegetation ready for excavation & foundation works. Buk earthworks related to moving existing soil onsite to create finished floor levels is required, with some additional fill required once vegetate spoil is removed from site. Retaining is also to be installed on the far western boundary adjacent existing properties and local Woolshed Park. This work is done from within the site.

Foundations will then be prepared on the finished floor level, involving minor excavation. There are no basements.

2.1.2 Superstructure

Superstructure includes various structural elements such as columns, walls, slabs, and roofs.

- Columns & Walls: majority of them will be precast and depending on the structural requirements and construction constraint, it may be in-situ. Hanssen's precast factory will support all the precast concrete and pre-fabrication of the reinforcement cages.
- Slabs: Hanssen use a system called bubbledeck for our slab installation. Bubbledeck is a lighter and stronger option than the traditional concrete slab. This is also savins on transporation and heavy freight on roads as less concrete is required to be poured on site. All bubbledeck will be made at Hanssen's precast factory and deliver to site when requested.
- Roof: a lightweight insulated colourbond roof will be installed on top of steel and concrete frame. The roof sheets will be installed in long sections onsite.

Generally, all superstructure elements will be unloaded and installed by a tower crane on site. See Appendix A for tower crane location.

2.1.3 Finishing and External Works

Before the final clean, activities such as the installation of windows, gyprock, waterproofing, flooring, doors, painting, cabinets, stone top, landscaping, external features etc will be completed as per the detailed architectural drawings and finishing schedules. This work is all carried out within the site, including storage of materials.

2.2 Road and Footpath Management

Hanssen Pty Ltd proposes to have minimal impact to the surrounding roads for the purpose of these construction activities. Permanent or long term closure of roads or lanes is not required or expected.

All vehicular access to the site will be via McGregor Rd, which provides sufficient space for delivery trucks to enter and exit the site. All pedestrian access to the site will be from McGregor Rd, with a defined path for workers and visitors to access via the site office onsite.

A complete Traffic Management Plan (TMP) has been prepared by MB Traffic Planning & Management for approval, as included at Appendix D.

The primary requirements of the TMP are:

- Ongoing awareness for road and footpath users of works in the area, including that trucks will be entering and exiting the site;
- Short term and occasional loading and unloading of vehicle on the street, accessible by the verge. Traffic Management to be installed and controllers used as required;
- Closure of 8 carbays on the verge, to enable the temporary parking as described above and ensure safety of vehicles. These bays are in place for purposes of future visitors to the development so there restricted use should not impact the local community;
- Closure of the footpath adjacent the site, to ensure the safety of users. There is an existing footpath on the opposite side of the street which can be utilized by pedestrians, and removing them from the frontage of the construction site will eliminate any potential risks.

If any additional services or emergency works are required impacting the road network a task specific application will be made to the City for approval.

Large vehicle transport routes are shown in Appendix E, including swept paths at key local intersections.

2.3 Risk Assessment

Please refer to Appendix C for the risk assessment for this project.

2.4 Storage of Materials and Equipment

The construction of this project allows for all materials to be stored onsite, with laydown areas for unloading of most deliveries and their storage within the site, noting some larger vehicles may be unloaded from the street but materials transported directly on to site.

All deliveries will access the site in accordance with the TMP.

2.5 Provisions for Parking

Worker numbers expected onsite for each of the phases are:

Site Clearing and Ground Works – month 1 - 3 – 20 people;
Superstructure – month 4 – 13 – 100 people;
External and Finishing Works – month 7 – 16 – 150 people.

Onsite parking will be available for 66 worker vehicles. Experience (based on worker survey February 2026) confirms that between 35% (inner city in finishing phase) to 72% (suburban good transport links, superstructure phase) of workers drive their own vehicle to site, the balance utilising public transport, motorbikes or as passengers. Acccordingly any parking overflow will be minimal, and street parking around the site is plentiful and unrestricted (with McGregor Rd adjacent the site not having any houses fronting one side of the road).

Hanssen Pty Ltd will discourage use of the surrounding streets by workers, but these are otherwise able to be managed by the City should parking disruptions occur.

2.6 Condition of Verge and Road Reserve

The verge adjacent McGregor Rd is to be fully reinstated during construction in accordance with approved Landscape Plans. The existing footpath will be maintained during construction and repaired to an as new state upon completion if required.

Any identified minor damage to the street and kerb not otherwise to be attended to as part of construction can be rectified during construction.

A dilapidation survey of existing infrastructure (footpath, carbays, kerb) will be provided to the City prior to commencement on site.

2.7 Dewatering

There will be no dewatering required for the construction works as no deep excavation is involved.

2.8 Tower Crane

One Tower Crane will be installed on site. This will be the primary way of getting materials onto and around the site. See Appendix A for location.

2.9 Truck Wash Down Area

There will be no allocated wash down area for trucks onsite. Bulk earthworks are expected to be undertaken during summer, where water will only be involved for dust suppression. All concrete suppliers are to be advised that their trucks must dispose of excess concrete and wash down at their depot after leaving site.

2.10 Storage and Disposal of Rubbish

All small waste produced on site will be collected in 240lt mobile waste bins at the source (ie within apartment or work area). The bins are shifted to a central location and held for collection by a side lift rubbish truck once per day. Large waste is deposited into bins controlled by a ISO 14001 compliant contractor. Amenities provided onsite for staff will be cleaned by onsite workforce.

2.11 Control of Sand and Dust

Temp fencing will be place surrounding the northern and western boundaries of the site, where shadecloth can be added should dust drift occur. The southern and western boundaries are already bounded by solid fences.

Spraying water, wheel washing or Dustex will also be used for dust suppression as required during this stage of construction. Further to above, consideration below will be taken into account prior to any job starts:

- Substituting dusty products for granular or liquid formulations;
- Ensuring adequate ventilation; and use controls to minimise the amount of dust in the air - such as on-tool dust extraction, local exhaust ventilation, or wet-cutting methods;
- Using tools with duct extraction system and adequate vacuum cleaner to constantly removing dust from the floor;
- Using appropriate personal protective equipment, including respiratory protective equipment.

If any activities may release dust and potentially escape from the land, the builder will issue written notification to owners or occupiers adjacent to the land at least 48 hours prior to the activities start including the description of the activities, time, location and contact details of the responsible for the activity.

Street cleans will be arranged on a weekly basis should it be identified as being required, or as requested by the City.

2.12 Stormwater run-off

Stormwater run-off will be contained and dispersed on site via stormwater soakage system. Any stormwater prior to then will distribute as currently occurs based on natural cleared sandy block.

2.13 Noise & Vibration Management

Please find Appendix B for Hanssen Noise & Vibration Management Plan.

Hours of operation of the site are restricted to those set out in the Environmental Protection (Noise) Regulations. The likely working hours are Monday-Friday 0700 – 1900hrs and Saturday 0700 – 1500hrs.

2.14 Access to Site

The site will be closed to the public and all visitors will be required to report immediately to the Site Manager via the site office located on site. Signs stating this will be attached to temporary fencing on site and fencing will prevent the free access of the public to the site. Primary access and egress to and from the site will be via McGregor Rd.

2.15 Community Liaison

Prior to commencement of construction activities an information newsletter will be distributed to all properties within 200 metres of the perimeter of the site. The newsletter will include: -

- Estimated construction duration and times.
- Site contact details.
- Complaints procedure.

The complaints procedure will include:

Complaint Reporting – any complaints are to be addressed to Hanssen Pty Ltd via email info@hanssen.com.au, or phone 6218 3800. Additional direct contact details for site office, including after hours contacts, will be provided (once established) as part of community information newsletter.

Complaint Response - Any complaints received will be recorded in site register by the Site Administrator, actioned by the Site Manager, and communicated to non-involved workers and Hanssen leadership in weekly meeting. Action by the Site Manager may include contacting the complainant, investigating the situation and providing feedback to the complainant. Where the complaint is about works underway at that time, the Site Manager will direct those works to cease (where reasonably can) until the complaint is investigated and works are in accordance with approved plans, implement remedies if deemed necessary prior to restarting those works. Where it relates to activities not related to work underway at the time of receiving the complaint, the Site Manager will action and respond within 2 working days of receiving. Resultant actions and responses are to be recorded in the site register.

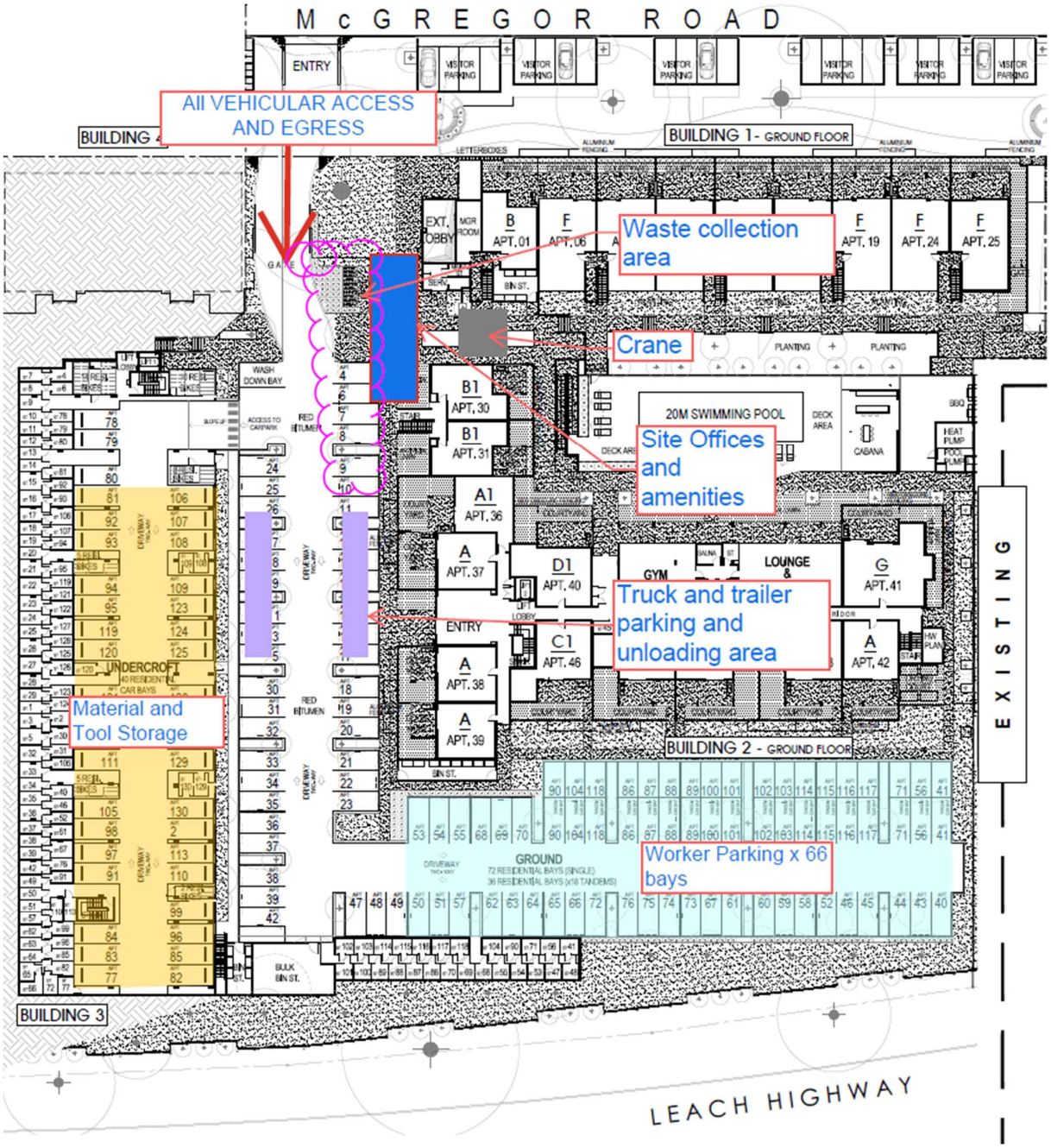
Complaint Escalation – Where a complainant is not satisfied with the response and/or actions of the Site Manager the complaint will be advised they can contact the Hanssen Pty Ltd Managing Director via same contacts seeking an additional review. The review process and actions will follow the same process as the original complaint, however with the Managing Director or their nominated delegate reviewing lead up, actions and responses in leu of the Site Manager.

2.16 Street Trees and Vegetation Management and Protection

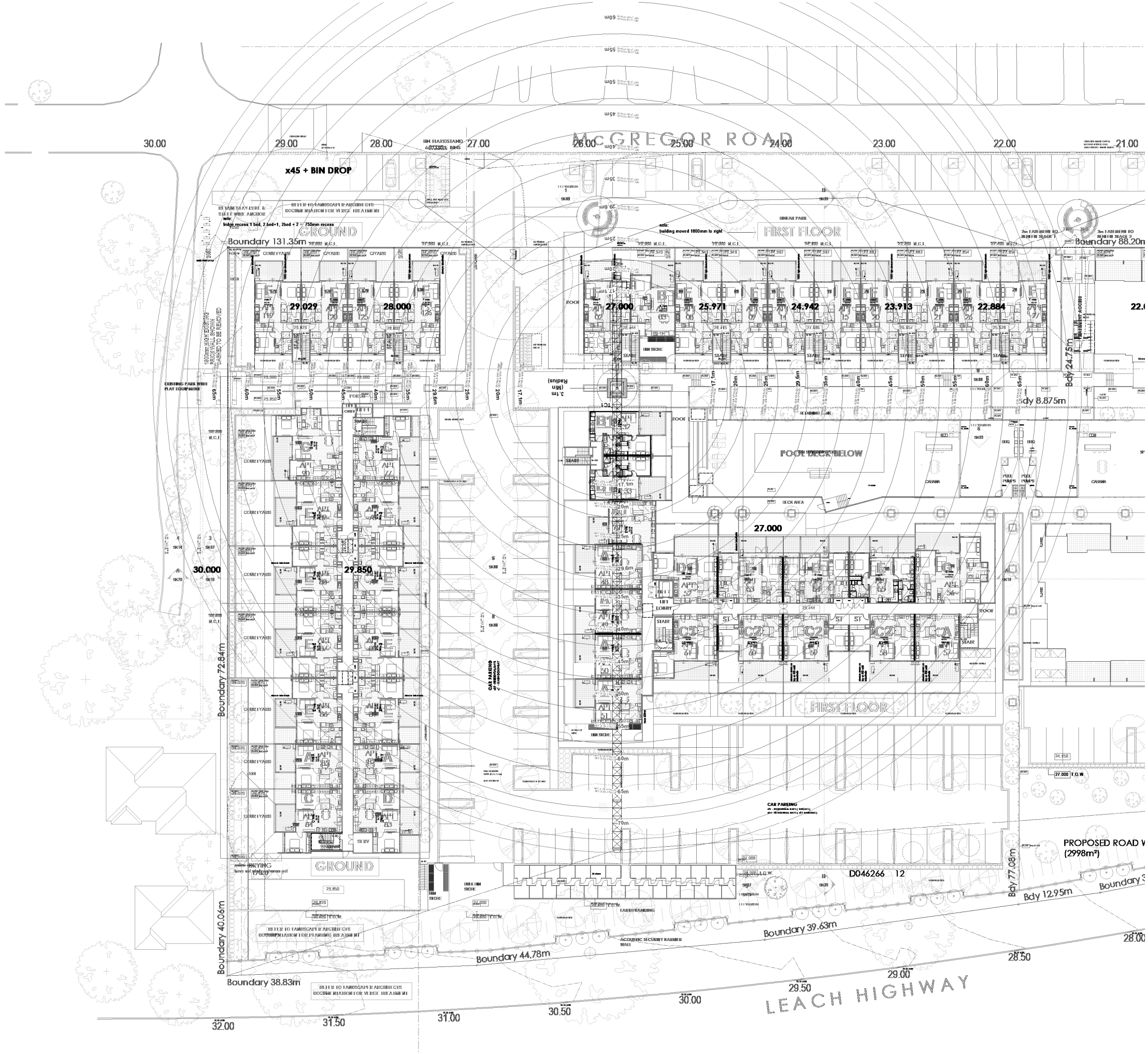
A Tree Protection Zone (TPZ) utilizing temp fencing will be installed around all street trees which are in proximity of the site. As no storage or use of the verge is proposed no contact is expected with street trees.

The TPZ's are shown on plan included in Appendix A.

Appendix A Site Layout Plan



CRANE AREA


McGREGOR ROAD
LEACH HIGHWAY
GROUND
FIRST FLOOR
FOOT DECK BELOW
FIRST FLOOR
GROUND
x45 + BIN DROP
BIN HARDSTAND
Boundary 131.35m
Boundary 88.20m
Bdy 24.75m
Bdy 8.875m
Boundary 72.84m
Boundary 40.06m
Boundary 38.83m
Boundary 44.78m
Boundary 39.63m
Bdy 12.95m
Bdy 77.08m
Boundary 3
PROPOSED ROAD W
(2998m²)
D046266 12
27.000 T.O.W.
CAR PARKING
EXISTING PARK WITH PLAY EQUIPMENT
COURTYARD
POOL
CABANA
DECK AREA
LIFT LOBBY
STAIR
ROOF
29.029
28.000
27.000
25.971
24.942
23.913
22.884
30.000
29.850
27.000
30.00
29.00
28.00
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PARKING and TRANSPORT IN LOCALITY

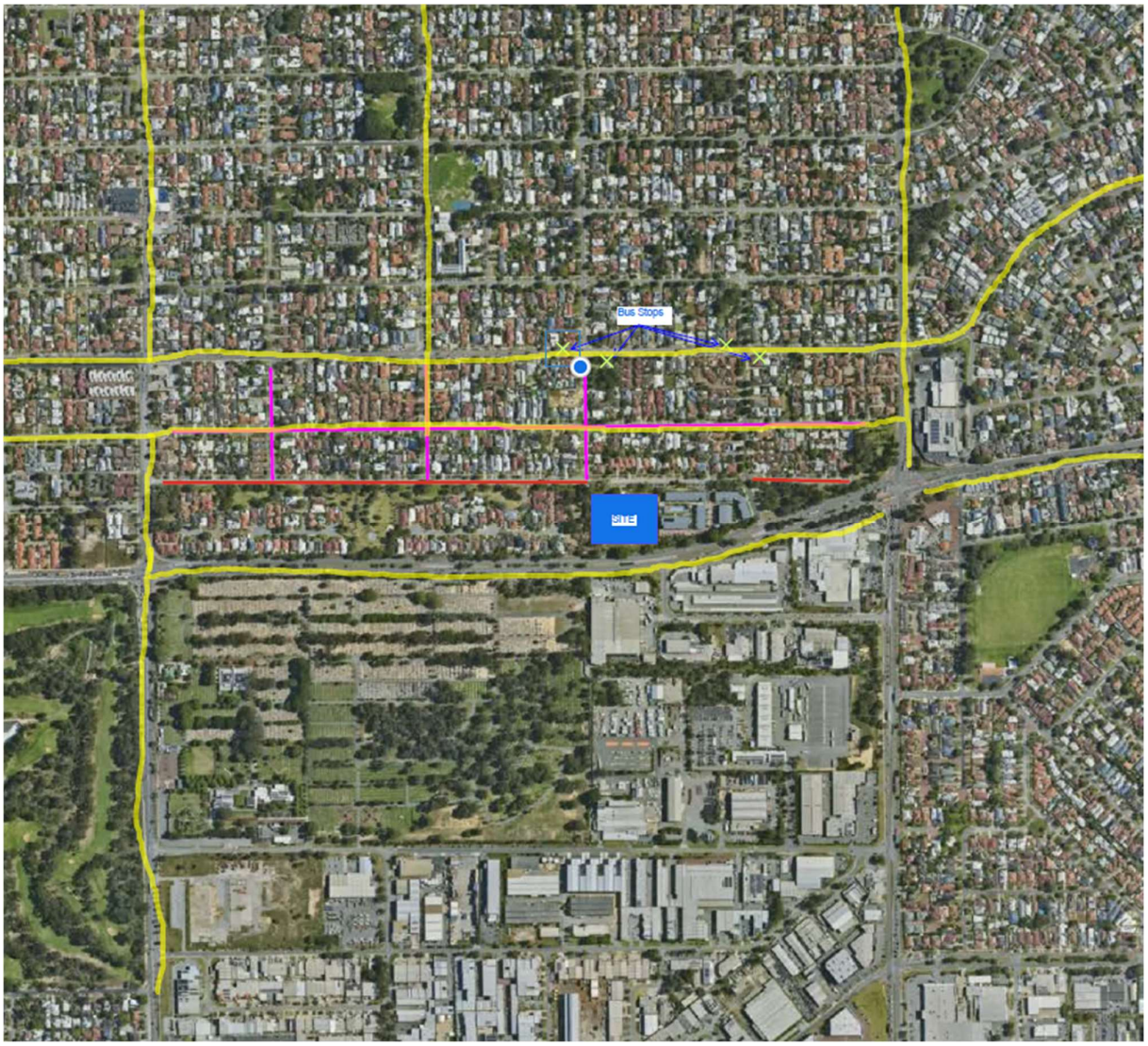


Image Area approx. 1km radius from site.

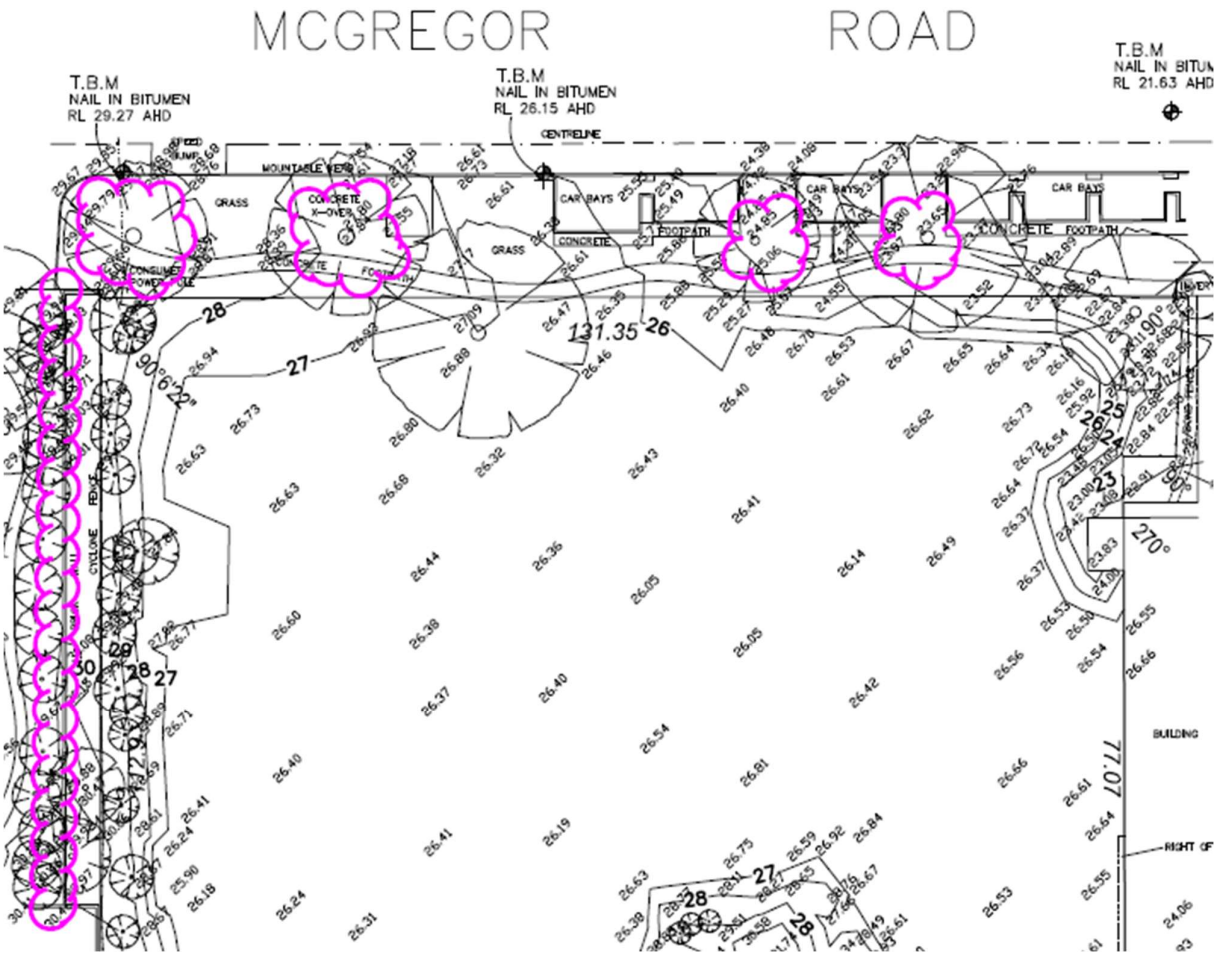
Street parking, in addition to onsite parking:

Red line = unrestricted street parking with no properties fronting southern side of McGregor Rd

Magenta line = unrestricted street parking in suburban streets.

Cycling access: yellow lines are roads suitable for cycling (bicycle lanes/PSP/Shared paths/Good road cycling/bicycle boulevard as determined by Department of Transport).

TREE PROTECTION ZONES



Appendix B Noise & Vibration Management Plan

NOISE & VIBRATION MANAGEMENT PLAN

INTRODUCTION

This outlines the proposed plan for management of noise and vibration associated with the construction works by Hanssen Pty Ltd. Building & construction sites pose different noise & vibration control problems compared with industrial sites.

The main issues are:

- Activities carried out in the open.
- Noise arises from many different kinds of activities; the character can vary with different stages of the work.
- Many of the process require vibration or impact to carry out the work.
- Construction sites are impossible to separate by planning. They occur in the midst of our commercial and urban environments.

Regulatory control of noise from building construction sites cannot be considered in the same manner as noise in a neighbourhood. It is not practical or possible to reduce noise to the general ambient levels. However, it is necessary that in the construction of the works, measures to reduce the effects and annoyance of noise & vibration emission from the site are to be implemented.

The purpose of this management plan is to establish a process for the:

- Management of noise & vibration on construction sites.
- Provide an effective communication link between adjoining residents & the construction site for the management of complaints regarding noise & vibration.
- Establish processes to minimise the noise & vibrations from the site.
- Establish guidelines for the noise emission & vibration from the construction site.
- Set conditions for noise and vibration monitoring on the site.

1.0 DESCRIPTION OF THE WORKS

A residential development comprising multi-storey residential and carparks. Refer to plans and elevations for complete details.

1.1 Construction Activities

The development is to be constructed using traditional building techniques including precast wall and concrete floor panels.

The structure for the apartments is proposed as precast bubble deck floors with In situ toppings.
Lift core and stair core to be precast panels with in situ column structure
External walls will be a mixture of precast panels and heavy duty framing on the balcony
Internal walls will be lightweight construction

2.0 SURROUNDING NOISE SENSITIVE PREMISES

There are residential homes in close proximity to the construction site. The builder will liaise with the homeowners/ building managers of these premises to advise them of the working hours of the construction site.

Should works be required outside of working hours (see section 3.1), an approval will be sought from the Local Government through established approval processes.

For work to be done outside working hours Hanssen will:

a) Advise all nearby occupants of the work to be done at least 24 hours before.
b) Show that it is reasonably necessary for the works to be done out of hours.
c) Prepare noise management plan for the proposed activity.
d) Submit the Noise Management Plan for approval at least 10 working days prior to the proposed works.

The nature of emergency works needs to be defined as any noise from work undertaken outside the hours of 7am to 7pm Monday to Saturday excluding public holidays would be in breach of the Environmental Protection (Noise) Regulations 1997, if no approval is in place.

The builder will provide the name & telephone number including any out of hour contacts to the Local Government at commencement of works.

3.0 NOISE AND VIBRATION STANDARDS

Construction by its very nature is a noisy activity that involves impact and vibration. Responsible standards therefore must take note of the constraints imposed by this activity as well as being considerate of the amenity in the adjoining neighbourhood.

3.1 Environmental Protection (Noise) Regulations, 1997

"Construction Work" is addressed in Regulation 13 of the Environmental Protection (Noise)" Regulations 1997. It is therefore subject to the requirements of the Regulations. The Regulations require:

- That work to be carried out between the hours of 07:00 and 19:00 hours on any day which is not a Sunday or Public holiday.
- 'Construction Work' must be carried out in accordance with Control of Noise Practices as set out in Section 6 of Australian Standard AS2436-1981 Guide to Noise Control on Construction, Maintenance and Construction Sites.
- Equipment used for construction must be the quietest reasonably available.

3.2 Australian Standard AS 2436

3.2.1 Control of Noise: Generally, the control of noise on the site will be in accordance with the Australian Standard AS 2436 -Guide to Noise Control on Construction Maintenance and Demolition Sites. In accordance with the Standard, the methods used to reduce noise emission from the site will include:

- Substitution: Where practicable quieter machinery or process are to be used.
- Modification: Engineered noise control is to be implemented on specific noisy items of equipment. This may include fitting of improved performance mufflers, screening of stationery noise sources, and other techniques as appropriate. All proposed equipment to be fitted with appropriate silencers.
- Siting of Equipment: high noise-level equipment is to be located away from noise sensitive areas. Pre-cast concrete trucks to be located closer to commercial buildings or roadways than residential to maximise distance to noise sensitive neighbours.
- Maintenance: Ensure equipment on site is appropriately maintained so as to emit minimum noise.
- Equipment Noise: Ensure equipment on site meets sound levels as set out in clause 6.2

3.2.2 Control of Vibration: Vibration is due to use on the construction site of heavy vehicles, earth moving equipment, compactors and impact type processes. The control of vibration is mainly limited to the selection of construction processes.

Impact Activities: There are no proposed specific vibration emitting activities, other than some footing and pad compaction.

4.0 CONSTRUCTION NOISE AND VIBRATION OBJECTIVES

4.1 AS 2436 Guide to Noise Control on Construction Maintenance and Demolition Sites

The Australian Standard AS 2436, Section 3 states that care shall be taken in applying criteria that normally would be used to regulate noise emitted from industrial, commercial and residential premises to construction, and particularly for those activities which are transitory and of short duration.

With reference to control of noise from construction sites, the AS2436 recommends:

- Reasonable and suitable noise guidelines be established;
- All practicable measures are taken on the building site to regulate noise emissions, including the siting of noisy static process, selecting less noisy processes, and regulating construction hours.
- Undertake noise monitoring where non-compliance occurs to assist in the
- Management and control of noise emission.

4.2 Noise Guidelines

4.2.1 Noise Objectives: Generally, the L_{10} noise level for long term construction noise as measured over hourly monitoring periods should not exceed 10 dB(A)above the L_{10} Assigned Level as established in the Environmental Protection (Noise) Regulations, 1997.

For short high noise level events measured over a 15 minute period should not exceed 20 dB(A) above the L_{10} Assigned Level. This criterion is for any 15 minute period within the hour.

4.2.2 Assigned Level: The Assigned Level as determined by the Environmental Protection (Noise) Regulations 1997, is determined on the traffic flow and land zoning within a 100 metre radius circle and 450 metre radius outer circle. The determination of the Assigned Level for the adjoining buildings is based on:

- Major road in the inner circle
- 30% of land in the inner and outer circle being zoned commercial

The Assigned Level for daytime being 07:00 to 19:00 hours Monday to Saturday is:

Assigned Levels	**L_{10}**	**L_1**
Residential Premises:	54 dB(A)	64 db(A)
Commercial Premises:	60 dB(A)	75 dB(A)

4.2.3 Noise Guidelines: The proposed guidelines for the construction works is therefore L_{10} 64 dB(A) at residential premises. For short high noise level events L_{10} 74 dB(A) for any 15minute period in the hour. Noise measurement and monitoring is to be used as a feedback tool to assist in management of noise levels.

4.3 Vibration

Setting of vibration limits for the Construction site is difficult. There is insufficient data to establish reasonable standards. Measurement and monitoring of ground vibration as required is therefore to be carried out. The data collected can then be used to assess the vibration levels for various work processes, and used for management of these construction processes.

The vibration caused by construction works needs to be considered in terms of both: The effect on people and the effect on building.

4.3.1 Human Sensitivity: The result of the vibration measurements can be compared to the Australian Standard AS 2670.2 Evaluation of Human Exposure to Whole Body Vibration - art 2; Continuous and Shock induced vibration in Buildings. This standard will be used to assess the human discomfort caused by vibration generated construction activities.

4.3.2 Building Vibration: The vibration standards that will be used to assess the effect of vibration on building structure will be based on:

Highly sensitive structures: 2mm/s PPV

Sensitive structures : 10mm/s PPV

5.0 NOISE LEVEL OF ACTIVITIES AND EQUIPMENT

5.1 Hours of Work

It is proposed to undertake all work during daytime hours being 07:00 to 19:00 Monday to Saturday, except in emergency situations where required to ensure safety is maintained. In this latter situation work will be carried out in strict accordance with the requirements for 'out of hours work' as set out in the Environmental Protection (Noise) Regulations.

5.2 Noise Level of Equipment and Processes

Representative sound power levels of equipment and process to be used during the works are set out in Table 1:

Equipment Process	Indicative Sound Power Level dB(A)	Indicative Sound Pressure Level at 10m.
Air compressor	90- 100	62-72 dB(A)
Angle Grinder	114	86 dB(A)
Bobcat	105	77 dB(A)
Compactor	112	84 dB(A)
Compressor	94-	66 dB(A)
Concrete pump and truck	105	77 dB(A)
Concrete saw	112-122	84-94 dB(A)
Concrete truck	100	72dB(A)
Concrete vibrator	101	73 dB(A)
Crane	105	72dB(A)
Hoist	95	
Drilling	94	66 dB(A)
Excavator	114	86 dB(A)
Hammering (impact)	120	92 dB(A)
Impact Drill	105	77 dB(A)
Jackhammer	121	93 dB(A)
Lighting Tower	92	74 dB(A)
Pneumatic hand tools	114- 117	86-89 dB(A)
Truck	108	90 dB(A)

TABLE 1: Nominal Noise Level of Equipment and Construction Processes

The noise levels as set out above are derived from the following sources:

- Table D2 of Australian Standard 2436-1981
- In-house data bases
- Draft NSW Construction Guidelines

6.0 NOISE AND VIBRATION CONTROL METHODS

6.1 Management Plan

The determination of appropriate noise control measures will be dependent on the particular activities and construction equipment used. The following table outline the site activities during the construction process. The activities are identified in terms of the level of potential nuisance, and process for noise/ vibration management.

Where an activity is listed as potentially creating a high noise or vibration nuisance, the contractor will maintain a log of the times that this activity is being carried out.

Site Activity	Usual method and comment	Nuisance level	Vibration Management	Noise Management
Compaction of sand	Heavy Vibration roller	Vibration High Noise High	(1) Use the smallest possible unit needed to compact the fill to a safe level. (2) Compact only those areas for which compaction is essential. (3) Limit times of compaction to restricted hours. ie. between hours of 8.30 am and 3.30 pm and no more than 2 hours at a time. Minimum of 1 hour break between any 2 hour work period. No work on Sundays or public holidays.	(1) All as for vibration management. (2) Use equipment fitted with side covers to engines where manufacture permits.
Drilling for soil anchors and nails	Penetration is achieved by a high frequency vibrating head preceded immediately by a jet stream of air. This stream acts as the main "drilling "component. The drilling rig has a normal industrial noise level.	Vibration Low Noise Low-Medium	Monitor penetration to enable early identification of existence of rock. (Not expected) This would necessitate a change of drilling technique.	As for vibration management.

Pouring of concrete for walls	Concrete is poured directly from the pre-mix truck and vibrated with a high frequency vibrator.	Vibration Low Noise Medium	Observe core working hours.	Observe core working hours.
Brick or block cutting	Use of purpose made masonry saws	Vibration Low Noise Medium – High	As for noise.	Use low noise cutting blades.
Material Movement	The height of the buildings requires the use of cranes. for the vertical movement of materials. These may be either fixed or mobile. Horizontal movement will be mainly by trucks which will be off loaded by hand, tractor or hiab or crane.	Vibration Low Noise Medium	As for noise.	(1) Restrict use to core hours except with permission by the council (2) Fueling up to be done at the end of the working day rather than the beginning. (3) Deliveries to be arranged to be at end of day rather than early morning.
Concrete scabbling	Scabbling for concrete joints and minor concrete removal forming part of the normal building process.	Vibration Low Noise Medium	As for noise.	(1) Scabble joints when concrete is relatively green. (2) Use electric tools of the minimum required capacity. (3) Carry out only within core hours and where possible delay use until after 8.00 am.
Concrete jack hammering	Jack hammering is usually required as a result a change of design or of site omission or error. The nature of the works requires the use of heavy duty pneumatic equipment.	Vibration Medium Noise High	As for noise	(1) Good site management will minimise the necessity. (2) Carry out any required work during restricted hours for high nuisance level work. E.g. between hours of 8.30 am and 3.30 pm and for no more than 2 hours at a time. Minimum of 1 hour break between any 2 hour work period. No work at all on

				Sundays or public holidays. (3) Exemptions at discretion of architect and will only be approved where justification can be quantified.
Power hand tools	Power saws used in formwork and timber framing	Vibration Low Noise Medium-High	As for noise.	Limit use to core hours but with morning starts delayed until 7:30am on Mondays to Fridays, 8:00am on Saturdays.
Precast concrete and steel erection of prefabricated components	This operation is normally carried out with cranes and incidental hand and power tools.	Vibration Low Noise Low	Refer to previous component activities.	Refer to previous component activities.

6.2 Noise Control Methods

6.2.1 Selection of Alternate Appliance or Process: Where a particular appliance or activity is found to generate noise levels that exceed the criteria, it may be possible to select an alternate approach or appliance.

6.2.2 Acoustic Barriers: Barriers or screens can be effective in reducing noise levels, and can be located at either the source or receiver. Barriers at the source are generally only effective for static equipment. The degree of noise reduction achieved is dependent on the extent to which the line of sight is blocked. If receiver is totally shielded, A noise reduction of up 10 dB(A) is possible. Where only partial obstruction is achieved noise reduction of 5 to 7 dB(A) can be achieved.

6.2.3 Silencing Devices: Where construction processes or appliances are noisy, the use of silencing devices may be possible. This can be in the form of engine shrouding, or industrial silencers.

6.2.4 Establishment of Site Practices: This involves formulation of work practices to reduce noise exposure to adjoining residences. This can be achieved by location of fixed equipment as far as practicable from residents, and rotating location of equipment to provide respite to receivers. Loading of construction vehicles should occur as far as practicable from noise sensitive premises.

6.2.5 Strategic Positioning of Processes on Site: This involves the location of particular processes or activities such that direct line of site is obstructed. In the construction of building structures this may be achieved by leaving a specific facade till last to maintain a noise barrier to adjoining residents.

6.2.6 Material Handling: Use of used conveyor belt or rubber matting can significantly reduce noise associated with impact of material being dropped.

6.2.7 Site Induction: All site managers and workers should be made aware of the noise and vibration limits established for the site and noise control measures to be implemented. Site managers to review daily expected noise emission from activities and prepare options for noise control, and providing respite to specific residential areas.

6.2.8 General Noise Control: Radios / stereos should be switched off when not used and volume to be at the normal level. Non-tonal reversing alarms to be used.

Prior to commencing any new activity, determine the likely effect on adjoining properties. Where the level of either noise or vibration is likely to be high, carry out the following procedure

1. Decide if alternate methods are available for the specific situation;
2. Implement necessary procedures to minimise the effect on adjoining properties;
3. Advise the nominated contact in sufficient time to allow 24- hours notice to be given to neighbours.

7.0 NOISE PREDICTIONS

7.1 Mobile Equipment

Equipment used in the construction process will be moved to all areas of the site depending on the area of construction.

7.2 Fixed Equipment

Generally the location of fixed equipment will be assessed on the basis of minimising noise emission to adjoining residential facilities, and fit for purpose.

The tower crane will be an electric crane located in (approx.) the centre of the site.

8.0 NOISE MEASUREMENT & MONITORING

In order to verify that the predicted noise emissions of the equipment to be used on the site is similar to the that modelled, the noise levels of the equipment will be measured on site as soon as practicable after commencement of each phase of the work. Noise levels significantly higher than the base noise levels set out in Section 6.2 (i.e. more than 3 dB (A) above the listed levels in table1) will require a review of the noise management plan and proposed noise control options.

9.0 COMMUNITY CONTACT PROCEDURE

For a construction noise management program to be effective requires continual and direct communication between all parties that may be affected, the construction contractor and the Local Authority. This communication link establishes a dynamic response process that allows for adjustment of work methods and criteria for the benefit of all parties impacted by the

construction process.

The objective of the community contact procedure is to:

- Inform the groups about the project and the noise control being implemented.
- Increase understanding of the acoustic issues associated activities involved in the construction process.
- Identify community concerns so that they can be addressed.

A community contact / complaints process is to be established to ensure any complainants regarding environmental noise emission are recorded and investigated. The construction contractor must provide signage with contact details, or an accessible site office to permit complaints to be made.

Local residents likely to be affected by excessive noise are to be notified of the intended construction program and for any proposed activity likely to result in increased annoyance to residents (such as concrete demolition with rock breaker).

A follow up procedure for all complaints is to be established. Procedure to include:

- Registration of noise complaint
- Identification of noise source
- Assessment of noise level
- Corrective action to mitigate noise emission if found to be unreasonable
- Re-assessment to ensure noise control procedures implements are successful
- Close-out

10.0 CONCLUSION

A noise and vibration management plan is developed for the construction of the residential development in order to:

- Identifies the noise sensitive receivers around the site.
- Establishes procedures to minimise noise and vibration to the surrounding noise sensitive premises.
- Provides list of expected noise levels for various equipment.
- Establishes a community contact procedure for communication between construction contractor, community, and local authority.
- Establishes a noise complaint procedure.

Appendix C Risk Assessment

Name of Project:	**Palmyra Apartments West**	Contract		Scope of work	
Location of Project:	**47 McGregor Rd, Palmyra**				
Client/Customer:	**Finbar**			Start	
Prepared by:	**Andy Watson**			Completion	
Reviewed by Site Foreman:	**Andy McEwan**			**Sign:**	**Date:**
Reviewed by Project Manager	**Darren Linton**			**Sign:**	**Date:**

Revision	Description of update	Date	Reason for update	Prepared	Reviewed	Approved
A			To be issued for construction			
O						
1						

The Risk Register has been developed using IS03100 (Risk Management Standard) and is to be read in conjunction with HANSSEN PTY LTD Safety Management System HSEPL001 HANSSEN PTY LTD HSE Management System.

CONSEQUENCE 'The outcome of an event expressed qualitatively, being a loss, injury, disadvantage or gain.'

	Health & Safety	Environment	Community	Legal Compliance	Cost
Catastrophic	Fatality or permanent disability	High severity which has or may have permanent and/or irreversible effects	High level of community concern, national media interest	Serious breach of legislation resulting in prosecution / fine/first offence	Up to $500,000
Major	Life threatening incident, Lost Time Injury or ongoing illness/health effects	Medium severity which has or may have persistent but reversible effects	Increased and repeated complaints from same area. Increased local media interest	Major breach of legislation resulting in prosecution and penalty / fine	Up to $400,000
Moderate	Incident that requires medical treatment by a qualified medical practitioner	Low severity which has short term and reversible effects	Repeated complaints from same area. Local media interest	Breach of regulation resulting in prosecution and penalty / fine	Up to $50,000
Minor	Incident that may require first aid treatment only	Impact confined to area impacted by work operations	Small number of complaints.	Technical/legal compliance issue resulting in notice / fine	Up to $1,000
Insignificant	No injuries	Very low environmental impact, not noticeable	Isolated complaint, no media enquiry	Minor technical/legal breach not attracting regulatory body	Up to $100

LIKELIHOOD: Likelihood that the stated consequence will occur

Almost certain	Almost inevitable outcome, expected to occur in most circumstances.
Likely	Not a certainty but there is a good chance of occurrence.
Possible	Could occur.
Unlikely	Could occur but not expected. Would require multiple failures of systems/controls.
Very unlikely	Little chance of occurrence. Would require a combination of factors to result?

EXPOSURE: Consider the exposure (frequency) factor when determining the likelihood of the risk/hazard event occurring.

Hazard event occurs	Exposure factor
Continuously	Many times, daily
Frequently	Approximately once daily
Occasionally	Once a week to once a month
Infrequent	Once a month to once a year

RISK MATRIX: LEVEL OF RISK

	CONSEQUENCE				
LIKELIHOOD	**Insignificant**	**Minor**	**Moderate**	**Major**	**Catastrophic**
Almost Certain	M	H	E	E	E
Likely	M	M	H	E	E
Possible	L	M	M	H	E
Unlikely	L	L	M	H	H
Very Unlikely	L	L	M	M	H

RISK MATRIX

Extreme (E)	Immediate action required.
High (H)	Management attention needed
Moderate (M)	Management responsibility must be specified
Low (L)	Manage by routine procedures / instructions

Notes:

1. Risks assessed as High or Extreme (before treatment) have been considered 'significant' risks.
2. For High and Extreme (significant) risks, actions and management attention is described under 'Control Measures' and 'Monitoring' columns of the Risk Register.

HAZARD IDENTIFIED	RISK RATING See risk matrix above
1. Failure to identify design opportunities to reduce hazards	Moderate
2. Failure to understand or comply with current legislation	Moderate
3. Failure to obtain Statutory approvals for work	Low
4. Failure to promote awareness of HANSSEN PTY LTD, Client and legal requirements	Low
5. Failure to Provide Adequate Amenities	Low
6. Demolition	High
7. Excavation Works	High
8. Electrical Works	High
9. Use of Lasers	Low
10. Formwork	High
11. Concrete Placement	High
12. Working at Height	High
13. Open Floor Penetrations	High
14. Public Safety / Traffic Management	Moderate
15. Dealing with Trespassers on site	Moderate
16. Manual Handling	Moderate
17. Use of Hand Tools and Explosive power tools	Moderate
18. Use of Mechanical Plant and Equipment	High
19. Working in a Confined Space	High
20. Control of Substances Hazardous to Health	High
21. Heat Stress and Ultraviolet Radiation	Moderate
22. Fire and Explosion	High
23. Violence, Aggression and Bullying at Work	Moderate
24. Air pollution	Moderate
25. Waste Management	Low
26. Noise / Vibration	Moderate
27. Tilt-up Concrete and Precast Construction	High
28. Drilling and Coring	Moderate
29. Failure to identify and reduce hazards resulting from purchasing	Moderate

Risk Hierarchy of Control - Preferred Order of Control Measures to Eliminate or reduce risks of injury or illness.

Elimination	Eg Eliminate the need for a fall risk area by careful design
Substitution	Eg Barricading or enclosing the fall risk area with edge protection
Isolation	Eg Isolating the hazard or practice from people involved in the work
Engineering	Eg Using a fall injury prevention system
Administrative	Eg Procedures, training, warning signs, limiting exposure time
PPE	Eg Use of Personal Protective Equipment

Hazard	Legal or Another Requirement	Impact	Risk Likelihood (L) & Consequence (C)		Level of Inherent Risk	Objectives & Targets	Risk Treatment Strategy (and responsibility)		Residual Risk
			L	C			Control Measures	Monitoring	
DESIGN / DEVELOPMENT STAGE									
1. Failure to identify design opportunities to reduce health, safety and environment hazards	AS 45001 Contract Requirements (as applicable) Building Code of Australia Relevant code of practice and guidance notes National Construction Standard Safe Design of buildings and Structures Code of Practice Work Safety and Health Act 2020 Work Safety and Health Regulations 2022	Immediate and lifetime impact of projects on the environment and health and safety hazards during construction, operation and maintenance	Possible	Moderate	High	Objective Research and promote opportunities for conservation & sustainable use of resources to clients in order to reduce the environmental impacts of projects following handover	**Design Manager / Project Manager** • Where HANSSEN PTY LTD is responsible for design, identify at design stage opportunities to reduce the health, safety & environmental impact of the project and document on Design Checklist HSEFM038 • On award 0f contract the DWHS will request in writing (Using HSEFM042 Safety - Design Information Letter) from the Designers a report on health and safety aspects of the design. • Any new WHS hazards resulting from design changes during the construction phase will be identified in the Technical Query HSEFM041 form and documented in Purchasing and Design Change Action Plan HSEFM039, assessed and controls communicated to workers by HANSSEN PTY LTD site management at toolbox and Prestart meetings. This should generate a review of relevant documentation/work processes as required - Purchasing and Design Change Action Plan HSEFM039	**Design Manager** • Monitor issues raised to ensure carried forward into design brief and final design / drawings. • Complete Design review of health, safety and environment issues and impact /hazards and document refer to design checklist HSEFM038 **Design Manager / Project Manager** Complete TQ HSEFM041 & Purchasing and Design Change Action Plan HSEFM039 **DWHS** Send letter to designer - HSEFM042 Safety - Design Information Letter	Moderate L = Unlikely C = Moderate

Hazard	Legal or Another Requirement	Impact	Risk Likelihood (L) & Consequence (C)		Level of Inherent Risk	Objectives & Targets	Risk Treatment Strategy (and responsibility)		Residual Risk
			L	C			Control Measures	Monitoring	
PROJECT DELIVERY									
2. Failure to understand or comply with current legislation Legislation being ➢ Acts, ➢ Regulations ➢ Codes of Practice and Standards (where referred to in legislation then it is law)	See Attached list of applicable acts, regulations, codes and standards	Potential non-compliance with acts and regulations conditions potentially resulting in harm to people, property or the environment Significant cost penalties apply if convicted.	Possible	Moderate	High	Objective Comply with current legislation Target Identify all new legislation and advise management & subcontractors. Update HANSSEN PTY LTD policies & procedures	**Safety Advisor** • Review information such as State Law Publisher on a regular basis to identify new legislation applicable to HANSSEN PTY LTD • Notify management of significant legislative changes **Site Foreman** • Implement changes on site • Raise at sub-contractor coordination meeting and reinforced at toolbox and Prestart meetings • Documents available Via internet	**Safety Advisor** • Revise Risk Register. Review & Update HANSSEN PTY LTD policies, plans & procedures **External Auditor** • Complete an WHSMS audit to assess compliance with AS 45001 & Legislation. HSEFM034c	Moderate L = Unlikely C = Moderate
3. Failure to obtain Statutory approvals for work Approvals may include • Construction work • Air Handling System • Septic Tank	Environmental Protection Act 1986 Health (Air-Handling and Water Systems) Regulations 1994 Contract agreement	Personnel unaware of key site safety and environmental related-issues hence increased risk of incident / breach of legal requirements resulting in non-approval of license or re-work.	Possible	Minor	Moderate	Objective Comply with legislation Target Obtain all approvals prior to work	**Site Administrator / Subcontractors:** • Ensure application to the local government authority and obtain written approval • Maintain statutory approval on file	**Subcontractors:** • Provide approvals to HANSSEN PTY LTD for handover to Client (ie Fire Authority / Water Authority / Gas etc)	Moderate L = Unlikely C = Moderate

Hazard	Legal or Another Requirement	Impact	Risk Likelihood (L) & Consequence (C)		Level of Inherent Risk	Objectives & Targets	Risk Treatment Strategy (and responsibility)		Residual Risk
			L	C			Control Measures	Monitoring	
4. Failure to promote awareness of HANSSEN PTY LTD, Client and Legal requirements	AS/NZS 45001 Contract agreement HSE Management Plan Work Health and Safety Act 2020 Work Health and Safety Regulations 2022	Personnel unaware of key site safety and environmental related-issues hence increased risk of incident / breach of legal requirements resulting in harm.	Possible	Minor	Moderate	Objective Comply with contract and legislation Target Induction of all HANSSEN PTY LTD, Visitor and Subcontract-or personnel	For HANSSEN PTY LTD new staff • **Relevant Manager/Site Foreman** (or delegate) to complete an induction using 'Staff Induction Record'. For HANSSEN PTY LTD site personnel and sub-contractors • **Site Administrator** (or delegate) to complete an induction using 'Site Induction Record' • No person is allowed to work unsupervised on site without first completing an applicable site induction. • For HANSSEN PTY LTD visitors- complete visitor book • HANSSEN PTY LTD require all people engaged in **construction work** at the workplace to have a current Construction Safety Awareness Training Certificate in accordance with the Work Health and Safety Regulations 2022 - Regulation	**Sub- Contractor & HANSSEN PTY LTD Site Foreman (or Delegate):** Copies of SAT card & other certificates are to be provided to the HANSSEN PTY LTD Site Administrator in accordance with Induction Procedure **HSEPC007** • Maintain records of employees inducted **Site Administrator:** • Review induction training records during audits and report findings.	Moderate L = Unlikely C = Moderate
5. Failure to Provide Adequate Amenities Site establishment	Work Health and Safety Regulations 2022	Present a health and safety risk if amenities are unhygienic	Unlikely	Minor	Low	Objective Comply with legal requirements Target	A person in control of a workplace must ensure that (see next page)	**HANSSEN PTY LTD Site Foreman & Sub-Contractor:** Conduct Monthly inspection, using Health & Safety Inspection Checklist	Low L = Very Unlikely C = Minor

Hazard	Legal or Another Requirement	Impact	Risk Likelihood (L) & Consequence (C)		Level of Inherent Risk	Objectives & Targets	Risk Treatment Strategy (and responsibility)		Residual Risk
			L	C			Control Measures	Monitoring	
						No incidents		**HANSSEN PTY LTD Site Administrator or delegate** Conduct regular audits and report findings.	

Access and Egress

1. Persons can move freely in the workplace; passages are kept clear of obstructions and there is sufficient space around plant so that it can be used and repaired safely
2. The means of access and egress from the workplace are safe and kept clear of obstructions [regulation
3. There is a safe means to leave the workplace in case of an emergency [regulation
4. Unless it is a natural ground surface, floors, stairs and ramps are slip resistant and are free from trip hazards and, if the floor can become wet, there is adequate drainage

Warning Signs

Hazard warning signs are displayed for hazards at the workplace that may not be readily apparent. The signs must comply with AS Safety signs for the occupational environment

Work Area Layout

1. There is adequate lighting at the workplace in regard to the nature and location of work and adequate for the movement of people about a workplace.
2. Appropriate seating for employees is provided.
3. Employees have sufficient space to work safely

Comfort (Air Temperature)

Ensure that employees are protected from extreme heat and cold and that the environment inside a building or structure is comfortable

Housekeeping

Ensure that rubbish and debris are removed from the workplace in accordance with (rubbish, building materials and plant is stored away

Facilities

Ensure that:

1. An adequate supply of clean, cool drinking water is provided (outside toilet areas) and, if water is unfit for drinking, an appropriate sign is clearly displayed
2. Provide sanitary and any other facilities in accordance with Work Health and Safety

No-Smoking

Smoking is not allowed in the construction site; erect no-smoking signs

Hazard	Legal or Another Requirement	Impact	Risk Likelihood (L) & Consequence (C)		Level of Inherent Risk	Objectives & Targets	Risk Treatment Strategy (and responsibility)		Residual Risk
			L	C			Control Measures	Monitoring	
6. Demolition Works Demolition work creates high potential for risks to workers and the general public	AS 2601-2001 Demolition of structures AS/NZS 1576 Parts 1 to 6 (Scaffold) Work Health and Safety Regulations 2022, Demolition Work Plan (Developed by Contractor) Demolition of precast & tilt up panelshttp://www.docep.wa.gov.au/WorkSafe/PDF/Codes_of_Practice/Code_Tiltup_Precast_addendum.pdf	Potential injury or harm to people, property or the environment if demolition works are not properly managed	Possible	Moderate	High	Objective Comply with legal requirements Target No incidents	**Site Foreman / Subcontractors:** License • Class 1, Class 2 or Class 3 demolition work is performed by a licensed person Approvals • Demolition work must not commence without approval of the local government Standards Class 1, 2 and 3 demolition work must comply with Australian standard AS 2601 Demolition of structures or the conditions imposed by WorkSafe WA. Notification to WorkSafe WA • WorkSafe must be notified at least 5 days before Class 1, 2 or 3 work commences that meets Australian standard *AS 260 Demolition of structures* • The notification must include a written statement that people performing the work are suitably trained and are supervised by a competent person demolition. • If the work does not meet Australian standard *AS 2601 Demolition of structures*, then an application must be submitted to WorkSafe at least 10 working days before its scheduled commencement	**Site Foreman:** Conduct Monthly inspection, using Health & Safety Inspection Checklist to assess compliance **HANSSEN PTY LTD Site Administrator or delegate** Conduct monthly inspection, using Health & Safety Inspection Checklist to assess compliance	Moderate L = Very Unlikely C = Moderate

Hazard	Legal or Another Requirement	Impact	Risk Likelihood (L) & Consequence (C)		Level of Inherent Risk	Objectives & Targets	Risk Treatment Strategy (and responsibility)		Residual Risk
			L	C			Control Measures	Monitoring	
							• The work must not commence until WorkSafe has given approval Records A licensed person must keep the documents listed in WHS Regulations 2022, on-site during Class 1, Class 2 or Class 3 demolition work Access - Access to a demolition site must be restricted Asbestos - When asbestos is detected, demolition work must stop until the asbestos is removed		
7. Excavation Works Excavation work may range from shallow trenching and simple foundation excavation to large and complex excavations for buildings and structures and deep sewers where the risk of serious injury is very significant	Work Health and Safety Regulations 2022, regulation 3.21(1), 3.28 and 3.108 to 3.113 HSE Management Plan HANSSEN PTY LTD Procedure Excavation and Surface Penetration HSEPC020 HANSSEN PTY LTD Procedure Emergency Response Plan HSEPC008) Code of Practice: Excavation	Potential injury or harm to people, property or the environment if excavation works are not properly managed	Possible	Moderate	High	Objective Comply with legal requirements Target No incidents	**Site Foreman / Subcontractors:** • Complete HANSSEN PTY LTD Excavation Permit and conduct JSA • If there is a risk that excavation work may interfere with any gas, water, sewerage or electrical service, accurate diagrams showing the location of the service must be obtained and available before starting work and given to the workers. • Check the stability of any building, road or structure that may be affected by the excavation is protected before starting work • Consider the use of temporary support systems, battering, benching, other forms of retaining	**HANSSEN PTY LTD Site Foreman & Sub-Contractor:** Conduct fortnightly inspection, using Health & Safety Inspection Checklist to assess compliance **HANSSEN PTY LTD Site Administrator or delegate** Conduct regular audits and report findings.	Moderate L = Unlikely C = Moderate

Hazard	Legal or Another Requirement	Impact	Risk Likelihood (L) & Consequence (C)		Level of Inherent Risk	Objectives & Targets	Risk Treatment Strategy (and responsibility)		Residual Risk
			L	C			Control Measures	Monitoring	
							structures, and de-watering systems to reduce the risk of injury • Ensure that, when there is a risk of injury due to an excavation: 1. Barriers are erected between the person at risk and the likely cause of the danger 2. Signs that warn of the risk are erected at the place where the excavation work is to be done 3. Means to safely move in, around, and across the top of, the area is provided for persons and plant 4. Ensure that no loads are placed near the edge of the excavations which may cause the excavation to collapse or the load falling into the excavation • Unless a competent person has assessed the sides of the excavation or earthworks to be stable, ensure that: 1. Shoring is provided to prevent material falling or dislodging and a person working in an excavation that is at least 1.5 metres deep is protected **2.** Another person is in the immediate vicinity of a person working in an excavation that is at least 1.5 metres deep		

Hazard	Legal or Another Requirement	Impact	Risk Likelihood (L) & Consequence (C)		Level of Inherent Risk	Objectives & Targets	Risk Treatment Strategy (and responsibility)		Residual Risk
			L	C			Control Measures	Monitoring	
8. Electrical works An electrical current flowing through the body can cause: • muscle spasms • electrical burns • uncoordinated contraction of the heart (fibrillation) • respiratory arrest (breathing stops) • cardiac arrest (heart stops beating) • injuries resulting from falls.	AS/NZS 3000: Electrical installations - Buildings, structures and premises AS/NZS 3012: Electrical installations - Construction and demolition sites AS/NZS 3760 – In service safety inspection and testing Work Health and Safety Regulations 2022, WHS Management Plan Plant –Electrical HSEPC022 HANSSEN PTY LTD Procedure Emergency Response Plan HSEPC008 Cutting Permit HSEFM047 & Coring Permit HSEFM048	Electricity is a common workplace hazard and is a frequent cause of electric shocks. Some of these shocks have been fatal. Electricity does not have to be high voltage for an electrocution to occur. Electrocutions have resulted from contact with faulty electrical equipment that has become live or contact with worn and damaged wiring and switches.	Possible	Catastrophic	Extreme	Objective Comply with legal requirements Target No incidents	**Site Foreman and Subcontractors** • Isolation of electricity must be completed before any work starts near to live electric cables • Electrical work must be performed by a person who holds an electrical work license • Protect cables from damage using lead stands where possible (keep off the ground) • The maximum allowable length of extension lead from a protected power outlet is 30 metres. • All electrical equipment must be checked and tagged quarterly • All power is to be drawn from Earth Leakage Circuit Breakers. • Maintain Electrical Register	**HANSSEN PTY LTD Site Foreman & Sub-Contractor:** Conduct monthly inspection, using Health & Safety Inspection Checklist to assess compliance **HANSSEN PTY LTD Site Administrator or delegate** Conduct regular audits and report findings. **Electrician** • Assess electrical equipment for suitable use and tag equipment checked • Update register HSEFM028	High L = Unlikely C = Major

Hazard	Legal or Another Requirement	Impact	Risk Likelihood (L) & Consequence (C)		Level of Inherent Risk	Objectives & Targets	Risk Treatment Strategy (and responsibility)		Residual Risk
			L	C			Control Measures	Monitoring	
"Danger zone" means anywhere that - (a) is within 0.5 metres of a live insulated overhead power line or aerial bundled conductor line of a voltage of not more than 1 000 volts. (b) is within 1.0 metre of a live uninsulated overhead power line of a voltage of not more than 1 000 volts. (c) is within 3.0 metres of a live overhead power line, whether insulated or not, of a voltage exceeding 1 000 volts but not more than 33 000 volts: or (d) is within 6.0 metres of a live overhead power line, whether insulated or not, of a voltage exceeding 33 000 volts:									
9. Use of Lasers Lasers are rated by hazard classification, according to their ability to injure people. Class 1 lasers are not hazardous. Class 2 lasers are normally not hazardous as sufficient protection is given by normal aversion responses - the eye's automatic reflex to blink and look away from bright or sudden light exposure	Work Health and Safety Regulations 2022, regulation 4.49(b)&(c) AS 2397 Safe use of lasers in the building and construction industry HSE Management Plan	The risk of eye injury from laser light and heat is particularly of concern as eyes focus and intensify light entering them. Repeated exposure to relatively low powered lasers, or from a single exposure to medium powered lasers may cause long term damage to sight or minor damage to skin. Exposure to high level lasers may cause depigmentation, severe burns and possible damage to underlying organs. High-powered lasers may cause fire hazards.	Possible	Moderate	High	Objective Comply with legal requirements Target No incidents	**Site Foreman and Subcontractors** • Ensure lasers or laser products are not operated at a workplace unless classified and labelled in accordance with AS 2211 • Class 3B or Class 4 lasers or laser products must not be used for construction work. • All other use of lasers and laser products in construction work must comply with Australian standard AS 2397 Safe use of lasers in the building and construction industry • At all times, people should avoid looking into a laser beam or a laser reflection, even if the exposure limit is not exceeded.	**HANSSEN PTY LTD Site Foreman & Sub-Contractor:** Conduct monthly inspection, using Health & Safety Inspection Checklist to assess compliance **HANSSEN PTY LTD Site Administrator or delegate** Conduct regular audits and report findings. **Employees:** Report any hazards to HANSSEN PTY LTD Site **Foreman**	Moderate L = Unlikely C = Moderate

Hazard	Legal or Another Requirement	Impact	Risk Likelihood (L) & Consequence (C)		Level of Inherent Risk	Objectives & Targets	Risk Treatment Strategy (and responsibility)		Residual Risk
			L	C			Control Measures	Monitoring	
10. Formwork **Fall from heights** **Manual handling** **Falling objects**	Work Health and Safety Regulations 2022, WHSE Management Plan	Potential injury or harm to people from manual handling in installation and erection of works.	Possible	Moderate	High	Objective Comply with legal requirements Target No incidents	**Subcontractors:** Formwork Erection • JSA provided Design • Formwork must be designed, erected, supported, braced and maintained to safely support all loads and forces and should it fail, no component of the formwork goes outside the workplace area. Stripping and lowering of formwork. A person who strips formwork must (a) do the work in a systematic manner and so as to minimise damage to the components. (b) remove nails and sharp fixings before stacking the components; and (c) upon completion of the work, stack the components of the formwork so that there is no obstruction either to access ways or to work areas. • A person who lowers any formwork from any building or structure must do so carefully, without throwing or dropping the formwork.	**HANSSEN PTY LTD Site Foreman & Sub-Contractor:** Conduct monthly inspection, using Health & Safety Inspection Checklist to assess compliance **HANSSEN PTY LTD Site Administrator or delegate** Conduct regular audits and report findings.	Moderate L = Unlikely C = Moderate

Hazard	Legal or Another Requirement	Impact	Risk Likelihood (L) & Consequence (C)		Level of Inherent Risk	Objectives & Targets	Risk Treatment Strategy (and responsibility)		Residual Risk
			L	C			Control Measures	Monitoring	
Use of Portable Ladders	(1) If, at a workplace, a person uses either a single or extension ladder then the person must ensure that the ladder - • is placed so that the distance from the ladder base to the base of the support wall is about ¼ of the working length of the ladder. • is located on a firm footing. • is secured into position so as to prevent slipping or sideways movement. • if being used to approach a platform, protrudes at least 900 mm beyond the landing for the platform; and • If being used at a workplace that is a construction site, is not suspended from a parapet hook. (2) If, at a workplace, a person uses - • a portable metal ladder then the person must ensure that the ladder meets AS/NZS 1892.1 • a portable wooden ladder then the person must ensure that the ladder meets A/S (3) A person must not use a ladder-bracket scaffold at a workplace unless the ladder-bracket scaffold is set up and used in accordance with clause AS/NZS 1576: Scaffolding.								
Use of Scaffold	AS/NZS 4576: Guidelines for scaffolding AS/NZS 1576 Parts 1 to 6 (Scaffold) Work Health and Safety Regulations 2022, WHSE Management Plan	Death or serious bodily injury resulting from a fall from height or falling object onto a person	Possible	Moderate	High	Objective Comply with legal requirements Target No incidents	**Subcontractors:** • Supply of scaffold and erecting scaffolding equipment must comply with Australian standard AS/NZS 1576: Scaffolding • the area where scaffolding is to be erected is kept clear of rubbish and any other unnecessary material. • Incomplete scaffolds must be tagged, and appropriate measures must be put in place to prevent unauthorised access. • All scaffolds must be inspected and tagged by a competent person	**HANSSEN PTY LTD Site Foreman & Sub-Contractor:** Conduct fortnightly inspection, using Health & Safety Inspection Checklist to assess compliance **HANSSEN PTY LTD Site Administrator or delegate** Conduct regular audits and report findings. Scaffolds	High L = Unlikely C = Moderate

Hazard	Legal or Another Requirement	Impact	Risk Likelihood (L) & Consequence (C)		Level of Inherent Risk	Objectives & Targets	Risk Treatment Strategy (and responsibility)		Residual Risk
			L	C			Control Measures	Monitoring	
							• A scaffold, hoarding, barricade or gantry must not be removed or altered without permission from HANSSEN PTY LTD • A person must not throw or drop scaffolding equipment from a building or structure • JSA/SWMS conducted	**Competent Person inspects:** • before the scaffold is used. • after the scaffold is altered or repaired. • at least every 30 days **Tagging in accordance with AS/NZS 1576.1**	

Hazard	Legal or Another Requirement	Impact	Risk Likelihood (L) & Consequence (C)		Level of Inherent Risk	Objectives & Targets	Risk Treatment Strategy (and responsibility)		Residual Risk
			L	C			Control Measures	Monitoring	
11. Concrete Placement • Insufficient lighting. • Poor access • Pumping concrete • Person holding 't' bar placing concrete and person holding 'j' hook • Access to site • Vibrator and operator • Shoveling • Screeding • Bull float • Hand toweling • Helicopter float • Sealing and curing	Work Health and Safety Regulations 2022 HSE Management Plan Plant HSEPC022 Hazardous Substances HSEPC017 (See MSDS Register HSEFM036)	Slips, trips and falls; abrasions, strains and sprains; manual handling injuries such as back damage. Formwork failure – structurally inadequate. Formwork not inspected. Violent ejection of concrete from hose at first moment of delivery Delivery pipe / joint failure Walking on deck during pour - slip on wet ply or reinforcement and fall / twist ankle	Possible	Moderate	High	Objective Comply with legal requirements Target No incidents	**Subcontractors:** • Develop JSA to cover works and comply with site requirements • Plant Register Aspects to be managed and controls implemented include • Adequate lighting for the work face, especially enclosed areas. • Access ways defined and lit. • Clear access to work area maintained • Caps fitted on all exposed reinforcement bars • PPE is worn by employees • Fall prevention measures required when working at height and near edge of the deck • Machine use, noise / vibration and refueling • Spraying sealing compound • Vehicle registration and certification	**HANSSEN PTY LTD Site Foreman & Sub-Contractor:** Conduct monthly inspection, using Health & Safety Inspection Checklist to assess compliance **HANSSEN PTY LTD Site Administrator or delegate** Conduct regular audits and report findings. (See MSDS Register HSEFM036)	Moderate L = Unlikely C = Moderate

Hazard	Legal or Another Requirement	Impact	Risk Likelihood (L) & Consequence (C)		Level of Inherent Risk	Objectives & Targets	Risk Treatment Strategy (and responsibility)		Residual Risk
			L	C			Control Measures	Monitoring	
12. Working at Height (gravity) • Falls from heights • Falls into trenches • Collapsing Walls in trenches or excavations • Falling Objects • Use of Ladders • Use of Scaffold • Use of EWP's	Work Health and Safety Act 2020 Work Health and Safety Regulations 2022 Code of Practice: The Prevention of Falls at Workplaces HSE Management Plan HANSSEN PTY LTD Procedure Emergency Response Plan HSEPC008	Death or serious bodily injury resulting from a fall from height or falling object onto a person	Possible	Catastrophic	Extreme	Objective Comply with legal requirements Target No incidents	**HANSSEN PTY LTD Site Foreman & Subcontractors:** • JSA If there is a risk of a person falling from one level to another, then a person having control of a workplace, must ensure that: 1. A fall injury prevention system meets the requirements of WHS, regulation 3.50. 2. A fall injury prevention system is inspected and maintained in accordance with WHS regulation 3.51. 3. Anchorages are inspected and maintained in accordance with WHS regulation 3.53. 4. If welding takes place, the person performing welding work, and the fall injury prevention system are protected from hot particles and sparks WHS regulation 3.52 5. The risk of falling through any hole or opening (other than a lift well, stairwell or vehicle inspection pit) with dimensions of more than 200 mm x 200 mm but less than 2 metres x 2 metres or with a diameter greater than 200 mm but less than 2 metres is controlled in accordance with Safety	**HANSSEN PTY LTD Site Foreman & Sub-Contractor:** Conduct fortnightly inspection, using Health & Safety Inspection Checklist to assess compliance **HANSSEN PTY LTD Site Administrator or delegate** Conduct regular audits and report findings. **All Personnel** • Constantly monitor work method • If a serious risk is identified, work is to be stopped until	High L = Unlikely C = Major

Hazard	Legal or Another Requirement	Impact	Risk Likelihood (L) & Consequence (C)		Level of Inherent Risk	Objectives & Targets	Risk Treatment Strategy (and responsibility)		Residual Risk
			L	C			Control Measures	Monitoring	
							Requirements of WHS regulations 2022 and WHS Act 2020	a remedy is put into place	
							6. The risk of falling **2 metres or more** from the edge of a scaffold, fixed stair, landing or suspended slab at the workplace or formwork or falsework and the risk of falling **3 or more metres from any other edge is** controlled in accordance with WHS regulation 7. Grid mesh and checker plate flooring at a construction site are securely fixed in accordance with WHS regulation.		
13. Open Floor Penetration eg fall from height from one floor to another floor below	Work Health and Safety Regulations 2022 HSE Management Plan	Death or serious bodily injury resulting from a fall from height	Possible	Major	Extreme	Objective Comply with legal requirements Target No incident	**HANSSEN PTY LTD and Subcontractors:** • Approved guardrails or covers must protect floor opening or holes. If covers are used, they must comply with safety requirements of WHS regulation 2022, WHS Act 2020, engineers and design requirements. Covers must be marked “Danger – hole beneath”.	**HANSSEN PTY LTD Site Foreman & Sub-Contractor:** Conduct weekly inspection, using Health & Safety Inspection Checklist to assess compliance **HANSSEN PTY LTD Site Administrator or delegate** Conduct regular	High L = Unlikely C = Major

Hazard	Legal or Another Requirement	Impact	Risk Likelihood (L) & Consequence (C)		Level of Inherent Risk	Objectives & Targets	Risk Treatment Strategy (and responsibility)		Residual Risk
			L	C			Control Measures	Monitoring	
								audits and report findings.	
14. Public Safety / Traffic Mngt Construction sites create risks not only for the construction worker, but also for the public who move around the site or who may live adjoining them	Work Health and Safety Regulations 2022 **WHSE Management Plan**	Common Law Implications A member of the public may claim damages through a civil court for injuries arising from an employer or employee's failure to take reasonable care. These are commonly called "negligence claims".	Possible	Moderate	High	Objective Comply with legal requirements Target No incidents	**Site Foreman and Subcontractors:** Do not commence work if persons in the vicinity of the site, but not on the site, could be injured, unless: 1. Adequate hoarding or barricades (1.8-metre-high chain link type fence) have been put in place to reduce the risk 2. A gantry is erected to prevent injury from falling objects 3. The design, erection, use and maintenance of a hoarding, barricade or gantry is adequate for the loads placed on it 4. Traffic Management Plan for works affecting the traffic flow.	**HANSSEN PTY LTD Site Foreman & Sub-Contractor:** Conduct monthly inspection, using Health & Safety Inspection Checklist to assess compliance **HANSSEN PTY LTD Site Administrator or delegate** Conduct regular audits and report findings. -	Moderate L = Unlikely C = Moderate

Hazard	Legal or Another Requirement	Impact	Risk Likelihood (L) & Consequence (C)		Level of Inherent Risk	Objectives & Targets	Risk Treatment Strategy (and responsibility)		Residual Risk
			L	C			Control Measures	Monitoring	
							A hoarding, barricade or gantry must not be removed or altered without permission from the HANSSEN PTY LTD Hoarding or barricades must not be installed without a license and its installation must comply with local government requirements Site works outside the fenced site, (Chain-link fence) footpath alterations, etc often create hazards to the public which can easily be eliminated or controlled by the following: • Erection of barriers around hazards. • Display of warning signs/lights. • Arrange for a traffic/person controller to redirect traffic/persons. • Provide a temporary bypass for traffic/persons. • Provision of additional lighting at night. • Where practicable, arrange so that excavation is completed before the end of the working day. If this is not practicable provide access and safety guard rails across the excavation. • Utilise temporary barriers to prevent unauthorized public access to work areas		

Hazard	Legal or Another Requirement	Impact	Risk Likelihood (L) & Consequence (C)		Level of Inherent Risk	Objectives & Targets	Risk Treatment Strategy (and responsibility)		Residual Risk
			L	C			Control Measures	Monitoring	
15. Dealing with Trespassers on site Construction sites create risks not only for the construction worker but also for members of the public. Site Foreman or other employees are most at risk and may incur personal injury when confronting members of the public who are trespassing on site Hazards include: - Vandalism - Theft - Property Damage Members of the Public may discard used syringes / needles on the HANSSEN PTY LTD site	Work Health and Safety Regulations 2022 National Code of Practice for the Prevention of Work-Related exposure to Hepatitis and HIV (Blood borne) viruses HSE Management Plan HANSSEN PTY LTD Procedure Emergency Response Plan HSEPC008	Potential injury to employees when confronting trespassers on site. Common Law Implications A member of the public may claim damages through a civil court for injuries sustained by an employee working at a HANSSEN PTY LTD controlled site. Potential source of infection Intravenous drug users have a greatly increased risk of infection with hepatitis C virus. There is currently no vaccine for the prevention of hepatitis C infection.	Possible	Moderate	High	Objective No harm to HANSSEN PTY LTD employees Target Report all incidents	**Site Foreman and Subcontractors:** • Display adequate number of warning signs (inc PPE) around the perimeter of the site 'Danger Construction Site Keep Out. • Additional warning signs 'Trespassers found on site will be prosecuted' are encouraged. **All personnel** If you witness a trespasser on site • Contact the Site **Foreman**. • Call security and report the incident providing a description of the person on site and any damage witnessed. • Use a camera or video to record any personal damage witnessed on site. **Do not:** • Confront the person trespassing on site as you potentially place yourself in a situation that may cause your personal injury Managing any discarded needles on site If any needles or syringes are found on site	**HANSSEN PTY LTD Site Foreman:** - Discuss at safety meeting **Employees:** - Report all incidents **HANSSEN PTY LTD Site Foreman & Sub-Contractor:** Conduct monthly inspection, using Health & Safety Inspection Checklist to assess compliance - Inspect the site every morning if needles are being discarded at the site. **HANSSEN PTY LTD Site Administrator or delegate** Conduct regular audits and report findings.	Moderate L = Unlikely C = Moderate

Hazard	Legal or Another Requirement	Impact	Risk Likelihood (L) & Consequence (C)		Level of Inherent Risk	Objectives & Targets	Risk Treatment Strategy (and responsibility)		Residual Risk
			L	C			Control Measures	Monitoring	
							- Purchase a sharps medical disposal container Ph 1800 656 100 for local supplier (must comply to AS/NZS 4031) - Use tools to pick-up sharps and dispose of them into non-reusable container, do not pick-up discarded needles use hands.		

Notes on Hepatitis

- Occupational infection occurs mainly from transmission via contaminated needles and sharp objects in the workplace, which have been handled incorrectly.
- Hepatitis B and hepatitis C are not usually transmitted by casual contact between persons.

16. Manual Handling Examples include: - Lifting - Lowering - Pulling - Pushing - Twisting - Carrying	Work Health and Safety Regulations 2022 Code of Practice: Manual Handling WHSE Management Plan	Stress and strain on body caused by poor manual handling Manual handling injuries include: • Strains and sprains. • Neck and back injury. • Slips, falls and crushing incidents. • Cuts, bruises and broken bones. • Hernia; and • Strained heart muscles.	Possible	Moderate	Extreme	Objective Comply with legal requirements Target No incidents	**Site Foreman and Subcontractors** • Comply with the advisory standards on Manual Handling • Mechanical equipment will be used as much as possible. • No one under 18 will be required to lift more than 20 kg. • Team Lifting methods are encouraged.	**HANSSEN PTY LTD Site Foreman & Sub-Contractor:** Conduct monthly inspection, using Health & Safety Inspection Checklist to assess compliance **HANSSEN PTY LTD Site Administrator or delegate** Conduct regular audits and report findings. • Consult with employees involved in manual handling • Observe tasks	Moderate L = Unlikely C = Moderate

Hazard	Legal or Another Requirement	Impact	Risk Likelihood (L) & Consequence (C)		Level of Inherent Risk	Objectives & Targets	Risk Treatment Strategy (and responsibility)		Residual Risk
			L	C			Control Measures	Monitoring	
		A young worker is more likely to be injured through manual handling work than an older worker because a younger person's body is still developing and is less able to cope with strain						• Monitor injury reports Review to check: • Control strategies are effective. • If further risk assessment required • New strategies required?	

Hazard	Legal or Another Requirement	Impact	Risk Likelihood (L) & Consequence (C)		Level of Inherent Risk	Objectives & Targets	Risk Treatment Strategy (and responsibility)		Residual Risk
			L	C			Control Measures	Monitoring	
17. Use of hand tools and explosive power tools	AS/NZS 1873 Powder-actuated (PA) hand-held fastening tools Work Health and Safety Regulations 2022, WHSE Management Plan Plant HSEPC022	Impact on bodies by moving objects eg chisels, saws Stanley knives, hand tools, swarf from drills, debris from grinders and sawdust Lacerations, foreign bodies in eyes	Possible	Moderate	High	Objective Comply with legal requirements Target No incidents	**Subcontractors:** • Persons using drills and grinders are to ensure swarf and debris is not a hazard to themselves or other people. • Use correct PPE (eg glasses /goggles) • Use *explosive power tools* in accordance with AS/NZS 1873 Powder-actuated (PA) hand-held fastening tools • A nail gun must not be used unless it is in accordance with the manufacturer's specifications and a warning sign has been erected • Always select power tools that are the most suitable for the job giving consideration to weight, vibration and kickback. • Maintain all cutting equipment. Excessive force is required when using dull blades. • Always use two hands to operate power saws; and • Ensure leads are placed/ positioned so they are not a trip hazard.	**HANSSEN PTY LTD Site Foreman & Sub-Contractor:** Conduct monthly inspection, using Health & Safety Inspection Checklist to assess compliance **HANSSEN PTY LTD Site Administrator or delegate** Conduct regular audits and report findings.	Moderate L = Unlikely C = Moderate

Hazard	Legal or Another Requirement	Impact	Risk Likelihood (L) & Consequence (C)		Level of Inherent Risk	Objectives & Targets	Risk Treatment Strategy (and responsibility)		Residual Risk
			L	C			Control Measures	Monitoring	
18. Use of Mechanical Plant and Equipment	Work Health and Safety Regulations 2022, HSE Management Plan Plant HSEPC022 HANSSEN PTY LTD Procedure Emergency Response Plan HSEPC008 Plant Inspection and Risk Assessment HSEFM026	Death or serious bodily injury resulting from unsafe use or failure to maintain plant and equipment	Possible	Major	Extreme	Objective Comply with legal requirements Target No incidents	**Subcontractors:** • Assess risk of using plant and provide risk assessment • Maintain schedule of common plant, to be used on site. • All personnel required to drive/ operate a vehicle, item of mobile plant or equipment shall have a current license/ certificate of competency for the vehicle. • Plant and Equipment supplied to site is safe and is maintained in a safe condition	**HANSSEN PTY LTD Site Foreman & Sub-Contractor:** Conduct monthly inspection, using Health & Safety Inspection Checklist to assess compliance **HANSSEN PTY LTD Site Administrator or delegate** Conduct regular audits and report findings.	High L = Unlikely C = Major

Hazard	Legal or Another Requirement	Impact	Risk Likelihood (L) & Consequence (C)		Level of Inherent Risk	Objectives & Targets	Risk Treatment Strategy (and responsibility)		Residual Risk
			L	C			Control Measures	Monitoring	

Plant listed below must not be used unless:

1. It has a current WorkSafe registration,
2. A competent person has inspected the plant and considered it safe to operate,
3. The information specified in WHS Regulations 2022,
    - Boilers categorized as hazard level A, B or C according to the criteria set out in
    - Building maintenance units
    - Lifts
    - Mobile cranes, other than tow trucks, with a safe working load greater than 10 tonnes
    - Pressure vessels categorized as hazard level A, B or C according to the criteria, but not gas cylinders to which AS 2030 applies; LP gas fuel vessels for automotive use to which AS/NZS 3509 applies; and serially produced vessels to which applies
    - Tower cranes
    - Truck-mounted concrete placing units with booms

The Plant listed above may be used before it is registered provided that:

1. The plant is used within 21 days after a competent person has inspected the plant and considered it to safe to operate,
2. Where it involves pressure equipment and powered plant, the information specified in Work Health and Safety Regulations

The registered plant must be re-registered when it is altered, relocated (fixed plant only) or when the ownership changes. It is an offence to remove, alter, conceal or attempt to remove, alter or conceal any markings showing the safe working load of plant or registration number of plants. WorkSafe must be notified when a registered item of plant is permanently withdrawn from service

Hazard	Legal or Another Requirement	Impact	Risk Likelihood (L) & Consequence (C)		Level of Inherent Risk	Objectives & Targets	Risk Treatment Strategy (and responsibility)		Residual Risk
			L	C			Control Measures	Monitoring	
Use of Elevated Work Platforms (Scissor Lift) WA Code of Practice – Prevention of Falls at Workplaces A/S 2250 Cranes-safe use – elevating work platforms HSE Management Plan Plant WHSEPC022 Control measures to be implemented: • Operators of EWP's must be trained and competent. • Platforms must only be used as working platforms not as a means of access to and egress from a work area. • Unless designed for rough terrain, the platforms must be used only on a solid level surface. • The surface must be checked to ensure there are no penetrations or obstructions which could cause uncontrolled movement or overturning of the platform. • When designed as rough terrain platforms, the manufacturer's instructions must be consulted for safe operation. • EWPs with a boom length of 11 metres or more must be operated by a WorkSafe certified operator • EWPs are designed for personnel not as a crane • The Safe Working Load (SWL) of an EWP is not to be exceeded • Daily checks are to be completed before operation • Risk assessments must be provided/available • JSA conducted									
19. Working in a Confined Space *Below ground level or confined spaces* Some of the hazards associated with confined spaces include:	Work Health and Safety Regulations 2022, Work in confined spaces. AS/NZS 2865 HSE Management Plan HANSSEN PTY LTD Confined	Collapse, entrapment, suffocation or exposure to toxic fumes	Possible	Major	Extreme	Objective Comply with legal requirements Target No incidents	**Subcontractors to ensure:** 1. A Risk Assessment, JSA/SWMS and Permit is completed before any work in a confined space 2. Work inside a confined space complies with Australian standard AS/NZS 2865: Safe working in a confined space 3. A standby person is in the immediate vicinity of the	**Subcontractors to:** • Comply with AS/NZS 2865 – Safe Working in a Confined Space **HANSSEN PTY LTD Site Foreman & Sub-Contractor:**	High L = Unlikely C = Major

Hazard	Legal or Another Requirement	Impact	Risk Likelihood (L) & Consequence (C)		Level of Inherent Risk	Objectives & Targets	Risk Treatment Strategy (and responsibility)		Residual Risk
			L	C			Control Measures	Monitoring	
• oxygen deficient or enriched atmosphere • flammable atmosphere • toxic atmosphere • external hazards that may affect those in the confined space • residual hazardous substances • surfaces • engulfment • electric shock • temperature extremes • access and egress • visibility • noise • psychological factors • mechanical equipment.	Space Entry HSEPC013 HANSSEN PTY LTD Confined Space Entry Permit HSEFM049 HANSSEN PTY LTD Procedure Emergency Response Plan HSEPC008						confined space if there is a risk of injury to a person entering or working in the confined space [Work Health and Safety Regulations 2022, 4. Work Health and Safety Regulations 2022	Conduct monthly inspection, using Health & Safety Inspection Checklist to assess compliance **HANSSEN PTY LTD Site Administrator or delegate** Conduct regular audits and report findings. **HANSSEN PTY LTD Site Foreman** • Issue Permit HANSSEN PTY LTD Confined Space Entry Permit HSEFM049	
20. Control of Substances Hazardous to Health *Chemicals and substances that*	Work Health and Safety Regulations 2022, regulation 5.3 AS 1940:2005 – Storage and Handling of	Chemical burn(s) NOTE: Unhardened concrete is classed as a hazardous substance Spillage of hazardous substances may	Unlikely	Minor	Low	Objective Prevent pollution and harm by ensuring that chemicals are stored	**Subcontractors:** • Provide copy of MSDS to HANSSEN PTY LTD for hazardous substances or dangerous goods brought onto site	**Site Foreman:** • Maintain register of Material Safety Data Sheets (MSDS) and copies of MSDS	Low L = Very Unlikely C = Minor

Hazard	Legal or Another Requirement	Impact	Risk Likelihood (L) & Consequence (C)		Level of Inherent Risk	Objectives & Targets	Risk Treatment Strategy (and responsibility)		Residual Risk
			L	C			Control Measures	Monitoring	
are classified as Hazardous Substances are listed in the List of Designated Hazardous Substances or meet the Approved Criteria for Classifying Hazardous Substances (as published by NWHSC)	Flammable and Combustible Liquids HSE Management Plan Hazardous Substances HSEPC017 HSEFM036 HANSSEN PTY LTD MSDS Register HANSSEN PTY LTD Procedure Emergency Response Plan HSEPC008	result in ground and/or water contamination and may pose a threat to human health* *Generally speaking, Hazardous substances are chemicals that may have a negative effect on a person's health when that person is exposed to levels above the national exposure standard *[NWHSC:3008(1995refers]*				and used responsibly. Target No incidents	• Assess the risk associated with storage and handling of hazardous substances or dangerous goods. Provide written risk assessment to HANSSEN PTY LTD • Ensure substances in containers are labelled • Check Storage and ventilation meets regulations • Ensure Material Safety Data Sheet and risk assessment is readily accessible to workers who use the substance and available in the First Aid Centre	records in the First aid centre. **HANSSEN PTY LTD Site Foreman & Sub-Contractor:** Conduct fortnightly inspection, using Health & Safety Inspection Checklist to assess compliance **HANSSEN PTY LTD Site Administrator or delegate** Conduct regular audits and report findings. **All personnel** If a spill occurs, follow Emergency Spill Response in MSDS	
21. Heat Stress and Ultraviolet Radiation Heat Stress is likely to affect people in all parts of Western Australia during	Work Health and Safety Regulations 2022 Work Health and Safety Act 2020 Working safely in hot weather - WorkSafe - DOCEP)	Radiation Sunburn / Skin, Eye damage / Skin cancer Temperature Exhaustion, Heat Stress, Heat Stroke, Burns. High environment temperatures cause	Possible	Moderate	High	Objective Comply with legal requirements Target No injuries	**Subcontractors:** • Assess the risk and include heat stress / UV controls in JSA's. **To avoid heat stress, set-up safe systems of work. These may include:** • Consider using mechanical assistance to reduce physical demands of work	**HANSSEN PTY LTD Site Foreman & Sub-Contractor:** Conduct monthly inspection, using Health & Safety	Moderate L = Unlikely C = Mod

Hazard	Legal or Another Requirement	Impact	Risk Likelihood (L) & Consequence (C)		Level of Inherent Risk	Objectives & Targets	Risk Treatment Strategy (and responsibility)		Residual Risk
			L	C			Control Measures	Monitoring	
our summer months. The effects of heat stress range from simple discomfort to life threatening illnesses such as heat stroke. Heat stress may occur as the result of a heat wave or a constant source of heat at the workplace. Six main factors are • High air temperature, • High humidity, • Low air movement, • Exposure to the sun • Intense physical activity. • Clothing impairing air movement and sweat evaporation	WHSE Management Plan	an increased blood flow to the skin, which allows release of heat. Blood is diverted to the muscles if physical work is being performed, resulting in a lower release of heat through the skin. Heat stress also causes increased sweating, depleting the body's fluid and causing heat intolerance. This reduces work capacity and efficiency. Other signs of heat stress include tiredness, irritability, inattention and muscular cramps. These factors all increase the risk of an accident. Do not assume that sunscreen alone will provide total protection from sunburn and skin cancer.					• On the onset of heat stress for individuals provide breaks in cooler areas during constant high temperature periods • Employees to report heat-related discomfort to the Site Foreman. • Use SPF30+ sunscreen (AS 2064) regularly • Use safety glasses. • Drink a minimum of 4 liters of water a day. Provide ready access to cool drinking water and encourage drinks of 100 to 200ml of water at frequent intervals to replace fluids lost in sweating. (Do not drink sugar level drinks are these are diuretic and will contribute to dehydration) • Eat regular meals - Wear light-colored protective clothing to reflect the heat. Due to the high incidence of skin cancers in Australia, the following minimum dress standard is recommended: - Use wide-brimmed attachments on helmets to protect from direct sunlight - Safety boots - Protective clothing (eg for welding,	Inspection Checklist to assess compliance • Consult with employees and promote awareness • Monitor injury or reports of heat stress at sites **Treat heat stress** Have the person rest in the coolest available place and drink cool but not cold fluids. Contact a nurse or first aid officer if the patient does not rapidly improve. **Treat heat stroke** Until medical aid (Doctor) is available, cool the person down as quickly as possible, such as by soaking the person's clothing in cold water, giving cool fluids if the person is conscious, and increasing air	

Hazard	Legal or Another Requirement	Impact	Risk Likelihood (L) & Consequence (C)		Level of Inherent Risk	Objectives & Targets	Risk Treatment Strategy (and responsibility)		Residual Risk
			L	C			Control Measures	Monitoring	
								movement by fanning.	
22. Fire and Explosion *Potential ignition sources include*: • naked flame. • hot work. • electrical equipment. • static electricity including friction. • welding near flammable substances, combustible dusts or waste materials.	HANSSEN PTY LTD Procedure Emergency Response Plan HSEPC008 HSE Management Plan Hot Work Procedure HSEPC014 and Permit HSEFM051 AS 3745. Emergency control organization and procedures for buildings, structures and workplaces Work Health and Safety Regulations 2022, Dangerous Goods Safety Act 4 Dangerous Goods Safety Regulations	Potential non-compliance with Insurer requirements for Fire Safety in the event of a claim Personal injury from fire or explosion Property damage and risk to nearby properties and people from fire or explosion	Unlikely	Moderate	Moderate	Objective To ensure that the risk of accidental fire at a workplace is minimised. Target Induction of all HANSSEN PTY LTD and Subcontract personnel regarding fire safety and emergency response.	**Subcontractors:** Fire Prevention • Complete HANSSEN PTY LTD Hot Work Permit HSEFM051 • The suitability, location and accessibility of emergency equipment including firefighting, and first aid will be undertaken by a competent person prior to work commencing on site. • **Eliminate** potential ignition sources being near flammable substances, combustible dusts or waste materials • Enclosed work areas that contain flammable or explosive atmospheres. • Display appropriate signage for the risks (AS 1319) • If there are flammable materials, ensure that there is no smoking or naked flame in that part of the workplace Emergency Facilities • If there is a fire risk, provide and maintain fire extinguishers in accordance with AS 2444 Portable fire	**HANSSEN PTY LTD Site Foreman & Sub-Contractor:** Conduct monthly inspection, using Health & Safety Inspection Checklist to assess compliance **HANSSEN PTY LTD Site Administrator or delegate** Issue Permit HSEFM051 Conduct regular audits and report findings.	Moderate L = Very Unlikely C = Minor

Hazard	Legal or Another Requirement	Impact	Risk Likelihood (L) & Consequence (C)		Level of Inherent Risk	Objectives & Targets	Risk Treatment Strategy (and responsibility)		Residual Risk
			L	C			Control Measures	Monitoring	
							extinguishers and fire blankets • Ensure that there is an evacuation procedure / plan, including diagrams and contact numbers, clearly displayed. Response to be practiced at minimum 6 monthly intervals • Provide fire-extinguisher training to persons at the workplace who are required to fight fires.		
23. Violence, Aggression and Bullying at Work Violence and aggression are present in situations where workers and other people are threatened, attacked or physically assaulted at work. Psychological aggression also falls under this definition. Bullying at work can be defined as repeated,	Work Health and Safety Act 2020 Work Health and Safety Regulations 2022 HSE Management Plan WA Code of Practice, Violence, Aggression and Bullying at Work Equal Opportunity Act	Bullying at work is unlawful under the WHS Act. Workplace violence and aggression are actions or incidents that may physically or psychologically harm another person. Violence or aggression in the workplace can be harmful to organizations as well as individuals resulting in: • Reduced efficiency, productivity/profitability. • Increased absenteeism.	Likely	Moderate	High	Target No incidents	**HANSSEN PTY LTD Site Foreman:** • Convey to all workers that bullying is inappropriate and will not be tolerated • Provide strong leadership to address reports of violence aggression and bullying at work • Make information and training available to employees. • Consult with workers and WHS Representatives • Any behavior that has the potential to harm or offend someone should be identified as a hazard and assessed for its risk to safety and health.	**HANSSEN PTY LTD Site Foreman & Sub-Contractor:** • Monitor effectiveness of action taken to address reports of violence, aggression or bullying Review phase may include: • The workplace is made safe. • First aid and medical assistance arranged as necessary. • immediate support provided	Moderate L = Possible C = Minor

Hazard	Legal or Another Requirement	Impact	Risk Likelihood (L) & Consequence (C)		Level of Inherent Risk	Objectives & Targets	Risk Treatment Strategy (and responsibility)		Residual Risk
			L	C			Control Measures	Monitoring	
unreasonable or inappropriate behavior directed towards a worker, or group of workers, that creates a risk to health and safety. There are two types of bullying behavior, overt and covert. Can occur from external, internal or client initiated. All workers and other people at workplaces are potentially at risk of experiencing some form of violence, aggression or bullying.		• Increased staff turnover. • Increased counseling and mediation costs. • Increased workers' compensation claims; or • Possible legal action It is possible that workers who are bullied will experience some of the following effects: • Stress, anxiety or sleep disturbance • Panic attacks or impaired ability to make decisions • Incapacity to work, concentration problems, loss of self-confidence and self-esteem or reduced output and performance. • Depression or a sense of isolation; physical injury. • Reduced quality of home and family life; or					**All personnel** • Immediately report any violence, aggression or repeated bullying to the Site Foreman. • Physical violence or assault can be reported to the Police.	for affected workers; and • ensuring the situation is under control <u>Actions during recovery:</u> • providing clear information to all workers about the action that will be taken • providing ongoing psychological first-aid support and support services for workers and their families • allowing workers time to recover and manage early return to work. • providing advice on reporting and workers compensation arrangements • investigating the incident to reduce the risk of injury or harm in the future.	

Hazard	Legal or Another Requirement	Impact	Risk Likelihood (L) & Consequence (C)		Level of Inherent Risk	Objectives & Targets	Risk Treatment Strategy (and responsibility)		Residual Risk
			L	C			Control Measures	Monitoring	
		• In extreme cases, risk of suicide.							
24. Air Pollution During works, significant dust / ozone sources may originate from: • *Earthworks* • *Concrete, Tile or brick cutting*	Environmental Protection Act 1986, section 49 Work Health and Safety Act 2020	Air Pollution Dust can result in a serious nuisance and loss of amenity for populations living in the vicinity of the site.	Likely	Moderate	High	Objective Minimise dust on surrounding land users and the environment Target No externally initiated work stoppages based on dust levels	**Subcontractors** to ensure: • No burning allowed on site • Use wet cutting where applicable or collect dust by vacuum/dust bags • Use Dust suppression measures (e.g. watering) where practicable. **All personnel** • All dust related complaints must be immediately reported to the HANSSEN PTY LTD Site Foreman	Complaints Handling Following complaints, the source of any excessive dust will be identified, and work practices modified or re-scheduled, to reduce or eliminate the risk of future events **HANSSEN PTY LTD Project / Site Foreman** Liaise with Customer / Stakeholder on reported complaints	Moderate L = Possible C = Minor
25. Waste Management Construction activities have the potential to generate wastes such as: Solid • Concrete • Bricks • Gyprock • Wastepaper	Environmental Protection Act Health Act Environmental Protection (Controlled Waste) Regulations 2001 Work Health and Safety Regulations 2022	Waste of energy and/or resources Attraction of pest species Reduced visual amenity Unpleasant odour Risk to human health Creation of fire hazards	Possible	Minor	Moderate	Objective Implement recycling initiatives for waste materials where **financially viable** Target Remove all solid and	**HANSSEN PTY LTD Site Foreman & Subcontractors:** • Engage licensed waste disposal contractors for the removal of waste from site • Littering is prohibited at site • Recycling bin on site were cost effective • All sites to be clean, tidy and professionally presented	**HANSSEN PTY LTD Site Foreman & Sub-Contractor:** Conduct monthly inspection, using Health & Safety Inspection Checklist to assess compliance Maintain dockets **HANSSEN PTY LTD Site**	Low L = Unlikely C = Minor

Hazard	Legal or Another Requirement	Impact	Risk Likelihood (L) & Consequence (C)		Level of Inherent Risk	Objectives & Targets	Risk Treatment Strategy (and responsibility)		Residual Risk
			L	C			Control Measures	Monitoring	
• Scrap Steel <u>Liquid</u> • Grey water • Used Oil	WHSE Management Plan					liquid waste from site		**Administrator or delegate** Conduct regular audits and report findings.	
26. Noise/ Vibration in excess of legislative requirements Noise sources could be generated from the following: • *Increase vehicle and truck movements* • *Earthmoving equipment operation, clearing and filling* • *Material handling equipment and operations* • *Power tools equipment operation.* Vibration could occur during:	Environmental Protection Act 1986 WA Environmental Protection (Noise) Regulations 1997, section 7 AS2436 (1981) – Guide to Noise Control on Construction, Maintenance and Demolition Sites Work Health and Safety Regulations 2022, Code of Practice: Managing Noise at Workplaces HSE Management Plan	Noise Pollution Excessive noise and vibration levels can result in a serious nuisance and loss of amenity for populations working and living in the vicinity of the works. Occupational health risks to the workforce e.g.: • Communication problems • Stress • Noise induced hearing loss <u>Information:</u> A 3 dB increase in noise level, though barely perceptible, corresponds to a doubling of sound energy. A 10-dB increase, indicating <u>10 times</u>	Likely	Moderate	High	<u>Objective</u> Minimise noise to workers, surrounding land users and the environment <u>Target</u> Reduce or restrict the generation of excessive noise on site. Steps to reduce noise levels include: • Reduce the level at the source • Isolate the source • Reduce exposure by moving worker	**HANSSEN PTY LTD Project/Site Foreman and Subcontractors** • Work to be completed between 7am and 7pm on any day which is not a Sunday or a Public Holiday. • Outside these hours work is only allowed when the Department of Environment has approved a Noise Management Plan. • All plant equipment and vehicles to be fitted with appropriate noise suppression equipment to reduce noise levels so far as is practicable. • Where practicable, schedule noisy activities for times that will cause least annoyance • If it is not practicable to avoid exposing a person at a workplace to noise above the exposure standard for noise i.e. (a) an LAeq,8h of 85dB(A); or (b) an L C, peak of 140 dB(C),} then provide person with	**HANSSEN PTY LTD Site Foreman & Sub-Contractor:** Conduct monthly inspection, using Health & Safety Inspection Checklist <u>Complaints Handling</u> **All personnel** All noise and vibration related complaints must be immediately reported to the HANSSEN PTY LTD Site Foreman. Following complaints, the source of any excessive noise or vibration will be identified and work practices modified or re-scheduled, to reduce or eliminate the risk of future events.	<u>Moderate</u> L = Unlikely C = Moderate

Hazard	Legal or Another Requirement	Impact	Risk Likelihood (L) & Consequence (C)		Level of Inherent Risk	Objectives & Targets	Risk Treatment Strategy (and responsibility)		Residual Risk
			L	C			Control Measures	Monitoring	
• *Pile driving* • *Compaction works.*		the energy, seems twice as loud Exposure - A noise 3 dB greater has twice the energy output and causes the same damage in half the time.				• Provide correct PPE (last resort)	personal hearing protectors , as per AS/NZS 1269.3.	**HANSSEN PTY LTD Project / Site Foreman** Liaise with Customer / Stakeholder on reported complaints **HANSSEN PTY LTD Site Administrator or delegate** Conduct regular audits and report findings.	
27. Tilt-up Concrete and Precast Concrete Panels/ Members *Erection of precast concrete panels or members at site*	Work Health and Safety Regulations 2022, Tilt Up Code of Practice AS/NZS 3850 Concrete Tilt Panel and Precast Concrete Procedure HSEPC011		Possible	Major	Extreme	Objective Comply with legal requirements Target No incidents	**Site Foreman and Subcontractors** to ensure: • requirements for the design and erection of the panels are taken in accordance with current legislation and relevant requirements of AS3850	**Site Foreman and Subcontractors to:** Comply with relevant requirements of AS3850 for erection purposes. **HANSSEN PTY LTD Site Administrator or delegate** Conduct regular audits and report findings.	High L = Unlikely C = Major

Hazard	Legal or Another Requirement	Impact	Risk Likelihood (L) & Consequence (C)		Level of Inherent Risk	Objectives & Targets	Risk Treatment Strategy (and responsibility)		Residual Risk
			L	C			Control Measures	Monitoring	

A person must not do any kind of tilt-up work (other than work relating to the manufacture of a concrete panel) at a construction site unless WorkSafe has been notified of their intention to manufacture the panel. [WHS Regs 2022,

A main contractor, employer or self-employed person intending to cast a concrete panel must

1. Notify WorkSafe of the intended casting at least 10 working days before casting is to begin using the standard form [WHS Regs 2022
2. Ensure that the design, materials and manufacture comply with AS 3850 Tilt-up concrete construction and a competent person, not involved in the original form set-up, conducts an inspection and provides a written report of the inspection results. [WHS Regs 2022

A main contractor, employer or self-employed person, at a construction site, must ensure that:

1. The transport, cranage, temporary storage and erection of a concrete panel, complies with AS 3850 Tilt-up concrete construction [WHS Regs 2022,
2. The design and installation of temporary bracing complies with AS 3850 Tilt-up concrete construction and has been approved by a qualified practicing engineer [WHS Regs 2022
3. The fixing of a concrete panel for the incorporation as a wall and the removal of temporary bracing comply with AS 3850 Tilt-up concrete construction [WHS Regs 2022,

At a site where tilt-up work is being done, the main contractor must ensure that, at all times, the following are kept at the site WHS Regs 2022,

1. Where a concrete panel is involved, whether or not manufactured at the construction site, a copy of the notification to WorkSafe about the manufacture of the panel
2. A copy of any WorkSafe exemption
3. A copy of the shop drawings of each concrete panel that is involved in the work
4. A current plan setting out details of the proposed execution of the work
5. A copy of any advice from a qualified practicing engineer
6. A copy of the inspection report for each concrete panel.

A responsible person must not allow any person to enter or remain in any area of the site where tilt-up work is being done except [WHS Regs 2022

1. A person doing the work
2. A person who has the written authority of a responsible person to enter the area for a purpose connected with the work
3. A person authorized under a written law to enter the area

A person having control of a workplace, where a concrete panel is proposed to be manufactured, must ensure that:

1. The manufacture is directly supervised by a person who has completed an approved course for managers and supervisors in the construction industry concerning the manufacture of concrete panels [WHS Regs 2022
2. Each person involved in the manufacture has completed an approved course for persons involved in the manufacture of concrete panels [WHS Regs 2022
3. The work is directly supervised by a person who has completed an approved course for managers and supervisors, in the construction industry, concerning tilt-up work [WHS Regs 2022
4. Each person involved in the work has completed an approved course for persons involved in tilt-up work [WHS Regs 2022

Hazard	Legal or Another Requirement	Impact	Risk Likelihood (L) & Consequence (C)		Level of Inherent Risk	Objectives & Targets	Risk Treatment Strategy (and responsibility)		Residual Risk
			L	C			Control Measures	Monitoring	
28. Concrete cutting and coring *Cutting or coring of precast concrete units or insitu concrete slabs.*	Work Health and Safety Regulations 2022, Code of Practice Concrete and Masonry Cutting and Drilling 2004 Cutting and sawing Permit HSEFM047 Drilling and Coring Permit HSEFM048 Code of Practice Manual Handling Electrical installations Construction and Demolition sites AS/NZS 3012 2010 AS2436 (1981) – Guide to Noise Control on Construction, Maintenance and Demolition Sites Code of Practice: Managing Noise at Workplaces	Death or serious bodily injury resulting from unsafe use of equipment. **Electrocutions** **Manual Handling** Injuries-include 1. Strains and Sprains 2. Neck and back injury 3. Slips, Falls and crush incidents 4. Hernia **Noise Pollution**	Possible	Major	Extreme	Objective Comply with legal requirements Target No incidents	**Site Foreman Subcontractors** • Complete HANSSEN PTY LTD Cutting and Sawing or Drilling and Coring Permit • Where practicable, schedule noisy activities for times that will cause least annoyance If it is not practicable to avoid exposing a person at a workplace to noise above the exposure standard for noise i.e. (a) an LAeq,8h of 85dB(A); or (b) an L C, peak of 140 dB(C),} then provide person with personal hearing protectors	**Site Foreman and Subcontractors to:** Code of Practice Concrete and Masonry Cutting and Drilling 2004 **HANSSEN PTY LTD Site Foreman** Issue Permit **HANSSEN PTY LTD Site Administrator or delegate** Conduct regular audits and report findings.	Moderate L = Unlikely C = Major

Hazard	Legal or Another Requirement	Impact	Risk Likelihood (L) & Consequence (C)		Level of Inherent Risk	Objectives & Targets	Risk Treatment Strategy (and responsibility)		Residual Risk
			L	C			Control Measures	Monitoring	
29. Failure to identify and reduce hazards resulting from purchasing/ procurement of plant, equipment Examples include building lifts, compressors, Mobile plant, lifting equipment.	Work Health and Safety Regulations 2022, NATIONAL STANDARD FOR PLANT [NWHSC:1010(1994)] AS 45001 Contract Requirements (as applicable) HSE Management System Manual – Purchasing procedure	Immediate and lifetime impact of plant or equipment on the environment and health and safety hazards during construction, operation and maintenance	Possible	Major	High	Objective Comply with legal & HANSSEN PTY LTD requirements Target No incidents	**Purchasing Manager / Project Manager/Site Foreman** • Person responsible identify prior to purchase of plant or equipment opportunities to reduce the health, safety & environmental impact of the product and document in HANSSEN PTY LTD HSEFM039 Form –Purchase/Design Change Action Plan **Sub-contractor/Supplier** • Provide relevant information on the product such as MSDS, operator manuals, test certificates, risk assessments, logbooks	**HANSSEN PTY LTD Site Foreman & Sub-Contractor:** Conduct monthly inspection, using Health & Safety Inspection Checklist **Sub-Contractor /Supplier** Provide relevant information on the product **HANSSEN PTY LTD Site Administrator or delegate** Conduct regular audits and report findings.	High L = Very Unlikely C= Minor

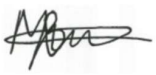
Appendix D Traffic Management Plan

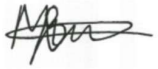
TRAFFIC PLANNING & MANAGEMENT

WORKS ON ROADS TRAFFIC MANAGEMENT PLAN

Building Construction
McGregor Road, Palmyra
43 McGregor Road Pty Ltd
Contract # N/A
March 2026 – July 2027

I, Matthew Byrne (AWTM Cert No. AUS-AWTM-24-13670-05), declare that I have designed this Traffic Management Plan following a site inspection on 6/01/2026. The Traffic Management Plan prepared is in accordance with the Main Roads Code of Practice, AGTTM and AS 1742.3

Signature:  Date: 15/01/2026

	Name / Company	Accreditation Details	Date	Signed
TMP Drawn by	Matthew Byrne *MB Traffic Planning & Management*	AUS-AWTM-24-1367-05	15/01/2026	
TMP Designed by	Matthew Byrne *MB Traffic Planning & Management*	AUS-AWTM-24-1367-05	15/01/2026	
TMP Reviewed by	Dallas Millward *MB Traffic Planning & Management*	AUS-AWTM-23-2352-04	15/01/2026	
TMP Revised by	Matthew Byrne *MB Traffic Planning & Management*	AUS-AWTM-24-1367-05	9/02/2026	
Road Authority Review by				
Road Authority Authorisation	Road authority authorisation of the implementation of traffic signs and devices is given for Traffic Management Plan No. MB1356 (Note: this can be provided by the road authority via email referencing the TMP and Rev No. – refer to Appendix G for email correspondence) Signed……Date…… Name……Position…… *(if unsigned, refer to Appendix G)*			

Revision Register

Revision Number	Revision Date	Comments	Section / Page No.	Revised By
A	15/01/2026	Initial Design	All	MB
B	09/02/2026	City of Melville Comment	Appendix F	MB

CONTENTS

GLOSSARY

AGTTM	AustRoads Guide to Temporary Traffic Management
AS	Australian Standard
AS/NZS	Australian and New Zealand Standard
AWTM	Advanced Worksite Traffic Management / Manager
BWTM	Basic Worksite Traffic Management / Manager
TC	Traffic Controller
CoP	Traffic Management for Works on Roads Code of Practice (MRWA)
MRWA	Main Roads Western Australia
WHS	Work Health and Safety
RSA	Road Safety Auditor
RTM	Roadworks Traffic Manager (accredited by MRWA)
SRSA	Senior Road Safety Auditor
TGS	Traffic Guidance Scheme
TMP	Traffic Management Plan

1. INTRODUCTION

1.1 Purpose and Scope

This Traffic Management Plan (TMP) outlines the traffic control and traffic management procedures to be implemented by the Project Manager to manage potential hazards associated with the traffic environment during the project.

The project involves the construction of a residential building along McGregor Road, Palmyra. The building construction will all occur within the property with the TMP covering site access as well as loading and unloading of trucks.

To facilitate the works, schemes have been included to cover footpath closure, site ingress/egress and single lane shuttle.

1.2 Objective and Strategies

The objectives of the Traffic Management Plan is to ensure:

- The safety of the road workers.
- All road users, including vulnerable road users, are safely guided around, through or past the work site.
- The performance of the road network is not unduly impacted and the disruption and inconvenience to all road users are minimised for the duration of the works.
- Impacts on users of the road reserve and adjacent properties and facilities are minimised.

In an effort to meet these objectives the Traffic Management Plan will incorporate the following strategies:

- Providing a sufficient number of traffic lanes to accommodate vehicle volumes.
- Ensuring delays are minimised.
- Ensuring all road users are managed including motorists, pedestrians, cyclists, people with disabilities and people using public transport.
- Ensuring work activities are carried out sequentially to minimise adverse impacts.
- Provision will be made for works personnel to enter the work area in a safe manner in accordance with safety procedures.
- All entry and exit movements to and from traffic streams must be in accordance with the requirements of safe working practices.

2. PROJECT OVERVIEW

2.1 Location

Figure 1.1 Site Location

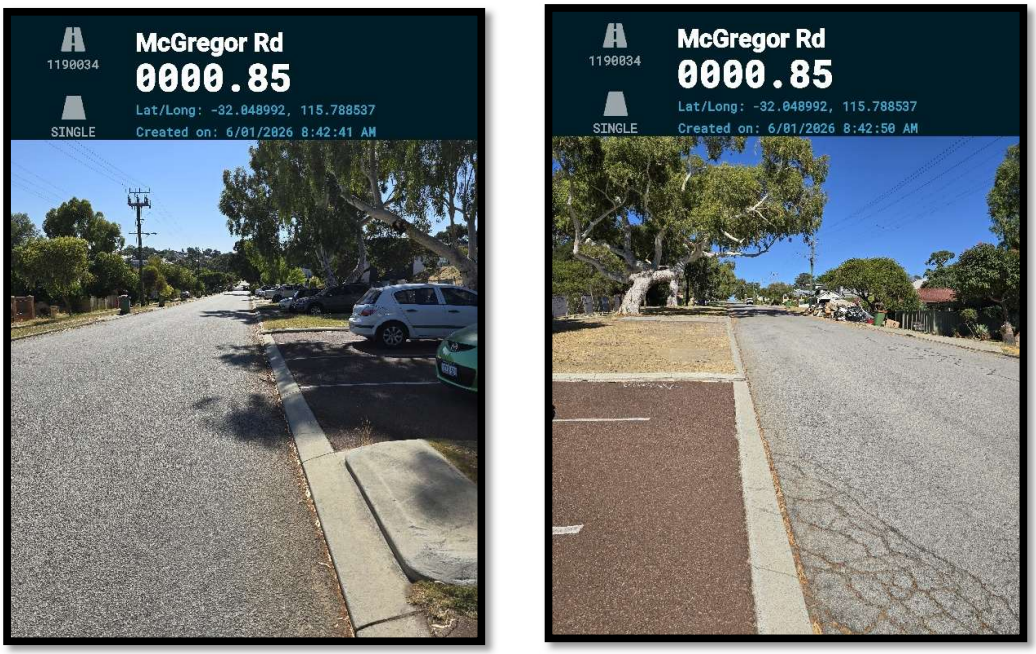


Figure 1.2 Site Visit Photo

2.2 Project Details, Site Assessment and Site Constraint /Impacts

ITEM	DESCRIPTION
Project	Building Construction
Location	47 McGregor Road, Palmyra
Road Classification, Existing Speed Limit	Access Road/ 50kph
Road Authority	City of Melville
Local Government	City of Melville
Principal	43 McGregor Road Pty Ltd
Prime Contractor	Hanssen Pty Ltd
Sub-Contractor	Various
Scope of Works	The project involves the construction of a residential building along McGregor Road, Palmyra. The building construction will all occur within the property with the TMP covering site access as well as loading and unloading of trucks.
Staging of Work / Temporary Traffic Management	All work staging will be conducted within private property. Traffic management schemes for footpath closure, site ingress/egress and loading/unloading of trucks will occur as needed throughout the project.
Project Date	01/03/2026 – 31/07/2027
Hours / Days of Work	0700hrs-1700hrs / Monday-Saturday
Duration of Work	16 Months
Other Constraints	N/A
Concurrent/adjacent Works or Projects	There were no concurrent or adjacent works or projects evident during the site visit.

2.3 Existing Traffic and Road Environment

ITEM	DESCRIPTION
Traffic Volume and Composition	No traffic volume data was available at the time of preparing this Traffic Management Plan. A 15 minute onsite count between 0845hrs and 0900hrs provided the following count: Eastbound – 7 vehicles Westbound – 9 vehicles Calculating to an hourly volume: Eastbound – 28 vehicles per hour Westbound – 36 vehicles per hour Total – 64 vehicles per hour
Existing road configuration	Two Lane - Two Way Undivided / Sealed
Existing pedestrian / cyclist facilities	There are concrete paths in the north and south verge of McGregor Road. There are no cyclist facilities.

2.4 Overview of Proposed TTM

ITEM	DESCRIPTION
Temporary Traffic Management Descriptions	The designer of this Traffic Management Plan has compared it to AS1742.3, AGTTM and Main Roads WA CoP and deemed it non-complex. To facilitate the works, schemes have been included to cover footpath closure, site ingress/egress and single lane shuttle.
Speed zone dates and times	0700hrs-1700hrs / Monday-Saturday
Lane Closures dates and times	0700hrs-1700hrs / Monday-Saturday
Road Closures dates and times	Not applicable.
Signal modifications description	Not applicable.
Proposed lane widths	Minimum 3.2m lane width during single lane shuttle, existing lane widths at all other times.
Road Safety Barrier	Not applicable.

2.5 Project Representatives

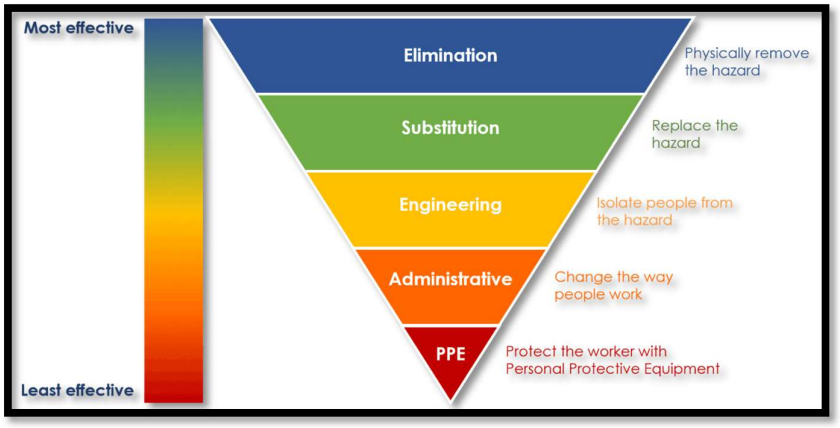
POSITION	NAME	CONTACT DETAILS
Road Authority Representative	Name TBC	City of Melville 10 Almondbury Road BOORAGOON WA 6154 P: 08 9364 0666 E: melinfo@melville.wa.gov.au
Local Government	Name TBC	City of Melville 10 Almondbury Road BOORAGOON WA 6154 P: 08 9364 0666 E: melinfo@melville.wa.gov.au
Project Manager / Prime Contractor	Name TBC	Hanssen 271 Stirling Crescent HAZELMERE WA 6055 M: TBA E: TBA
Site Supervisor/Manager	Name TBC	Hanssen 271 Stirling Crescent HAZELMERE WA 6055 M: TBA E: TBA
TMP Design	Matthew Byrne	MB Traffic Planning & Management 15/103 Victoria Street BUNBURY WA 6230 M: 0437 487 248 E: matt@mbtraffic.com.au
TMP Implementation	Name TBC	Company TBC Main Roads Traffic Management Registration No.: TBC

43 McGregor Road Pty Ltd have engaged MB Traffic Planning & Management to prepare this Traffic Management Plan and associated controls for the works.

The TMP will be implemented by a registered company as per the Main Roads WA Traffic Management Company Registration Scheme.

3. RISK MANAGEMENT

The following details the preliminary assessment of site hazards likely to be encountered, the level of risk associated with each and the control proposed. Note that the risk level is the level of assessed risk *without* the controls in place. The controls listed have been determined as being appropriate in reducing the risk to a level that is acceptable.
The hierarchy of control has been utilised to ensure that the highest practicable level of protection and safety is selected:



In evaluating the options, a key consideration is whether the option takes traffic around, through or past the worksite.

3.1 Risk Classification Tables

QUALITATIVE MEASURES OF CONSEQUENCE OR IMPACT

Level	Consequence	Description
1	Insignificant	Mid-block hourly traffic flow per lane is equal to or less than the allowable lane capacity detailed in AGTTM. No impact to the performance of the network. Affected intersection leg operates at a Level of Service (LoS) of A or B. No property damage.
2	Minor	Mid-block hourly traffic flow per lane is greater than the allowable road capacity and less than 110% of the allowable road capacity as detailed in AGTTM. Minor impact to the performance of the network. Intersection performance operates at a Level of Service (LoS) of C. Minor property damage.
3	Moderate	Midblock hourly traffic flow per lane is equal to and greater than 110% and less than 135% of allowable road capacity as detailed in AGTTM. Moderate impact to the performance of the network. Intersection performance operates at a Level of Service (LoS) of D. Moderate property damage.
4	Major	Midblock hourly traffic flow per lane is equal to and greater than 135% and less than 170% of allowable road capacity as detailed in AGTTM. Major impact to the performance of the network. Intersection performance operates at a Level of Service (LoS) of E. Major property damage.
5	Catastrophic	Midblock hourly traffic flow per lane is equal to and greater than 170% of allowable road capacity as detailed in AGTTM. Unacceptable impact to the performance of the network. Intersection performance operates at a Level of Service (LoS) of F. Total property damage.

WHS QUALITATIVE MEASURES OF CONSEQUENCE OR IMPACT

Level	Consequence	Description
1	Insignificant	No treatment required
2	Minor	First aid treatment required.
3	Moderate	Medical treatment required or Lost Time Injury
4	Major	Single fatality or major injuries or severe permanent disablement
5	Catastrophic	Multiple fatalities.

QUALITATIVE MEASURES OF LIKELIHOOD

Level	Likelihood	Description
A	Almost certain	The event or hazard: is expected to occur in most circumstances, will probably occur with a frequency in excess of 10 times per year.
B	Likely	The event or hazard: Will probably occur in most circumstances, will probably occur with a frequency of between 1 and 10 times per year.
C	Possible	The event or hazard: might occur at some time, will probably occur with a frequency of 0.1 to 1 times per year (i.e. once in 1 to 10 years).
D	Unlikely	The event or hazard: could occur at some time, will probably occur with a frequency of 0.02 to 0.1 times per year (i.e. once in 10 to 50 years).
E	Rare	The event or hazard: may occur only in exceptional circumstances, will probably occur with a frequency of less than 0.02 times per year (i.e. less than once in 50 years).

IMPORTANT NOTE: The likelihood of an event or hazard occurring must first be assessed over the duration of the activity (i.e. "period of exposure"). For risk assessment purposes the assessed likelihood must then be proportioned for a "period of exposure" of one year.

Example: An activity has a duration of 6 weeks (i.e. "period of exposure" = 6 weeks). The event or hazard being considered is assessed as likely to occur once every 20 times the activity occurs (i.e. likelihood or frequency = 1 event/20 times activity occurs = 0.05 times per activity). Assessed annual likelihood or frequency = 0.05 times per activity x 52 weeks/6 weeks = 0.4 times per year. Assessed likelihood = Possible.

QUALITATIVE RISK ANALYSIS MATRIX – RISK RATING

	CONSEQUENCE				
Likelihood	**Insignificant (1)**	**Minor (2)**	**Moderate (3)**	**Major (4)**	**Catastrophic (5)**
Almost certain (A)	Low 5	High 10	High 15	Very High 20	Very High 25
Likely (B)	Low 4	Medium 8	High 12	Very High 16	Very High 20
Possible (C)	Low 3	Low 6	Medium 9	High 12	High 15
Unlikely (D)	Low 2	Low 4	Low 6	Medium 8	High 10
Rare (E)	Low 1	Low 2	Low 3	Low 4	Medium 7

MANAGEMENT APPROACH FOR RESIDUAL RISK RATING

Residual Risk Rating	Required Treatment
Very High	Unacceptable risk. **HOLD POINT**. Work cannot proceed until risk has been reduced.
High	High priority, WHS MR and Roadworks Traffic Manager (RTM) must review the risk assessment and approve the treatment and endorse the TGS prior to its implementation.
Medium	Medium Risk, standard traffic control and work practices subject to review by accredited AWTM personnel prior to implementation.
Low	Managed in accordance with the approved management procedures and traffic control practices.

3.2 Risk Register

3.2.1 Generic Risks

Item	Risk Event	Consequence	Pre-treatment Risk			Treatment	Residual Risk			TMP/TGS Reference
			L	C	RR		L	C	RR	
1	Traffic Controller injured during set up and pack down of traffic management	Injury to Traffic Controller.	D	5	H 10	Site set up and pack down must be in accordance with company safe work method document (SWMS or similar)	E	5	M 7	4.5, 7.2
2	Fog, rain or other inclement weather affecting visibility of signage causing collision between vehicles and traffic controller or workers.	Injury to personnel.	C	4	H 12	Should inclement weather affect visibility the spacing of signs must be increased by 25%.	D	4	M 8	5.1
3	Fog, rain or other inclement weather affecting visibility of signage causing collision between vehicles and traffic controller or workers.	Property damage.	C	3	M 9	Should inclement weather affect visibility the spacing of signs must be increased by 25%.	D	3	L 6	5.1
4	Visibility issues due to the rising/setting sun due to the east/west alignment of the road causing collision between vehicles and traffic controller or workers.	Injury to personnel.	C	4	H 12	Visibility must be monitored by the team leader/crew leader. Where visibility drops below 90m works must cease and the road returned to its original condition until visibility returns to the acceptable level.	D	4	M 8	5.1.4
5	Visibility issues due to the rising/setting sun due to the east/west alignment of the road causing collision between vehicles and traffic controller or workers.	Property damage.	C	3	M 9	Visibility must be monitored by the team leader/crew leader. Where visibility drops below 90m works must cease and the road returned to its original condition until visibility returns to the acceptable level.	D	3	L 6	5.1.4

3.2.2 Site Specific Risks

Item	Risk Event	Consequence	Pre-treatment Risk			Treatment	Residual Risk			TMP/TGS Reference
			L	C	RR		L	C	RR	
6	Works obstructing the footpath causing conflict between works and pedestrians.	Injury to pedestrians.	C	4	H 12	Implement footpath closure detouring pedestrians via the surrounding network.	E	4	L 4	1.1, 2.2, 4.2.1 MB1356 -01, -02, -03
7	Slow moving vehicles entering or existing site conflicting with road users.	Injury to road user.	C	3	M 9	Implement truck symbolic signs to signify entry exit point. There is adequate line of sight from each direction.	E	3	L 3	1.1, 2.2, 7.3.5 MB1356 -02
8	Slow moving vehicles entering or existing site conflicting with road users.	Injury to operator.	C	3	M 9	Implement truck symbolic signs to signify entry exit point. There is adequate line of sight from each direction.	E	3	L 3	1.1, 2.2, 7.3.5 MB1356 -02
9	Slow moving vehicles entering or existing site conflicting with road users.	Property damage.	C	3	M 9	Implement truck symbolic signs to signify entry exit point. There is adequate line of sight from each direction.	E	3	L 3	1.1, 2.2, 7.3.5 MB1356 -02
10	Truck unable to access site due to constraints within the property. Loading and unloading conflicts with road users.	Injury to road user.	C	3	M 9	Implement single lane shuttle to provide area for the truck to park. Temporary stop traffic when loading/unloading needs to occur from the live lane.	E	3	L 3	1.1, 2.2, 4.1.9 MB1356 -03
11	Truck unable to access site due to constraints within the property. Loading and unloading conflicts with road users.	Injury to operator.	C	3	M 9	Implement single lane shuttle to provide area for the truck to park. Temporary stop traffic when loading/unloading needs to occur from the live lane.	E	3	L 3	1.1, 2.2, 4.1.9 MB1356 -03
12	Truck unable to access site due to constraints within the property. Loading and unloading conflicts with road users.	Property damage.	C	3	M 9	Implement single lane shuttle to provide area for the truck to park. Temporary stop traffic when loading/unloading needs to occur from the live lane.	E	3	L 3	1.1, 2.2, 4.1.9 MB1356 -03
13	Single lane shuttle impacting the capacity of McGregor Road leading to congestion.	Poor network performance.	C	3	M 9	A traffic flow analysis has been undertaken and the length of the shuttle flow is deemed compliant with Main Roads WA Code of Practice Table 15. Level of Service B is expected to be maintained.	E	3	L 3	4.1.2 MB1356 -03

Item	Risk Event	Consequence	Pre-treatment Risk			Treatment	Residual Risk			TMP/TGS Reference
			L	C	RR		L	C	RR	
14	Workers within 1.2m of passing traffic struck by vehicle.	Injury to worker.	C	4	H 12	Implement 40kph speed restriction and separate the work area to the trafficable lane with delineation.	E	4	L 4	4.1.3 MB1356 -03
15	Workers within 1.2m of passing traffic struck by vehicle.	Injury to road user.	C	4	H 12	Implement 40kph speed restriction and separate the work area to the trafficable lane with delineation.	E	4	L 4	4.1.3 MB1356 -03
16	Workers within 1.2m of passing traffic struck by vehicle.	Property damage.	C	4	H 12	Implement 40kph speed restriction and separate the work area to the trafficable lane with delineation.	E	4	L 4	4.1.3 MB1356 -03
17	Existing parking facilities obstructed by the works.	Poor network performance.	A	2	H 10	The roadside parking bays will be closed with delineation and inaccessible during the activity.	E	2	L 2	4.2.5 MB1356 -02, -03

4. TRAFFIC MANAGEMENT PLANNING AND ASSESSMENT

4.1 Traffic Assessment and Analysis

4.1.1 Traffic and Speed Data

No traffic volume data was available at the time of preparing this Traffic Management Plan. A 15 minute onsite count between 0845hrs and 0900hrs provided the following count:

Eastbound – 7 vehicles
Westbound – 9 vehicles

Calculating to an hourly volume:
Eastbound – 28 vehicles per hour
Westbound – 36 vehicles per hour
Total – 64 vehicles per hour

4.1.2 Traffic Flow Analysis

To ensure adequate traffic flow along McGregor Road whilst single lane shuttle is implemented, the Traffic Management schemes have been designed to comply with Table 15 from Main Roads WA Code of Practice.

Table 15 Compliance				
Road Name	Peak Volume	Length of single Lane Shuttle	Desirable Traffic Flow Volume	Compliant with CoP (Y/N)
McGregor Road	64vph	70m	<800vph	Y

4.1.3 Temporary Speed Zones

A worksite speed limit of 40kph will be implemented due to workers being on foot within 0m to 1.2m of the trafficable lanes.

After work hours the posted speed will be reinstated, the road will be left clean and free of debris and safe for road users.

4.1.4 Existing Traffic Signals

There are no existing traffic signals in the vicinity of this project.

4.1.5 Impact to Adjoining Network

There is not expected to be any impact to the adjoining road network by the Traffic Guidance Schemes that are contained within this plan.

4.1.6 End of Queue Treatment

End of queue protection treatments are not required as no stopping of traffic is proposed for this project.

4.1.7 Portable Traffic Control Devices (PTCDs)

Portable Traffic Control Devices (PTCDs) are not required for this project.

4.1.8 Speed Management

Speed management is not required for this project due to the short length of the speed restriction.

4.1.9 Excavations or Above Ground Hazards

4.1.9.1 Excavations

There are no excavations planned within the road reserve within this Traffic Management Plan.

4.1.9.2 Above Ground Hazards

Above ground hazards may be in the form of work vehicles, plant, machinery and/or materials. These hazards must be maintained within the delineated work area at all times.

4.2 Road Users

4.2.1 Pedestrians

The footpath on the southern side of McGregor Road will be impacted by the works. When required, the footpath will be closed with pedestrians detoured via the surrounding footpath network.

4.2.2 Cyclists

There are no cyclist facilities affected by the Traffic Guidance Schemes that are contained within this plan.

4.2.3 Public Transport

The proposed works is not expected to impact on public transport routes or stops.

4.2.4 Heavy and Oversized Vehicles

Heavy and oversize vehicles are not expected to impact the site.

4.2.5 Existing Parking Facilities

Parking bays on the south side of McGregor Road will need to be closed during the works. When possible, parking bays will be reopened for use by the public.

4.2.6 Access to Adjoining Properties / Business

There is not expected to be any impact to adjoining developments and/or properties by the Traffic Guidance Schemes that are contained within this plan.

4.2.7 Rail Crossings

There is no impact to rail crossings by the Traffic Guidance Schemes that are contained within this plan.

4.2.8 School Crossings

There are no school crossings affected by the Traffic Guidance Schemes that are contained within this plan.

4.2.9 Special Events and Other Works

Contact with the local government has indicated there is no other special events or other works planned that will impact these works.

4.2.10 Emergency Vehicle Access

There is not expected to be any impact to emergency vehicle through and to the work site.

4.3 Night Work Provisions

Night works are not proposed for this project.

4.4 Road Safety Barriers

Road Safety Barriers are not required for this project.

4.5 Shadow Vehicles

Shadow vehicles are not required for the works.

4.6 Consultation and Communication / Notification

4.6.1 Other Agencies

In accordance with the CoP all relevant agencies must be notified using the 'Notification of Roadworks' form attached at Appendix "A". A distribution list is provided on the bottom of the form. Other agencies must be notified as required.

4.6.2 Public

Public notification is not required for this project.

5. SITE ASSESSMENT

5.1 Provision to Address Environmental Conditions

5.1.1 Adverse Weather

Weather may adversely impact on the effectiveness of the traffic control detailed on the attached TGS's. Notwithstanding this, should adverse weather conditions be encountered during the works, the following contingency plans should be activated. Note: any adjustments to the plan must be risk assessed and approved by someone holding a WTM or AWTM accreditation. Major changes will require road authority approval.

5.1.1.1 Rain

In the event of rain, an on-site assessment must be made and sign spacing and tapers may be extended by 25% to account for increased stopping distances.

If rain occurs, Traffic Management Personnel must inspect the site and where signage and / or devices are not clearly visible, signage may need to be adjusted to improve visibility or if necessary provide additional signage and delineation. Where stopping distances are adversely affected by wet surfaces, spacing between signs may need to be adjusted to provide increased reaction time for drivers. In cases where it is determined that the rain is so heavy that the risk is considered unacceptable, all work must cease until rain has cleared. All changes must be noted in the daily diary.

5.1.1.2 Floods

Should works be affected by flooding to the extent that the worksite becomes impassable or risk is considered unacceptable, all work must cease immediately and Traffic Controllers (and other personnel if necessary) must be deployed immediately to close the site and direct traffic around the flooded area (under the direction of the project manager or traffic manager). Emergency services and the Road Authority must be notified immediately and Traffic Controllers must remain onsite until emergency services and the Road Authority personnel arrive and take control of the site.

5.1.1.3 Other adverse weather (strong winds, thunder storms, etc.)

In the event of other adverse weather conditions occurring, an AWTM accredited person must be consulted to mitigate risks for the particular weather event occurring. This may require the suspension of works if deemed necessary.

5.1.2 Sun Glare

Where sun glare is identified as adversely affecting a driver's ability to sight signage and / or traffic control devices, sign locations may need to be adjusted and additional delineation and/or traffic control devices provided to address the risk from glare. Additionally, in the event that traffic control is adversely affected by glare at sunset and sunrise, traffic controllers may need to assist in maintaining low traffic speeds. All changes are to be noted in the daily diary.

5.1.3 Fog, Dust and Smoke

Where fog, dust or smoke is identified as adversely affecting a driver's ability to sight signage and / or traffic control devices, sign locations may need to be adjusted and additional delineation and/or traffic control devices provided to address the risk. All changes are to be noted in the daily diary.

Should works be affected by fog, dust or smoke to the extent that risk is considered unacceptable, all work must cease immediately and Traffic Controllers (and other personnel if necessary) must be deployed immediately to close the site.

5.1.4 Road Geometry, Terrain, Vegetation and Structures

Road geometry, terrain, vegetation and/or structures are not expected to impact the implementation of controls within this TMP.

5.2 Existing Traffic and Adverting Signs

There are no existing traffic or advertising signage that may impact with the Traffic Guidance Schemes within this Traffic Management Plan.

6. SAFETY PLAN

6.1 Work Health and Safety

All persons and organisations undertaking these works or using the roadwork site have a duty of care under statute and common law to themselves, workers and all site users, lawfully using the site, to take all reasonable measures to prevent accident or injury.

This TMP provides details on how all road users considered likely to pass through, past, or around the worksite will be safely and efficiently managed for the full duration of the site occupancy and works.

6.2 Roles and Responsibilities

6.2.1 Responsibilities

The Project Manager has the ultimate responsibility to ensure the TMP is implemented for the prevention of injury and property damage to employees, contractors, sub-contractors, road users and all members of the public.

The Project manager will ensure all site personnel are fully aware of their responsibilities, and that Traffic Controllers are appropriately trained and accredited and that sufficient controllers are available to ensure appropriate breaks are taken.

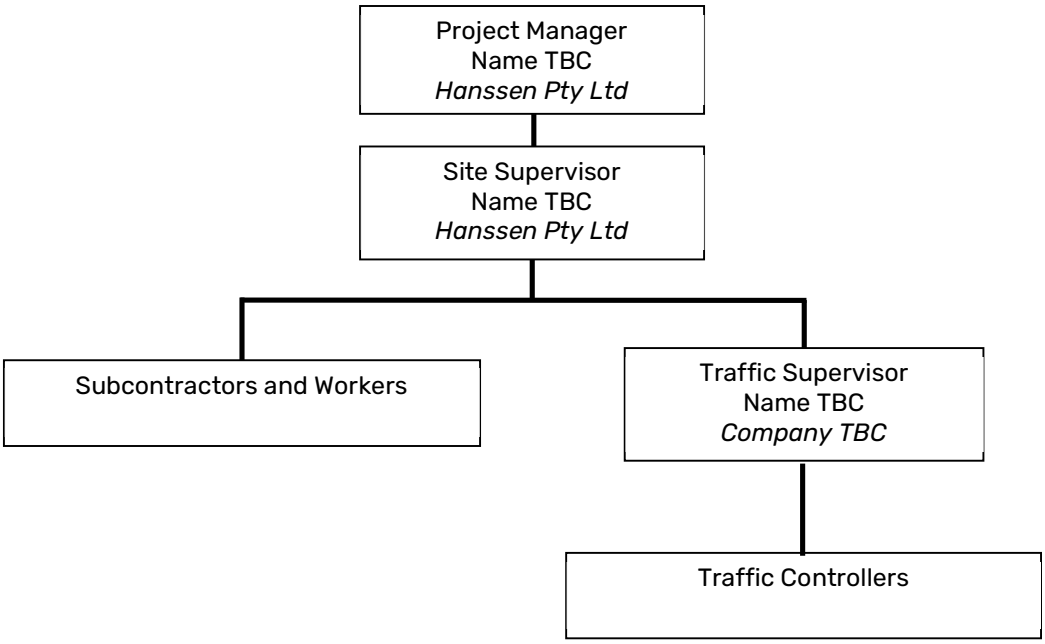
All personnel engaged in the field activities will follow the correct work practices as required by the CoP, AGTTM and AS1742.3.

All personnel will not commence or continue work until all signs, devices and barricades are in place and operational in accordance with the requirements of the TMP.

All personnel responsible for temporary traffic management must ensure that the number, type and location of signs, devices and barricades are to a standard not less than Appendix F of this plan, CoP, AGTTM and AS1742.3. Should a situation arise that is not covered by this TMP, CoP, AGTTM or AS1742.3, the Road Authority Representative must be notified.

6.2.2 Roles

The following diagram outlines the responsibility hierarchy of this contact.



6.2.2.1 Project Manager

The project manager must:

- Ensure all traffic control measures of this TMP are placed and maintained in accordance with this plan and the relevant Acts, Codes, Standards and Guidelines
- Ensure suitable communication and consultation with the affected stakeholders is maintained at all times
- Ensure inspections of the temporary traffic management are undertaken in accordance with the TMP, and results recorded. Any variations must be detailed together with reasons
- Review feedback from field inspections, worksite personnel and members of the public, and take action to amend the traffic control measures as appropriate following approval from the Road Authority's Representative
- Arrange and/or undertake any necessary audits and incident investigations

6.2.2.2 Site Supervisor

The site supervisor is responsible for overseeing the day-to-day activities, and is therefore responsible for the practical application of the TMP, and must:

- Instruct workers on the relevant safety standards, including the correct wearing of high visibility safety vests
- Ensure traffic control measures are implemented and maintained in accordance with the TMP
- Work with the Traffic Management Supervisor to ensure the correct TGS is selected for the work activity
- Undertake and submit the required inspection and evaluation reports to management
- Render assistance to road users and stakeholders when incidences arising out of the works affect the network performance or the safety of road users and workers
- Take appropriate action to correct unsafe conditions, including any necessary modifications to the TMP.

6.2.2.3 Traffic Management Supervisor

The Traffic Management Supervisor is responsible for the practical application of the Traffic Management devices and workers in accordance with the appropriate Traffic Guidance Schemes, AGTTM, Main Roads Code of Practice and AS 1742.3.

- At least one person accredited in Advanced Worksite Traffic Management must be available to attend the site at short notice at all times to manage variations, contingencies and emergencies, and to take overall responsibility for traffic management.

The Traffic Management Supervisor is responsible for the following:

- Work with the Site Supervisor to ensure the correct TGS is selected for the work activity
- Prior to any implementation activities on site the Traffic Management Supervisor must execute all actions outlined in the Austroads Guide to Temporary Traffic Management Part 6, Field Staff – Implementation and Operations.
- Ensuring the Traffic Management devices are set out in accordance with the Traffic Guidance Schemes, AGTTM and Main Roads Code of Practice.
- Ensure that the quality and quantity of Traffic Management devices matches the relevant Traffic Guidance Scheme, Main Roads Code of Practice and AS 1742.3.
- Have all relevant qualifications, including Worksite Traffic Management for complex Traffic Management arrangements on State Roads.
- Must be on site to manage adjustments, modifications, contingencies and emergencies and take overall responsibility for the implemented Traffic Management setups.
- Where changes are required to complex Traffic Management arrangements, the Traffic Management Supervisor must risk assess those changes and record variations in the Daily Diary. Where an RTM is not consulted, all changes must be within the original scope and objectives of the proposed Traffic Guidance Schemes. All other changes must be endorsed by the RTM and must be authorised by the Road Infrastructure Manager.
- Ensure there is a copy of the approved Traffic Management Plan, including all associated Traffic Guidance Schemes is available on site at all times.

6.2.2.4 Traffic Management Workers

- At least one person on site must be accredited in Basic Worksite Traffic Management, and must have the responsibility of ensuring the traffic management devices are set out in accordance with the TMP.

6.2.2.5 Traffic Controllers

Traffic Controllers must be used to control road users to avoid conflict with plant, workers, traffic and pedestrians, and to stop and direct traffic in emergency situations.
Traffic Controllers must:

- Operate in accordance with AGTTM Part 7: Traffic Controllers
- Be accredited in Basic Worksite Traffic Management
- Hold a current Traffic Controller's accreditation
- Be relieved from their duty after not more than 2 hours for a period of rest or "other duties" of at least 15 minutes as required by AGTTM and/or OS&H Regulations.

6.2.2.6 Workers and Subcontractors

Workers and Subcontractors must

- Correctly wear high visibility vests, in addition to other protective equipment required (e.g. footwear, eye protection, helmet sun protection etc.), at all times whilst on the worksite
- Comply with the requirements of the TMP and ensure no activity is undertaken that will endanger the safety of other workers or the general public
- Enter and leave the site by approved routes and in accordance with safe work practices

6.3 Personal Protective Equipment (PPE)

All personnel entering the work site must correctly wear high visibility vests to AS/NZS 4602, in addition to other protective equipment required on a site-by-site basis (e.g. protective footwear, eye protection, helmet, sun protection, respiratory devices etc.) at all times whilst on the worksite.

6.4 Plant and Equipment

All plant and equipment at the workplace must meet statutory requirements and have the required registration, licences or certification where required. All mobile equipment must be fitted with suitable reversing alarms. All mobile plant and vehicles must be fitted with a pair of rotating flashing yellow lamps in accordance with AS1742.3 clause 4.14.1. All workers will be made aware of the safe work practice at the time of the site induction.

6.5 Trip Hazards

The worksite and its immediate surroundings must be suitably protected and free of hazards, which could result in tripping by cyclists or pedestrians. Hazards, which cannot be removed, must be suitably protected to prevent injury to road users, including those with sight impairment. Where level differences are significant, suitable barriers, which preclude pedestrian access must be used.

Where works extend beyond daylight hours and adjacent lighting is insufficient to illuminate hazards to cyclists or pedestrians, appropriate temporary lighting must be installed.
The worksite must be kept tidy to reduce the risk to workers.

7. IMPLEMENTATION

7.1 Traffic Guidance Schemes

The Traffic Guidance Scheme (TGS) outlined in Appendix F and listed below have been provided for the following stages to demonstrate the type of controls that will be implemented throughout the term of the contract. All sign and device requirements are shown on each TGS. Should the use of additional (not shown on the TGS or listing of devices) or reduced number of devices be required due to unforeseen needs, they must be recorded within the Daily Diary as a variation to the TMP, following prior approval.

Traffic Management Stages	TGS Number and version	Details
1.1	MB1356-01 Rev A	Pedestrian Management
1.2	MB1356-02 Rev A	Site Ingress/Egress
1.3	MB1356-03 Rev A	Truck Loading/Unloading

7.2 Sequence and Staging

Before work commences, signs and devices at approaches to the work area must be erected in accordance with the adopted TGS and AGTTM Part 6.

7.2.1 TGS Installation

7.2.1.1 Typical Installation Principals

Installation is typically carried out applying one of the processes in accordance with AGTTM Part 5 as “short term – low impact works” to protect the TTM staff. The examples in this section are based on limiting high risk manoeuvrers during installation including U-Turns and loops exposing workers to live traffic without protection.

Fundamental principles that should be complied with to ensure safety during this work activity are that:

- travel should only be in a forward direction on any road
- the TTM vehicle may be used as added protection considering the:
- availability of safe park up area(s) near the signage placement location
- line of sight to approaching vehicles
- visibility of the worker and TTM vehicle to approaching vehicles
- location of signage/devices on vehicle which need to be accessed
- worker access to vehicle (e.g. not through crush zones)
- available space on road shoulder or median
- geometry/terrain of shoulder or median
- distance between vehicle and travel path / shoulder drop off
- TMI proximity to ‘expected travel path while traversing between vehicle and signage location
- likely area in which the vehicle may move if impacted
- availability of ‘gaps in traffic’ or lookout
- turn around procedures must be conducted in a safe and legal manner
- TMI must face the traffic when placing devices
- all workers must know their escape route at all times
- the vehicle mounted warning device must be operating and the hazard/arrow board used as required
- all workers must wear correct PPE
- a look out person/spotter must be used for all activities where required in accordance with AGTTM Part 5
- full co-ordination of any ITS infrastructure which may assist the TGS installation
- the locations and types of devices are recorded in the diary
- the TGS is implemented as approved and a copy is available on site.

If it is considered too dangerous due to speed or volume to install the TGS using the protections defined in AGTTM Part 5, then consideration needs to be given to adopting a mobile convoy (refer AGTTM Part 4) or other controls e.g. manual traffic control to hold traffic during installation under its own TGS (refer AGTTM Part 3). A different installation sequence may need to be adopted to address any site-specific circumstances and can be approved by TMD or other authorised person.

7.2.1.2 Installation Process

The general procedure for setting up a site is to:

1. locate the work area using GPS, landmarks, side streets, chainage
2. install devices as outlined in the TGS for side streets first
3. install devices as outlined in the TGS for the non-working lane (un-affected direction)
4. install devices as outlined in the TGS for the working lane (affected direction) to complete installation
5. conduct a drive through inspection after all devices are in place and before work commences

All sign spacings and taper lengths will be noted on the TGS and should be in accordance with AGTTM Part 3.

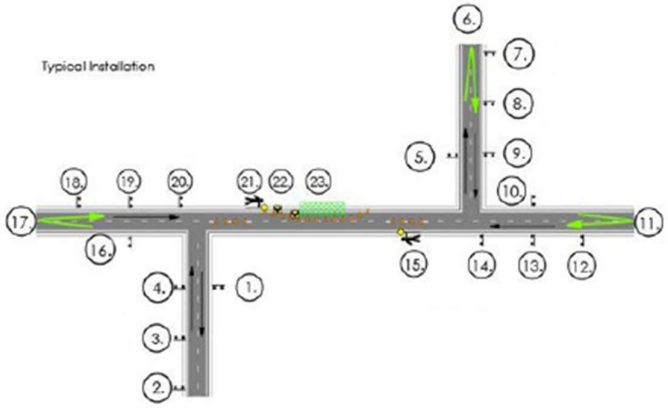
7.2.1.3 Installation Sequence

6.4.3 Two-way road - lane closure with side roads

Determine points of reference (e.g. beginning and end of work area, location of first cone in taper, location of TCs). The order of installation is then as follows and as depicted in Figure 6.3.

Task	Description	Installation Sequence
a.	Side road signage installed on side road(s) on approach to the work area in the affected direction	1 to 4
b.	Other side road(s) in order along the road to the end of the TTM in affected direction	5 to 9
c.	The 'termination signs/speed reinstatement' on the 'works side' of the road is placed as the first sign when initially leaving work area.	10
	Then use the existing road network to turn where safe to do so	11
d.	Non-works approach - place signs (advance warning to termination) including the four cones on centreline of the road on the approach to the TC position.	12 to 16
	Then use the existing road network to turn where safe to do so	17
e.	Works approach - place signs (advanced signs to taper) and TC including the four cones on centreline of the road on the approach to the TC position.	18 to 21
f.	The TCs should briefly stop traffic in both directions (while the taper and delineation are deployed)	-
g.	Taper and lane closure delineation to be placed in the direction of the traffic flow including additional signs (repeater signs or 40km/h at end of taper) if required.	22 to 23
h.	Drive through the site to inspect installation is suitable for traffic.	-

Figure 6.3: Traffic control with side streets – typical installation sequence



In this scenario all sign checks are performed, and breaks facilitated when an additional TC is provided.

7.2.2 TGS Removal

7.2.2.1 Typical Removal Principles

Removal is carried out applying one of the short term low impact provisions in accordance with AGTTM Part 5. The processes described in this section are based on limiting high risk manoeuvrers during removal of the TGS including U-Turns and loops exposing workers to live traffic without protection.

Fundamental principles that should be complied with to ensure safety during this work activity are that:

- travel should only be in a forward direction on any road
- recovery of devices must be done in the reverse order using the same work method as for setting out
- the TTM vehicle may be used as added protection considering the:
- availability of safe park up areas near the signage placement location
- line of sight to approaching vehicles
- visibility of the worker and TTM vehicle to approaching vehicles
- location of signage/devices on vehicle which need to be accessed
- worker access to vehicle (e.g. not through crush zones)
- available space on road shoulder or median
- geometry/terrain of shoulder or median
- distance between vehicle and travel path / shoulder drop off
- TMI proximity to expected travel path while traversing between vehicle and signage location
- likely area in which the vehicle may move if impacted
- availability of 'gaps in traffic' or lookout
- turn around procedures must be conducted in a safe and legal manner.
- TMI must face the traffic when removing devices
- all workers must know their escape route at all times
- the vehicle mounted warning device must be operating and the hazard/arrow board used as required
- all workers must wear correct PPE
- a look out person/spotter must be used for all activities where required in accordance with AGTTM Part 5
- full co-ordination of any ITS infrastructure which may assist the TGS removal
- the removal of the TTM signs and devices is recorded in the diary/sign register
- conduct a final drive through of the site to ensure all devices are removed and all permanent signs are reinstated or uncovered.

If it is considered too dangerous due to speed or volume, then consideration needs to be given to adopting a mobile convoy (refer to AGTTM Part 4) or other controls e.g. traffic control to hold traffic during removal under its own TGS. A different sequence may need to be adopted to address any site-specific circumstances and can be approved by TMD.

7.2.2.2 Removal Process

The general procedure for removing a site is the:

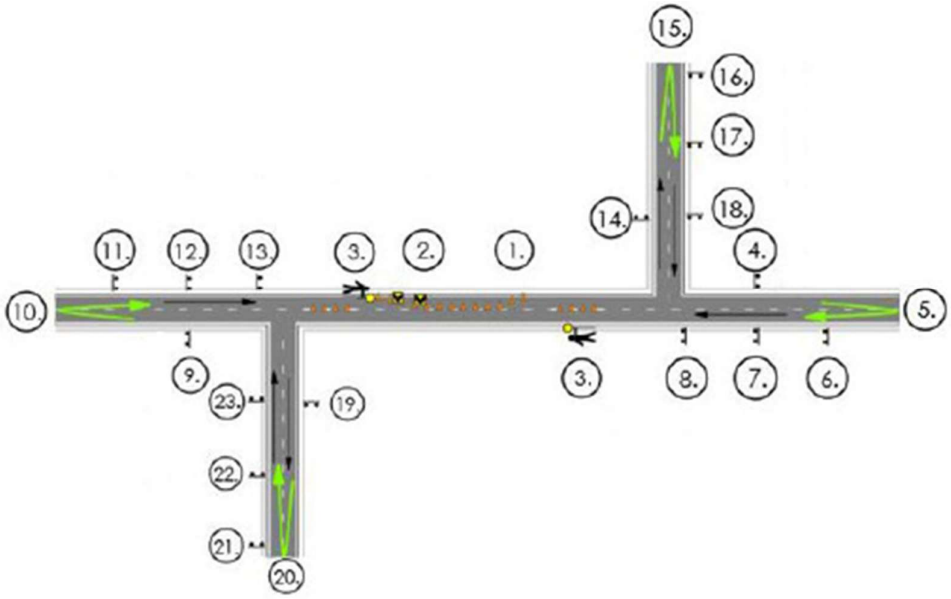
1. work area (devices in reverse order)
2. affected side of roadway (signage in direction of travel)
3. non-affected side of roadway (signage and devices in direction of travel)
4. side roads (closure devices then signage in direction of travel)
5. detours (in direction of travel).

7.2.2.3 Removal Sequence

8.4.3 Two-way road – lane closure with side road intersections

Task	Description	Removal Sequence
a.	TCs holds road traffic in both directions on stop	
b.	Lane closure removed, from termination area to taper, including all signs and devices within work area	1
c.	Taper removed, from center of road to edge of road	2
d.	TC operation finishes with road now open in both directions and four cones on the centerline of the road at the TC stations are removed	3
e.	Pick up signs in a single loop of work site.	4 to 23

Figure 8.3: Two-way road – lane closure with side road intersections – typical removal sequence



7.3 Traffic Control Devices

7.3.1 Sign Requirements

All signs used must conform to the designs and dimensions as shown in Australian Standard AS 1742.3, AGTTM and the CoP.

Prior to installation, all signs and devices must be checked by the Site Supervisor or a suitably qualified person to ensure that they are in good condition and meet the following requirements:-

- Mechanical condition - Items that are bent, broken or have surface damage must not be used.
- Cleanliness - Items should be free from accumulated dirt, road grime or other contamination.
- Colour of fluorescent signs - Fluorescent signs whose colour has faded to a point where they have lost their daylight impact must be replaced.
- Retroreflectivity - Signs used for night-time or in low light conditions whose retroreflectivity is degraded either from long use or surface damage and does not meet the requirements of AS 1906 must be replaced.
- Battery operated devices - must be checked for lamp operation and battery condition.

Where signs do not conform either to the requirements of AS 1742.3 or would fail to pass any of the above checks, they must be replaced on notice.

Signs and devices must be positioned and erected in accordance with the locations and spacing's shown on the drawings. All signs must be positioned and erected such that:

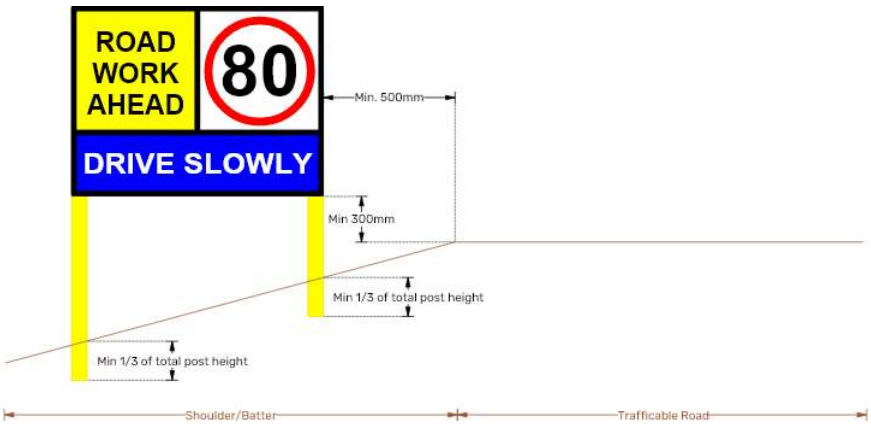
- They are properly displayed and securely mounted;

- They are within the driver's line of sight;
- They cannot be obscured from view;
- They do not obscure other devices from the driver's line of sight;
- They do not become a possible hazard to workers or vehicles; and
- They do not deflect traffic into an undesirable path.

Signs and devices that are erected before they are required must be covered by a suitable opaque material. The cover must be removed immediately prior to the commencement of work.
Where there is a potential for conflict of information between existing signage and temporary signage erected for the purpose of traffic control, the existing signs must be covered. The material covering the sign must ensure that the sign cannot be seen under all conditions i.e. day, night and wet weather. Care will be taken to ensure existing signs are not damaged by the covering material or by adhesive tape.

7.3.1.1 Securing Signs and Devices

Signs required at the one location for more than 14 days must be mounted in a semi-permanent fashion. Semi-Permanent refers to the mounting of temporary signage onto frangible post/s. The sign size and construction as well as the positioning and height are required to be in line with AS1742.3 and Main Roads WA Code of Practice for Works on Roads.



Signs not mounted on semi-permanent posts (for periods of less than 14 days) must be secured by the use of sandbags or other weights, the minimum number of which is listed below:

Permanent Speed Limit	Clearance of sign to travelled path	Minimum number of 10kg sandbags
60kph or less	Any	2

7.3.2 Tolerances on positioning of signs and devices

Where a specific distance for the longitudinal positioning of signs or devices with respect to other items or features is stated, for the spacing of delineating devices or for the length of tapers or markings, the following tolerances may be applied:
(a) Positioning of signs, length of tapers or markings:
(i) Minimum, 10% less than the distances or lengths given.
(ii) Maximum, 25% more than the distances or lengths given.
(b) Spacing of delineating devices:
(i) Maximum, 10% more than the spacing shown.
(ii) No minimum.

These tolerances must not apply where a distance, length or spacing is already stated as a maximum, a minimum or a range.

7.3.3 Flashing Arrow Signs

Flashing arrow signs are not required.

7.3.4 Delineation and Edge Clearance

Cones must be used for delineation unless other treatment is specified in the Traffic Management Plan or on the Traffic Guidance Schemes. All cones must be at least 700 millimetres in height and constructed from fluorescent orange or red material that is resilient to impact and will not damage vehicles when hit at low speed. Cones will be fitted with suitable white retro-reflective tape placed in accordance with AS 1742.3.

Cones must be designed to be stable under reasonably expected wind conditions and air turbulence from passing traffic.

The base of the cones will be secured so that they are not dislodged by traffic. Cones will be inspected at intervals necessary to ensure any misalignment or displacement is identified and corrected prior to this causing disruption to traffic.

The clearance between delineation and the edge of the nearest traffic lane (measured from the traffic-side edge of the delineating device or barricade) shall comply with AGTTM Pt 3 Table 4.1 requirements:

Speed (km/h)	Distance (m)
For traffic cones, bollards, longitudinal channelizing barricades or any other delineation device	
≤ 65	0.3 m

7.3.5 Site Access for Work Vehicles

Construction and/or traffic management vehicles entering and exiting the traffic stream must be mindful of the conditions that may affect the safety of these movements.

All entry and exit movements will be in accordance with the Road Traffic Code and must be undertaken in the following manner:
Vehicles must:

- Decelerate slowly and signal their intention by indicator to leave the traffic stream;
- Activate the vehicle's rotating yellow lamp, where fitted, once a speed of 20 km/h. has been reached and at least 50m prior to the exit location.
- Switch on the vehicle hazard lights once the vehicle is stationary.
- Where risks associated with unassisted exit or entry to or from the traffic stream are high, Traffic Controllers should be used to assist entry and exit movements.

Vehicles fitted with rotating amber lamps must have the vehicle's rotating lamp activated prior to entering the traffic stream and must undertake the following.

- Switch off the vehicle hazard lights;
- Indicate intention to enter the traffic stream using direction indicators;
- Ensure there is a suitable gap from oncoming traffic to allow for a safe entry manoeuvre; and,
- Turn off the rotating yellow lamp(s) once a speed of 40 km/h is reached.

Entry and exit manoeuvres must be avoided in close proximity to intersections. Work personnel must not cross traffic streams on foot unless absolutely necessary.

7.3.6 Communicating TMP Requirements

The BWTM accredited person in charge of implementing the TMP must communicate its requirements to the personnel on ground. An approved copy of this TMP must be provided to the Project Manager and/or Site Supervisor prior to implementation.

8. EMERGENCY ARRANGEMENTS AND CONTINGENCIES

8.1 Traffic Incident Procedures

In the event of an incident or accident, whether or not involving traffic or road users, all work must cease, and traffic must be stopped as necessary to avoid further deterioration of the situation. First Aid must be administered as necessary, and medical assistance must be called for if required.

Road plant within the work area that may impact on any services requiring access to a crash site will be cleared from the area quickly as necessary.

8.1.1 Serious Injury or Fatality

In the case of serious injury or fatality occurring within the traffic management site all work must cease immediately, machinery and vehicles turned off and the area cleared of personnel as soon as possible. Traffic Controllers (and other personnel if necessary) must be deployed immediately to ensure no traffic or other road users approach the area.

An Ambulance and Police must be called on telephone number 000 where life threatening injuries are apparent.

All road workers and traffic management personnel must preserve the scene leaving everything in situ, until direction is given by Police or WorkSafe.

A site specific detour route and/or road closure point will be determined, signed and controlled by traffic management personnel and advised to Police, who will take charge of the site upon arrival. Detour routes will be determined so as to cater for all types of vehicles required to use them. An example of how to manage an emergency can be found in Section 5 of AGTTM Part 10.
All site personnel must be briefed on control procedures covering incidents and crashes that result in serious injury or fatalities.

8.1.2 Minor Incident or Vehicle Break Down within Site

Broken down vehicles and vehicles involved in minor non-injury crashes must be temporarily moved to the verge as soon as possible after details of the crash locations have been gathered and noted. Where necessary to maintain traffic flow, vehicles must be temporarily moved into the closed section of the work area behind the cones, providing there is no risk to vehicles and their occupants or workers. Suitable recovery systems must be used to facilitate prompt removal of broken down or crashed vehicles. Assistance must be rendered to ensure the impact of the incident on the network is minimised.

Any traffic crash resulting in non-life threatening injury must be reported to the WA Police Service on 131 444.

Details of all incidents and accidents must be reported to the Site Supervisor and Project Manager using the incident report form at Appendix “C” (or similar).

8.2 Emergency Services

Special provision for emergency services is not required for this project.

8.3 Dangerous Goods

Should any incident arise involving vehicles transporting dangerous goods, all work must cease immediately, machinery and vehicles turned off and the area cleared of personnel as soon as possible. Traffic Controllers (and other personnel if necessary) must be deployed immediately to ensure no traffic or other road users approach the area.

Emergency services must be notified of the proposed works nature, location, date and times as well as contact details for the site supervisor. All site personnel must be briefed on evacuation and control procedures.

8.4 Damage to Services

In the event that gas services are damaged, all work must cease immediately, machinery and vehicles turned off and the area cleared of personnel as soon as possible. Traffic Controllers (and other personnel if necessary) must be deployed immediately to ensure no traffic or other road users approach the area. The Police Service and relevant supply authority must be called immediately. Damage to any other services must be treated in a similar manner except machinery may remain operational and access may be maintained where it is safe to do so.

All site personnel must be briefed on evacuation and control procedures.

8.5 Failure of Services

8.5.1 Failure of Traffic Signals

Not applicable.

8.5.2 Failure of Street Lighting

In the event that street lighting is damaged and fails to operate or operates incorrectly, Traffic Controllers (and other personnel if necessary with appropriate temporary lighting) must be deployed immediately if the lighting failure adversely affects road user safety to control traffic movements as required. Western Power must be notified immediately.

8.5.3 Failure of Power

In the event that power infrastructure is damaged and poses a risk through live current, Traffic Controllers (and other personnel if necessary) must be deployed immediately to secure the site and prevent entry to the area affected by live power. Western Power must be notified immediately (phone 13 13 51).

8.6 Emergency Contacts

In the event of an emergency the following relevant authorities must be contacted and advised of the nature of works, location, type of emergency and contact details for the site supervisor.

Emergency Service	Phone (Emergency)
WA Police Service	**000**
St. John Ambulance	**000**
DFES	**000**
Power	**13 13 51**
Gas	**13 13 52**

9. MONITORING AND MEASUREMENT

9.1 Daily Inspections

Prior to works commencing the Site Supervisor must communicate the Traffic Management Plan to all key stakeholders and affected parties.

On completion of setting out the traffic control measures, the site is to be monitored for a suitable period of time. If traffic speeds on the approaches to the work site are assessed as being above the temporary posted speed zone for the work site, the Site Supervisor is to initiate action to modify the approach signage and tapers in accordance with the requirements of AGTTM/CoP. All such actions are to be recorded in the Daily Diary. Should road users be observed to continue to travel in excess of the posted speed limit, the police may be requested to attend the site to enforce the temporary posted speed limit.

The Advanced Worksite Traffic Management accredited supervisory person at the worksite may conditionally approve changes made to a complex traffic management plan subject to review and endorsement of the change by an RTM as soon as practicably possible.

The Traffic Management Contractor must ensure that all temporary signs, devices and controls are maintained at all times. To achieve this, procedures in line with the requirements outlined in AGTTM Part 6 will be instituted. The monitoring program must incorporate inspections:

- Before the start of work activities on site,
- During the hours of work,
- Closing down at the end of the shift period, and
- After hours.

A daily record of the inspections must be kept indicating

- When traffic controls where erected,
- When changes to controls occurred and why the changes were undertaken,
- Any significant incidents or observations associated with the traffic controls and their impacts on road users or adjacent properties.

The Traffic Management Contractor must ensure that personnel are assigned to monitor the traffic control scheme. Inspections must at least satisfy the following requirements.

9.1.1 Before works start

- Confirm TMP and TGS are suitable for the day's activities;
- Inspect all signs and devices to ensure they are undamaged, clean and comply with the requirements depicted on the TGS;
- All lamps should be checked and cleaned as necessary;
- After any adjustments have been made to the signs and devices, conduct a drive through inspection to confirm effectiveness.

9.1.2 During work hours

- Designate and ensure that appropriate work personnel drive through the site periodically to inspect all signs and devices and ensure they are undamaged and comply with the requirements depicted on the Traffic Guidance Schemes;
- Conduct on the spot maintenance/repairs as required;
- Attend to minor problems as they occur;
- When traffic controllers are holding and releasing traffic, ensure they remain in place at all times. Relieve controllers as necessary to ensure attentiveness is retained;
- During breaks or changes in work activities remove or cover any signs that do not apply (e.g. PREPARE TO STOP, Workers symbolic);
- Re position signs or required by work processes throughout the shift and keep records of any changes.

9.1.3 Closing down each day

- Conduct a pre-close down inspection, allowing time for any appropriate maintenance works;
- Remove any signage;

- Remove any delineation;
- Drive through site and confirm all signs and devices are removed;
- Record details of inspection and any changes made to layout.

9.1.4 After hours

- Not applicable.

9.2 TMP Audits and Inspections

A compliance audit will not be mandatory to be carried out. Should an audit be carried out it will be in accordance with Main Roads Specifications and must be conducted using the 'Compliance Audit Checklist for Traffic Management for Works on Roads'.

9.3 Records

A daily diary recording all inspections including variations to the approved TMP must be kept using the Daily Diary.

The Traffic Supervisor is to record all inspections made on a daily basis and at those times prescribed by the Traffic Management Implementation Standards. Upon completion of each day the Traffic Supervisor must provide copies of the daily diary record to the Project Manager.

The Traffic Supervisor is to record all variations made to the approved Traffic Management Plan on a daily basis and indicate clearly the nature of the variations and the reason for the variations. Upon completion of each day the Traffic Supervisor must provide copies of the variation record to the Project Manager.

9.4 Public Feedback

Public feedback must be provided to 49 McGregor Road Pty Ltd who will record the feedback and, at their discretion distribute any positive feedback to those involved or, carry out any actions on negative feedback to ensure the issue is not repeated on future projects.

10. MANAGEMENT REVIEW AND APPROVALS

10.1 TMP Review and Improvement

A review of the effectiveness of the TMP will be undertaken by the Project Manager and Traffic Management Contractor as part of the close-out procedure.

10.2 Variations

Where the TMP needs amending, e.g. due to a change in the scope of works or safety concerns, an adjusted TMP will be submitted for approval to the Road Authority.

Minor on-site adjustments or modifications, if required, must generally only be made following approval and recorded in the daily diary. In emergency situations, on-site adjustments or modifications must be made and recorded in the daily diary, and the Project Manager notified as soon as practicable.

There are no departures from the requirements of the Traffic Management for Works on Roads Code of Practice in this Traffic Management Plan.

10.3 Approvals, Authorisations and Permits

Before works commence it is necessary to seek approval from the following:

- Local Government Authority – City of Melville

APPENDIX A – NOTIFICATION OF ROADWORKS

NOTIFICATION OF ROADWORKS

TMP reference	MB1356	Communication plan sent to Main Roads	Yes ☐	No ☐	N/A ☒

Anticipated start date:	01/03/2026	Anticipated finish date:	31/07/2027	
Daily work hours:	0700hrs-1700hrs	Is weekend work applicable?:	Yes ☒	No ☒
Location of works (Road/Street, Suburb):	49 McGregor Road, Palmyra			
Description of works:	Building Construction			
Description of traffic management arrangements:	Pedestrian Management – Footpath Closure south side of McGregor Road Site Ingress/Egress – Warning signage either side of site gate Single Lane Shuttle – Traffic Control for loading and unloading deliveries			
Posted Speed Limit:	50kph	Worksite speed limit:	40kph	After hours speed limit: N/A

What is the anticipated effect on traffic flows?:	Minimal			Will there be restricted width for oversize escorted vehicles?:	Yes ☐	No ☐	N/A ☒
Are lanes closed at signals?:	Yes ☐	No ☐	N/A ☒	Are signal loops or hardware affected?:	Yes ☐	No ☐	N/A ☒
Will signal phases need time changes?	Yes ☐	No ☐	N/A ☒	Will signals need to revert automatically?:	Yes ☐	No ☐	N/A ☒
Date of signal 'black out':	N/A			Times of signal 'black out':	N/A		
Will Police attendance be required?:	Yes ☐	No ☒		Dates for Police attendance :	N/A		
Are bridges located in area of works, (inc detours)?:	Yes ☐	No ☒		Will changes to traffic flows/composition occur on bridges?:	Yes ☐	No ☒	
Are the works located within a School Zone?:	Yes ☐	No ☒		Is there a children's crossing near the works?:	Yes ☐	No ☒	

Road Authority:	City of Melville				
Postal Address:	10 Almondbury Road BOORAGOON WA 6154				
Telephone:	08 9364 0666	Email:	melinfo@melville.wa.gov.au	Facsimile:	N/A
Contact:	TBC				
Telephone:	TBC	Email:	TBC	Mobile:	TBC

Construction Contractor:	Hanssen				
Postal Address:	271 Stirling Crescent HAZELMERE WA 6055				
Telephone:	08 6218 3800	Email:	TBA	Facsimile:	N/A
Contact:	TBC				
Telephone:	TBC	Email:	TBC	Mobile:	TBC
After hours contact:	TBC	Telephone:	N/A	Mobile:	TBC

Traffic Management Contractor:	TBC				
Postal Address:	TBC				
Telephone:	TBC	Email:	TBC	Facsimile:	N/A
Contact:	TBC				
Telephone:	TBC	Email:	TBC	Mobile:	TBC
After hours contact:	TBC	Telephone:	TBC	Mobile:	TBC

Distribution List	Email/Website
WA Police State Traffic Coordination	State.Traffic.Intelligence.Planning.&.Co-ordination.Unit.SMAIL@police.wa.gov.au
Fire & Emergency Services	dfes@dfes.wa.gov.au
Local Government	melinfo@melville.wa.gov.au

APPENDIX B – VARIATION TO STANDARDS

Variation of Standard, AGTTM or MRWA CoP is not required for this project

APPENDIX C – RECORD FORMS

Traffic Management Daily Diary (Dec 2024)

Location: _____ **Client:** _____ **Date:** _____
TMP No: _____ **TGS No:** _____ **Weather Conditions:** _____ **Diary Sheet:** ____ **of** ____
Start Time at Depot: _____ **Time Arrive Onsite:** _____ **Commencement of Site Setup:** _____ **Site Setup and Operational:** _____
Site Pulled Down at: _____ **Time Aftercare signs setup:** _____ **TGS No:** _____ **Time left site:** _____ **Finish time at Depot:** _____
☐ Day Works **☐ Night Works** **☐ Emergency Response** **Site Setup as per TGS ☐ Yes ☐ No (if not comment on next page)**
☐ Attendance at Pre-Start Meeting **Did an incident occur (if yes complete incident report form) ☐ Yes ☐ No**
I confirm that the above times of 'setup' and 'pulldown' of traffic management signs and devices are a true and correct record
Name (Site Supervisor): _____ Signed: _____

Drive Through Checks (Checks must be conducted at least every 2 hours)
Time of check entered. Rule off and leave blank if the check does not apply to the site. Make a note of any issues on the next page.

Traffic Management Site Checks	1	2	3	4	5	6	7	8	9	10
Time										
Drive Through Video Recording conducted as per Main Roads Requirements										
Are signs upright, clean, visible, level & stable										
Are taper lengths correct										
Are speed limit signs correct and doubled up										
Are sign spacings correct										
Are cone/bollard alignments straight & spaced correctly										
Are devices operating correctly										
Are pedestrians, cyclists and other vulnerable road users catered for										
Are lane widths adequate										
Are vehicle queue lengths acceptable										
Is road surface condition adequate										
Is the work area clearly defined?										
Are the travel paths for both directions of traffic clearly defined? Is the work area appropriately separated from passing traffic? Check the transition at the interface of the modified alignment.										
Are centre lines/lane lines/edge lines clear and unambiguous?										
Are sight and stopping distances adequate at works, at intersections and driveways?										
Are traffic lanes clearly delineated?										
Are lighting for night-time controls operating correcting?										
Have other risks associated with traffic management at night been catered for, e.g. placement of lighting towers										

No. of TTM Vehicles Onsite: _____ **No. of TTM Personnel Onsite:** _____

TTM Personnel Names & Accreditations:

	Accreditation Details (tick)					**Time of Break from Stop/Slow** (Traffic controllers must have a 15 minute break every two hours of constant stop/slow operation)							
Name	**TC**	**BWTM**	**WTM**	**AWTM**	**OTMA**	On	Off	On	Off	On	Off	On	Off
						:	:	:	:	:	:	:	:
						:	:	:	:	:	:	:	:
						:	:	:	:	:	:	:	:
						:	:	:	:	:	:	:	:
						:	:	:	:	:	:	:	:
						:	:	:	:	:	:	:	:

Additional Comments _____

I confirm that the details contained herein are true and correct

Name: (TTM Leader): _____ Signed: _____

TRAFFIC INCIDENT REPORTING FORM

Region: Contract No.:	Incident Report No.: Contractor:

Safety Incident Report No:

Major Incident Reports must be forwarded to the Superintendent within 48 hours of the incident occurring or becoming apparent.
Contractors must use this Form for reporting of traffic Incidents on works under Contract and this form supplements the Safety Incident Report Form.

1.0 Details of Incident	Reported to:	☐ Supervisor	☐ TMR	☐ Other			
Date of incident		Time of Incident					
Work Being Undertaken							
Location (include direction and lane if applicable)							
Crash Type							
Incident type	Near Miss	Property Damage	Injury	Fatality			
Atmospheric Conditions	Clear	Overcast	Raining	Fog/Smoke/Dust			
Light Conditions	Day Light	Night Time	Dawn/Dusk				
Road Surface	Unsealed	Sealed					
Road Condition	Wet	Dry					
Street Lighting	On	Off	Not provided				
Police Attended Yes/No		Officer name/number					

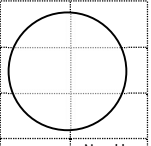
Other relevant details, (Last maintenance grade, watering and dust conditions):

2.0	Details of Traffic Management in place:		
TMP/TGS No:		Name of individual that prepared the TGS	
Time last inspected:		Accreditation No:	
Date TGS Approved:		Date TMP Approved:	

3.0	Descriptions of Vehicles:			
Detail (make, model/ped/cyclist/VRU)		Registration No	Direction of Travel	Age of Driver
3.1	Vehicle 1			
3.2	Vehicle 2			
3.3	Vehicle 3			
Comments:				

4.0 Description of Incident:

Draw the Incident including the direction of travel, traffic control signs, fixed structures and north point.



5.0 Attachments: The following copies MUST be submitted with this Incident Report.

Approved TMP ☐ Approved TGS ☐ Approvals for temporary speed restrictions ☐ Daily Diary ☐

6.0 Police Report:

Accident reported to Police: ☐ YES ☐ NO Report made by ☐ Phone ☐ Fax ☐ Mail or E-mail

Date Report Made Day Month Year Police WA Reference Number

7.0 Details of Person Completing this Incident Form:

Name: Contractor Name:

Position:

Date: Signature:

APPENDIX D – TRAFFIC ANALYSIS AND VOLUME COUNTS

No traffic volume data was available at the time of preparing this Traffic Management Plan. A 15 minute onsite count between 0845hrs and 0900hrs provided the following count:

Eastbound – 7 vehicles
Westbound – 9 vehicles

Calculating to an hourly volume:
Eastbound – 28 vehicles per hour
Westbound – 36 vehicles per hour
Total – 64 vehicles per hour

APPENDIX E – ROADWAY ACCESS AUTHORISATION PERMIT

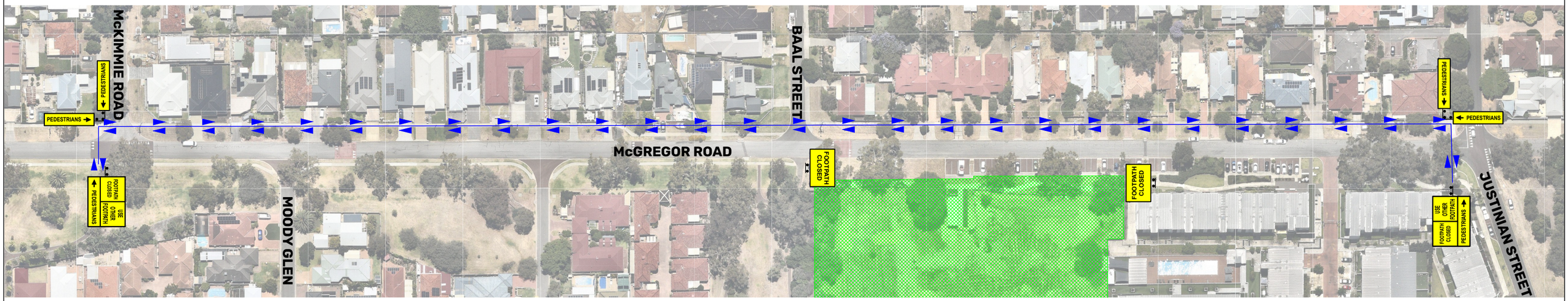
Roadway Access Authorisation Permit is not applicable to this project

APPENDIX F – TRAFFIC GUIDANCE SCHEMES

Best viewed when printed in A3

Notes:

1. All sign locations shall be checked prior to set out and positions adjusted to allow for specific site constraints such as vegetation, other signs, roadside furniture and sufficient space on shoulders.



Legend

- Existing Sign
- Footpath
- Kerb Line
- Line Marking
- Sign Legs
- Traffic Cone - 700mm
- Work Area

Device List:

FOOTPATH CLOSED / USE OTHER FOOTPATH / PEDESTRIANS	x 1	PEDESTRIANS	x 2
FOOTPATH CLOSED / USE OTHER FOOTPATH / PEDESTRIANS	x 1	PEDESTRIANS	x 2
FOOTPATH CLOSED	x 2	Legs	x 16

Client:	43 McGregor Road Pty Ltd	**Date:**	09/02/2026	**Posted Speed:**	50kph	**TGS No.:**	MB1356-01
Location:	McGregor Road, Palmyra	**Scale:**	N.T.S	**Temp Speed:**	N/A	**Revision:**	B
Title:	Building Construction Footpath Closure	**North:**		**Drawn:**	Matthew Byrne AUS-AWTM-24-1367-05	TRAFFIC PLANNING & MANAGEMENT	
				Signed:			

Best viewed when printed in A3

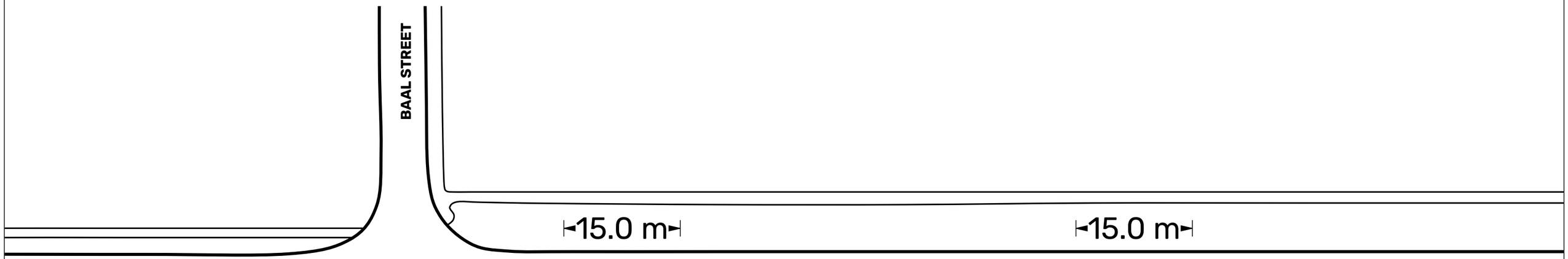
Notes:

1. All sign locations shall be checked prior to set out and positions adjusted to allow for specific site constraints such as vegetation, other signs, roadside furniture and sufficient space on shoulders.

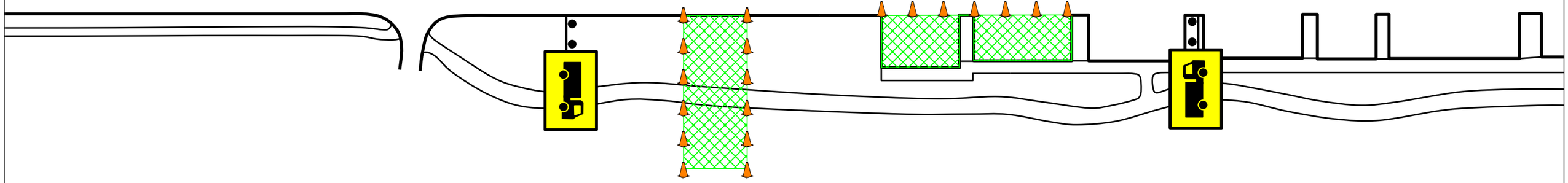
2. Truck symbolic signage must be removed when the site is not active.

3. Min cone spacing = 4m

4. This TGS must be used in conjunction with TGS MB1356-01.



McGREGOR ROAD



Legend

- Existing Sign
- Footpath
- Kerb Line
- Line Marking
- Sign Legs
- Traffic Cone - 700mm
- Work Area

Device List:

	x 2	Legs	x 4

Client:	43 McGregor Road Pty Ltd	**Date:**	09/02/2026	**Posted Speed:**	50kph
Location:	McGregor Road, Palmyra	**Scale:**	N.T.S	**Temp Speed:**	N/A
Title:	Building Construction Site Access	**North:**		**Drawn:**	Matthew Byrne AUS-AWTM-24-1367-05
				Signed:	

TGS No.:	MB1356-02
Revision:	B

TRAFFIC PLANNING & MANAGEMENT

Best viewed when printed in A3

Notes:

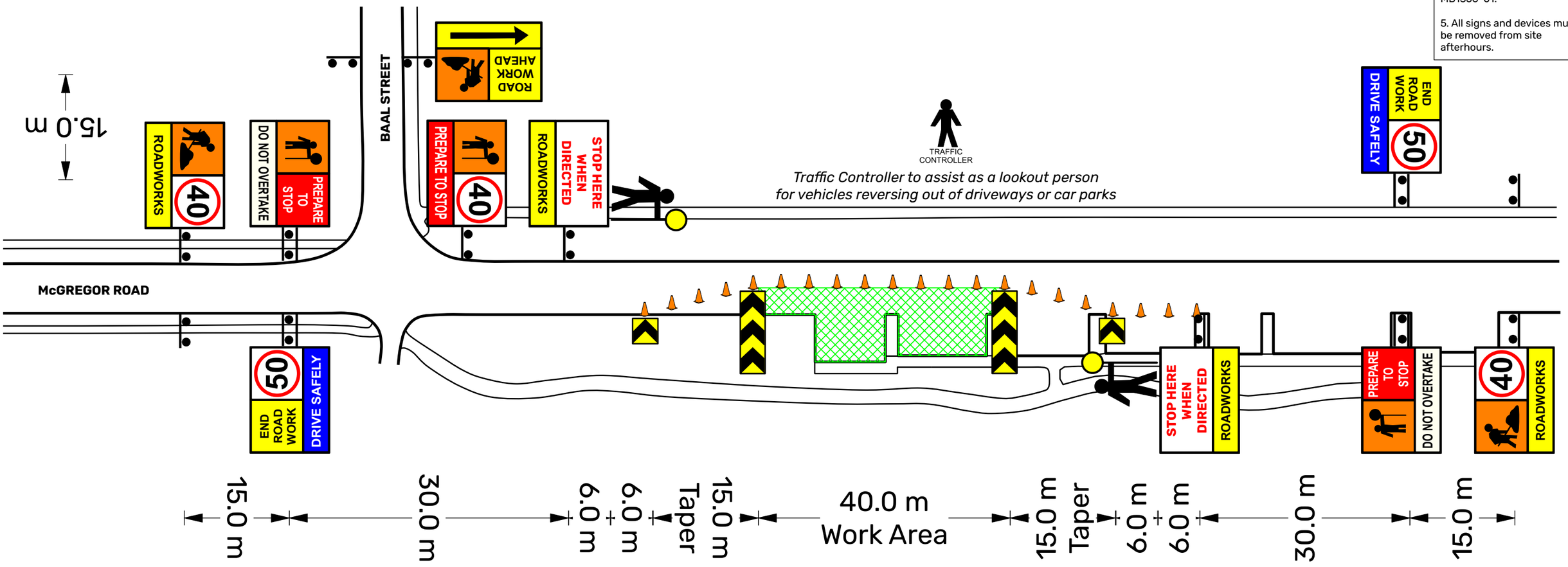
1. All sign locations shall be checked prior to set out and positions adjusted to allow for specific site constraints such as vegetation, other signs, roadside furniture and sufficient space on shoulders.

2. Max cone spacing = 4m

3. Min lane width = 3.2m

4. This TGS must be used in conjunction with TGS MB1356-01.

5. All signs and devices must be removed from site afterhours.



Legend

- Existing Sign
- Footpath
- Kerb Line
- Line Marking
- Sign Legs
- Traffic Cone - 700mm
- Work Area

Device List:

	x 2		x 2
ROAD WORK AHEAD	x 2	STOP HERE WHEN DIRECTED / ROADWORKS	x 2
DRIVE SAFELY / 50 / END ROAD WORK / PREPARE TO STOP / DO NOT OVERTAKE	x 4	40 / PREPARE TO STOP	x 1
		40 / ROADWORKS	x 4
	x 40	Legs	x 34

Client:	43 McGregor Road Pty Ltd	**Date:**	09/02/2026	**Posted Speed:**	50kph
Location:	McGregor Road, Palmyra	**Scale:**	N.T.S	**Temp Speed:**	40kph
Title:	Building Construction Truck Loading/Unloading Single Lane Shuttle	**North:**		**Drawn:**	Matthew Byrne AUS-AWTM-24-1367-05
				Signed:	

TGS No.: MB1356-03
Revision: B

TRAFFIC PLANNING & MANAGEMENT

APPENDIX G – ROAD AUTHORITY/STAKEHOLDER AUTHORISATION

END OF DOCUMENT

JUSTINIAN STREET NORTHBOUND
INTO
McGREGOR ROAD WESTBOUND

JUSTINIAN STREET

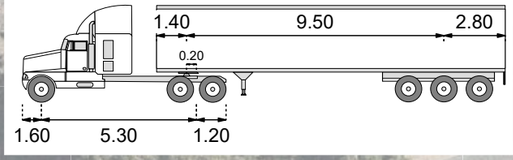
McGREGOR ROAD

NORTH

Plan Scale

1 : 500 (1cm = 5m)

Vehicle dimensions



Prime mover and semi-trailer

Length: 19.00 m
Max width: 2.50 m
Lock to lock time: 4.0 s
Max steering angle: 27.76°
Turn radius (curb to curb): 12.50 m
Turn radius (wall to wall): 13.26 m

McGREGOR ROAD EASTBOUND INTO JUSTINIAN STREET SOUTHBOUND

JUSTINIAN STREET

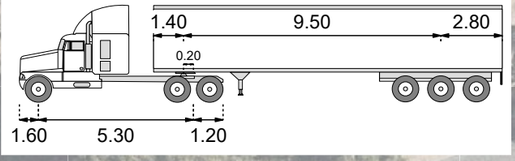
McGREGOR ROAD

NORTH

Plan Scale

1 : 500 (1cm = 5m)

Vehicle dimensions



Prime mover and semi-trailer

Length: 19.00 m
Max width: 2.50 m
Lock to lock time: 4.0 s
Max steering angle: 27.76°
Turn radius (curb to curb): 12.50 m
Turn radius (wall to wall): 13.26 m

LEACH HIGHWAY WESTBOUND INTO JUSTINIAN STREET NORTHBOUND

JUSTINIAN STREET

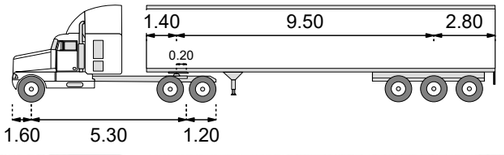
LEACH HIGHWAY

NORTH

Plan Scale

1 : 500 (1cm = 5m)

Vehicle dimensions



Prime mover and semi-trailer

Length: 19.00 m
Max width: 2.50 m
Lock to lock time: 4.0 s
Max steering angle: 27.76°
Turn radius (curb to curb): 12.50 m
Turn radius (wall to wall): 13.26 m

JUSTINIAN STREET SOUTHBOUND INTO LEACH HIGHWAY EASTBOUND

JUSTINIAN STREET

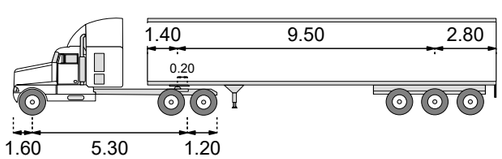
LEACH HIGHWAY

NORTH

Plan Scale

1 : 500 (1cm = 5m)

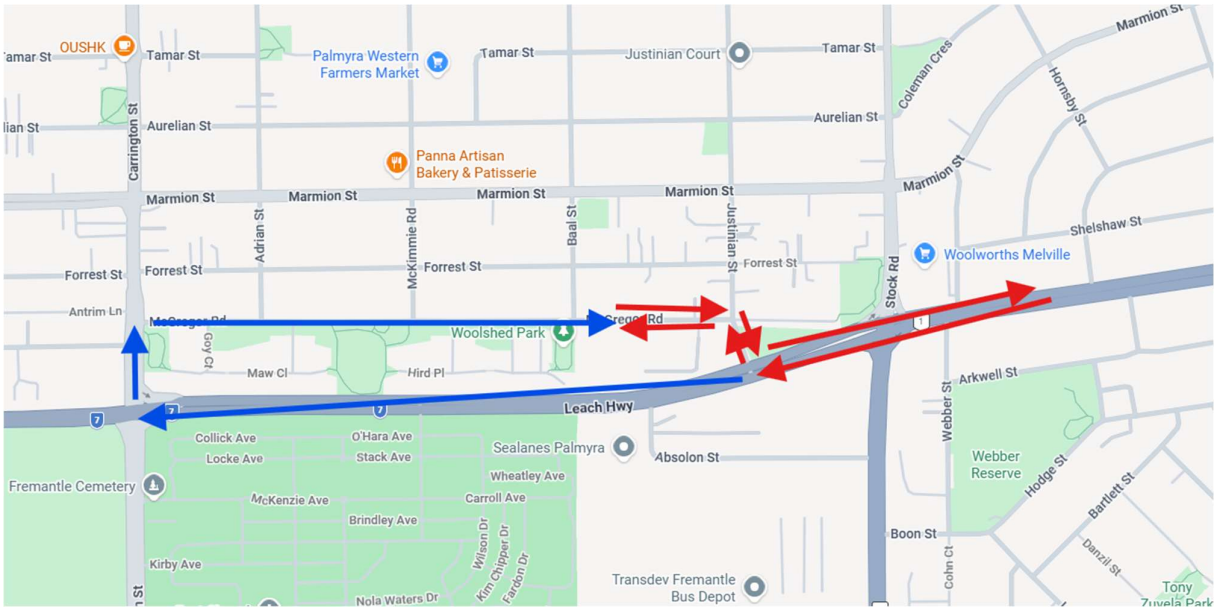
Vehicle dimensions



Prime mover and semi-trailer

Length: 19.00 m
Max width: 2.50 m
Lock to lock time: 4.0 s
Max steering angle: 27.76°
Turn radius (curb to curb): 12.50 m
Turn radius (wall to wall): 13.26 m

Appendix E Transport Routes



Red arrow indicates primary transport routes (precast and bubbledeck superstructure manufacture yard is in Hazelmere, along with Hanssen storage yard).
Blue is alternate.

Swept paths overleaf for Leach/Justinian and Justinian/McGregor in both directions.
Trucks will all have signage indicating “DO NOT OVERTAKE TURNING VEHICLE”.