

33 Cross Street, Double Bay

Major Project Application MP 08_0100

Construction Management Plan (draft)

1 Introduction

The Director General's Requirements (DGRs) for the Environmental Assessment dated 28 August 2008 outline the following in relation to construction impacts:

"8. Address measures to ameliorate potential impact arising from the construction of the proposed development".

The commencement of demolition, excavation or construction that stems from an approval or grant of development consent can be the subject of conditions relating to the manner of conducting the work. However, it is generally not the intention of the consent conditions to specify the precise manner of undertaking the works as there are many ways by which satisfactory performance may be achieved, in particular where there are performance requirements specified in the conditions (e.g. acoustic performance for example) or by reference to standards. Hence this document identifies how adequate performance can be achieved without specifying the precise means. This is appropriate as the contract to undertake the work has not been awarded and therefore the alternatives have not been explored or costed nor their effectiveness assessed in the circumstances of the case. This gives greater flexibility to the builder to apply methods which are familiar and for the approval authority to be appraised of the alternatives available through this draft document submitted with this Project Application. The builder would obtain a final approval of the more precise Construction Management Plan, which is generally consistent with this draft plan prior to the issuing of a Construction Certificate.

1.1 Draft Statement of Commitment

- A detailed demolition and construction management plan based including but not limited to the management measures incorporated in this draft plan will be prepared by Ashington for approval prior to the commencement of any demolition or construction works commencing on site.

Purpose:

- *To minimise impacts on the amenity of surrounding residential areas and the Double Bay town centre during the demolition and construction period.*

This draft plan outlines management measures for demolition and construction works in relation to:

Section 2 – Demolition and construction management

- Pre-commencement inspections
- Tree preservation
- Compliance with the relevant Australian Standards
- WorkCover licence
- Contaminated land
- Asbestos
- Erosion and dust control
- On-site burning
- Recycling/reuse of materials
- Footpath and roadway protection
- Adjoining buildings
- Working hours
- Waste minimisation during demolition and construction

Section 3 – Erosion and sediment control

- Erosion control measures
- Sediment fence
- Drainage pit control
- Water diversions
- Stock pile control
- Washing area
- Vegetation retention and protection
- Pump out
- Erosion and Sediment Management Plan
- Warning sign on site
- Dust control on disturbed area

Section 4 - Acoustic Requirements for Construction**Section 5 – Hoardings**

- Damage to or obstruction of Council footway and roadway

Section 6 – Construction Traffic Management

- Pedestrian Public Traffic
- Vehicular Public Traffic

2 Demolition and construction**2.1 Introduction**

This section provides the standards that a development must incorporate to ensure the demolition and construction of a building or work is safe and does not adversely impact on the environment.

Objectives

The objectives are:

- a) to ensure that demolition is carried out in accordance with the relevant legislation and guidelines;
- b) to ensure that demolition procedures are safe and environmentally efficient;
- c) to ensure that demolition does not have an adverse impact on surrounding residents, land, buildings, or footpaths and roadways;
- d) to preserve significant trees;
- e) to encourage the recycling and reuse of building materials;
- f) to encourage the use of licensed contractors to undertake demolition work; and
- g) to ensure the maximum amount of waste materials resulting from demolition and construction are reused and/or recycled.

The procedures and standards to achieve these objectives are:

2.2 Pre-commencement inspections

Prior to the commencement of demolition, an inspection of the site is to be undertaken by Council or an accredited certifier to ensure that all pre-commencement conditions have been satisfied.

2.3 Tree preservation

Existing trees, both on the site and adjoining footpath reserve, must be protected with fencing to prevent damage during demolition, and retained in accordance with any Tree Preservation Order.

2.4 Australian Standard AS 2601-1991 Demolition of Structures

2.6 All demolition work is to be carried out in accordance with Australian Standard AS 2601- 1991 Demolition of Structures.

2.5 WorkCover licence

Depending on the scale and type of demolition work to be undertaken, persons undertaking demolition work may need to be licensed under the Occupational Health and Safety (Demolition Licensing) Regulations 1995. WorkCover issue demolition licences to applicants who successfully undertake the Demolition Supervision Course, and who can demonstrate their ability and experience in the field. A copy of the license is to be displayed at the site if the scope of the works involved requires a licence.

2.6 Asbestos

Applications for demolition are to include details of the materials to be demolished, including the extent of asbestos in the building. All demolition and disposal of asbestos is to be undertaken in accordance with the requirements of the Occupational Health and Safety Regulations, Construction Safety Act, EPA and WorkCover.

In respect to dwellings, a licensed demolition contractor is required where more than 50% of the floor area of the dwelling is being demolished or more than 200 square metres of fibro is involved. For demolition less than this, eg. sheds, minor additions, garages, a licensed contractor is not required but the following procedures are to be followed:

- a) appropriate protective clothing is to be worn;
- b) asbestos is to be kept wet (ie. By continuous hosing);
- c) breaking of asbestos sheeting should be avoided;
- d) asbestos is to be wrapped in plastic and placed in a lined bin; and
- e) asbestos is to be transported in a covered/sealed vehicle and only disposed of at an authorised disposal point.

2.7 Erosion and dust control

Prior to demolition, measures are to be implemented to control erosion from the site. An erosion/sedimentation control plan may be required to be prepared (see below).

The demolition process is to be undertaken in such a manner as to minimise dust emission from the site. Where the demolition is likely cause dust emission, perimeter fencing and shade cloth/hessian is to be used together with continuous water spray or wetting down during the demolition process.

2.8 On-site burning

The burning of any demolished material on the site is not permitted. Offenders may be liable to prosecution under the Environmental Protection Operations Act.

2.9 Recycling/reuse of materials

Demolition procedures are to maximise the reuse and recycling of demolished materials in order to reduce the environmental impacts of waste disposal.

2.10 Footpath and roadway protection

- All footpath reserves are to be protected, by the provision of suitable hoarding or fencing along the street alignment.

- The hoarding is to comply with Part 4 of this plan.
- The footpath and roadway is to be kept clear at all times and is not to be obstructed by any demolition material or vehicle.
- All loading of vehicles with demolished material is to take place on the site. Mud is to be hosed off vehicle tyres prior to departure from the site.
- Vehicle loads are to be covered to prevent loose debris and dust from escaping.

2.11 Adjoining buildings

The following matters are to be satisfied prior to and/or during demolition:

- f) the works manager is to give written notice to adjoining land owners and residents seven (7) days prior to the commencement of demolition advising of the commencement date;
- g) safe access to and from adjoining buildings is to be maintained at all times;
- h) no demolition activity shall cause damage to or adversely affect the structural integrity of any adjoining building;
- i) consideration is to be given to the need for shoring and underpinning, and to changes in soil conditions as a result of the demolition, and appropriate measures implemented;
- j) the effects of vibration and concussion on adjoining buildings and their occupants is to be minimised;
- k) where the surface of an adjoining building is exposed by demolition, the need for weatherproofing the exposed surface is to be investigated and temporary or permanent protection provided as appropriate; and
- l) the demolition of below ground walls that support the adjoining ground is not to be undertaken until it is established that demolition will not cause the collapse of the adjoining ground, or effective lateral support is provided to prevent collapse.

2.12 Working hours

All demolition work is to accord with the hours of work specified in the conditions of consent. Any variation to these hours is to be approved by the Council prior to undertaking work outside of the specified hours.

2.13 Waste minimisation during demolition and construction

The quantity of waste required to be reused or recycled should be greater than 60%, wherever possible.

A waste management plan (WMP) is to be lodged for all building construction and all demolition works.

The purpose of the WMP is to ensure that waste management is considered during the planning phase. Generally a Council will consider the WMP prior to the granting of development consent. The WMP is to contain the following:

- a) identify all sources of waste that will result from the development on the site;
- b) estimate how much of each type of waste will be produced (estimates should be plausible and feasible);
- c) nominate on the WMP ways in which reuse and recycling of the materials may be achieved (nominate on-site reuse options in preference to off-site reuse options).

Materials that have an existing reuse or recycling market should not be disposed at landfills (eg. Concrete, second hand doors and windows); and

d) the names of waste disposal and transport contractors appointed by the applicant to transport and recycle waste materials from the site if known at time of application.

The location of stockpiles/waste containers and details of vehicular access should be indicated on the site plans submitted with the development application. Sufficient space should be set aside on-site to store waste materials and allow waste contractors to access the site.

The following waste related issues should be considered when planning and undertaking demolition activities:

- a) Council consent for placing skip bins on public property;
- b) contaminated land assessment and remediation;
- c) production of special wastes on-site (such as hazardous chemicals, asbestos);
- d) arrangements for the removal, transport and disposal of special wastes; and
- e) pollution control measures (such as sediment fences or dust controls).

Evidence such as weighbridge dockets that show waste is being disposed of in a legal manner are to be maintained on the site at all times by the site supervisor and presented to an authorised regulatory representative upon request.

2.14 List of related publications

Reference can be made to the following publications for further details:

- Australian Standard AS2601 – 1991 Demolition of Structures;
- Occupational Health and Safety Act 1995;
- Construction Safety Act;
- Environmental Protection Act;
- DEC Managing Urban Stormwater - Construction Activities; and
- DEC Waste Not Policy.

SECTION 2 – SOIL EROSION AND SEDIMENTATION

2.15 Introduction

Sediment is a carrier of pollutants such as phosphorus, light and heavy metals, bacteria and toxic waste. These pollutants can have an adverse effect on the quality of waterways and bushland.

Sedimentation contributes to the destruction of native vegetation and animal habitats. Sedimentation also increases the risk of flooding. Each year substantial sums of money are spent removing sediment from drains, rivers and creeks in order to reduce the risk of flooding.

The problems of erosion and sedimentation can be prevented or reduced when the work to be carried out is properly planned and when suitable erosion control measures are implemented.

Note: Under the provisions of the Protection of the Environment Operation Act 1997 any person who allows soil, debris or other matter to flow into any kerb and gutter, creek, bay, river or the like is guilty of an offence.

2.16 Objectives

The objectives are:

- to control soil erosion and sedimentation by implementing erosion control measures; and
- to minimise environmental damage to waterways and bushland as a result of sedimentation.

2.17 Development standards

The procedures and standards to achieve the objectives are as follows:

Erosion controls are generally required for all new development including:

- demolition;
- excavation;

- trenching; and
- building;

except where the development comprises additions, alterations or ancillary development and:

- e) does not cause significant environmental impacts; or
- f) does not cause significant site disturbance; or
- g) does not occur adjacent to the public footway/roadway/drainage.
- In addition to the requirements of the Council's development consent, the works are also required to adhere to statutory responsibilities under the:
 - Local Government Act, 1993;
 - Soil Conservation Act, 1938;
 - Environmental Planning & Assessment Act, 1979;
 - Rivers and Foreshores Improvements Act, 1948; and
 - Protection of the Environment Operations Act, 1997.
- Certain cases this will require a 3A permit from the Department of Planning if:
 - excavation is to occur within 40 metres of a river, estuary or lake;
 - if building erosion control works and other structures in a river, estuary or lake; and
 - it is intended to place any fill material in a river, estuary or lake.

2.18 Erosion control measures

Development is to comply with the erosion and sediment control measures listed below as appropriate to the scale and site conditions of the development:

- an approved sediment fence is to be installed as close as possible to the proposed disturbance activity and be located at the lower slope of the building site;
- an approved sediment fence or other soil control device, is to be installed around sensitive environmental areas such as streams, foreshores, steep slopes and bushland;
- a recognised stabilised access control is to be installed on all entrance and exit points from the site;
- any existing drainage pits on the site or directly adjacent the site is to be covered or protected with approved sediment control devices;
- water diversions are to be installed on the upper slope of the site. Collected water is discharged in a location that does not affect other property owners of the public;
- a stock pile are is to be set up with approved sediment control devices on the lower slope;
- a washing/cleaning area is to be set up with approved sediment control devices on the lower slope;
- all vegetation to be retained is to be protected by fencing or cordoned off;
- any accumulated water contaminated with sediment, from a sediment basin or excavation pit, is to be flocculated or filtered in order to lower the suspended solid load to less than 50 milligrams per litre;
- the work is to be suitably staged to minimise the extent of the area disturbed by works at any given time;
- all erosion control devices or measures are to be maintained in good working order at all times for the duration of the project;
- roof construction and connection of roof drainage to underground drainage systems is to be carried out as soon as possible;
- all disturbed areas are to be progressively stabilised with permanent vegetation as each stage of the development is completed;

- soil, sand and gravel are not to be stockpiled on roadways or in drainage areas; and
- the public footway adjacent to the site must remain unobstructed and safe for pedestrian access at all times.

2.19 Sediment fence

The provision of sediment filtering or sediment traps is required below all disturbed areas, prior to commencement of building or earthwork operations:

Purpose

- used in a temporary situation to intercept runoff from the site, slow the water velocity and allow sediment to settle out.

Construction

- Sediment fabric consist of a filter fabric ("geotextile filter" NOT shade cloth or plastic) for example Terram 1000, Polyfelt TS 500, Bidim U24, Geofab, envirofence or equivalent
- fabric is attached to a strand wire (ordinary fence wire) or wire mesh (14 gauge and 150mm x 150 mm opening);
- the lower end of the fabric and mesh is embedded 200mm into the ground;
- filter cloth to be fastened securely to wire fence with ties spaced every 600mm;
- generally follow the contour of the land;
- when two (2) sections of filter cloth adjoin each other they shall be overlapped by 150mm and folded over; and
- posts holding the mesh are either steel Y or U type or 40-50mm hardwood 900-1200mm long posts. These are spaced at 2 to 3 metres apart.

Maintenance

- Fences must be inspected at the end of each working day for breakages, sagging, undermining etc. Sediment is removed before it clogs the fabric.

2.20 Stabilised access

The installation of a stabilised access control is to be installed on all entrance and exit points. The structure is to be either a Coarse Aggregate with geofabric layer or Shaker Ramp:

Purpose

- Provide a firm base for vehicular entry/exit and eliminate transport of fine sediment. Fabric stops gravel being compressed into underlying soil.

Construction

- Single layer high strength geofabric under bed of 30-75mm aggregate. Aggregate layed minimum 200mm thick. A hump or bund should be placed just inside property boundary to divert runoff to a silt fence or sediment trap.

Maintenance

- Add extra aggregate to maintain hump as necessary.

2.21 Drainage pit control

- Any existing drainage pits on the site or directly adjacent the site are to be covered or protected with wire mesh and gravel inlet filters (gravel sausage) or equivalent filter:

Purpose

- Small removable structures placed over kerb inlet pits to prevent the entry of sediment.

Construction

- A sleeve of geofabric longer than the inlet pit, 900 mm round filled with 25-50mm gravel;
- bag reinforced with 14 gauge, 12 x 12 mm wire mesh around the bag 250mm shorter than the bag on either end;
- place filter in front of pit, leaving gap at top for spill over;
- back end of the bag (that is not reinforced) forms seal with the gutter edge; and
- maintain opening with spacer bars between the gutter and bag.

Maintenance

g) remove sediment after each rain event or build up in gutter.

2.22 Water diversions

The installation of diversion and catch drains to divert uncontaminated runoff around the site:

Purpose

- To divert clean surface water around the building site to control water during storm events and keep water clear of critical work areas.

Construction

- Locate along a contour avoiding vegetation or trees;
- shape drain (up side) and mound of soil (down side) to channel water; and
- provide positive grade (1-5%) and convey water to stabilised area (such as street drain). NOTE: water is not to pass through any disturbed land. If it does then the water must pass through a sediment control structure before discharge.

Maintenance

Inspect weekly and after significant rain. Remove accumulated sediment as necessary to keep flow and prevent over topping.

2.23 Stock pile control

A stock pile area is to be set up with approved sediment control devices on the lower slope. Stock piles are reserves of material stored on site for later use in construction or landscaping. This includes timber, mulch, top soil, gravel, sand etc. Building waste is also to be protected in a separate area if possible.

Purpose

- To prevent material from leaving the site and polluting.

Construction

- Locate site in low or flat area;
- protect the stockpiles from overland flow with earth banks upstream;
- protect with sediment fence down slope; and
- cover stockpiles that are to remain greater than 40 days.

Maintenance

- As part of the sites routine inspection program, check that the sediment fence and other controls are operating effectively.

2.24 Washing area

- A washing/cleaning area is to be set up with approved sediment control devices on the lower slope:

Purpose

- To ensure that any material from washed equipment, such as concrete slurries does not leave the site and pollute.

Construction

- Locate site in low or flat area;
- create slight depression to collect any waste material;
- protect the wash area from overland flow with earth banks upstream; and
- protect with sediment fence down slope.

Maintenance

f) Clear any receptacles for concrete and mortar slurries, paint, acid washing etc each week or more frequently as they fill.

2.25 Vegetation retention

- An approved sediment fence is to be installed around sensitive environmental areas such as waterways, vegetation or bushland.

Purpose

- To protect areas from damage and pollution from the building site.

Construction

- See clause 3.5.

Maintenance

- Fences must be inspected at the end of each working day for breakages, sagging, undermining etc. Sediment is removed before it clogs the fabric.

2.26 Pump out

- Any accumulated water contaminated with sediment, from a sediment basin or excavation pit, is to be flocculated or filtered in order to lower the suspended solid load to less than 50 milligrams per litre:

Purpose

- To prevent contaminated water leaving the site and polluting.

Construction

- Gypsum (or other approved flocculant) should be applied within 24 hours of the end of the storm event;
- the gypsum must be spread evenly over the entire water surface;
- pumping is not to occur for at least 36 hours and preferably 48 hours after application; and
- clean water is to be discharged to the water table via a hay bail and sediment filter in a way that does not pick up sediment that has dropped to the bottom.
- Note: Gypsum is a hydrated form of calcium sulphate and is available at many swimming pool shops and hardware stores.

2.27 Erosion and Sediment Management Plan

An Erosion and Sediment Management Plan is required for all development to which clause 26 applies. The plan is to be submitted for approval by the Council, or an accredited certifier, and implemented prior to commencement of any site works or activities.

An Erosion and Sediment Management Plan is to show the following:

- a) property details (location, applicant, drawn by, date, scale);
- b) accurate property description (property boundary);
- c) contours;
- d) access point and access control measures;
- e) location and type of all sediment control structures;
- f) location of existing vegetation to be retained and undisturbed ground;
- h) any existing watercourses or drainage;
- i) material stockpile areas and storage and control methods;
- j) location of new drainage features (stormwater inlet pits);
- k) re-vegetation techniques and when implemented;
- l) location of roads and all impervious surfaces; and
- m) location of adjoining environmentally sensitive areas eg. bushland, waterways etc.

2.28 Warning sign on site

A warning sign to identify that the site is subject to Erosion and Sediment Management is to be displayed at the most prominent point of the building site, visible to both the street and site works. The sign is to be displayed throughout the construction period.

2.29 Dust control on disturbed area

Dust control measures are to be applied to reduce a surface and airborne movement of sediment blown from exposed areas of construction sites:

Purpose

- a) Dust movement may create an unacceptable hazard or nuisance on the site or down-wind.

Construction

- b) A variety of methods may be employed to provide temporary or permanent protection:

- i) Barriers – temporary barriers constructed from timber, synthetic fabrics, jute, straw bales, brush or similar materials can be used to control air currents and blowing soil.

They should be placed at right angles to the prevailing wind and spaced at intervals equivalent to about 15 times their height.

- ii) Vegetative cover – the retention of existing trees and shrubs to act as a windbreak may afford valuable protection.

- iii) Mulches – the use of mulches protects the soil surface and thereby prevents dust generation.

- iv) Irrigation – wetting the site surface is an emergency treatment which can be repeated when needed. Control of sediment laden runoff from over watering should be closely monitored.

2.30 Awareness of Penalty Provisions

Authorised Officers who observe offences under the Protection of the Environment Operations Act 1997 (including Council officers) may serve an on-the-spot fine on the individual causing or permitting pollution (eg; truck drivers tracking mud off site onto the road, a person pumping ponded stormwater off site after rain).

Note: Failure to comply with a direction of an Authorised Officer is an offence.

2.31 Reference list

- Managing Urban Stormwater: Soil and Construction Manual (The Blue Book) NSW Environment Protection Authority.

- Urban Erosion and Sediment Control Revised Edition 1992 (Green book) Department of Conservation and Land Management.

3 Acoustic Requirements for Construction.

The NSW Department of Environment and Conservation's Environmental Noise Control Manual (ENCM) has been largely superseded by the NSW Industrial Noise Policy (INP) and a new DEC publication, "Noise Guidelines for Local Council". Construction noise criteria were previously specified in the ENCM and have not been included in either of the aforementioned publications. The DEC have advised that it is currently developing new draft guidelines for managing construction noise which will adopt a "best practice" type approach that attempts to reduce construction noise to a level that is limited by what is feasible and reasonable.

The guidelines would require a construction noise management plan to be compiled by the developer.

The noise management plan should detail the best practice construction methods to be used, presenting a reasonable and feasible approach. The plan should identify the extent of any residential area affected and assess the impact on residents. The plan should detail any community relation programs which are planned e.g. prior notification for particularly noisy activities, letter box drop regarding out of hours construction work to be undertaken, etc and a 24 hour contact phone number for residents to call should they have any complaints or questions.

The construction site noise section, Chapter 17.1 of the ENCM, is reproduced below.

CONSTRUCTION SITE NOISE

Where there is a likelihood of annoyance due to noise from construction sites, conditions such as the following may be specified in a development consent or building application.

This applies particularly to non-scheduled premises such as commercial buildings where a long construction time is not likely. The criteria may not be applicable to long term constructions such as coal mines which may take several years. Variations should be made according to local conditions.

Level Restrictions

(i) Construction period of 4 weeks and under

The L10 level measured over a period of not less than 15 minutes when the construction site is in operation must not exceed the background level by more than 20 dB(A).

(ii) Construction period greater than 4 weeks and not exceeding 26 weeks

The L10 level measured over a period of not less than 15 minutes when the construction site is in operation must not exceed the background level by more than 10 dB(A).

Chapter 20 of the ENCM states that:

"It is acceptable for noise levels at receiving premises in a commercial zone to be 5-10 dB higher than in a residential area".

Time Restrictions

Monday to Friday, 7am to 6pm Saturday, 7am to 1pm if inaudible on residential premises, otherwise: 8am to 1pm. No construction work to take place on Sundays or Public Holidays.

Silencing

All possible steps should be taken to silence construction site equipment. It is particularly important that silenced equipment should be used on road or rail works where 24 hr operation is necessary.

It is expected that construction hours at the subject site for the construction period will be

- Monday to Friday, 7am to 7 pm
- Saturday 7 am to 1pm.

It is not expected that exceedences will occur during the construction period or that residential areas will be affected.

Table 3-4 Construction noise criteria, L10, dB(A)

	Premises Day-time (7am to 6 pm)	Evening (6pm to 7 pm)
Residential	52	48
Commercial	57 - 62	53 – 58

4 Hoardings (if applicable)

4.1 Introduction

This section provides standards for the construction of a hoarding where development and building work associated with the erection, alteration, cleaning, repair, renewal or demolition of buildings and excavation is to be carried out adjacent to or on a public place.

Objectives

The objectives are:

- a) to provide standards which will protect public footways, roads and the like from the hazards of building sites;
- b) to ensure activities on properties do not obstruct the safe use of public footways, roads and the like; and
- c) to require the erection of hoardings for activities such as cleaning, repairing and other maintenance works associated with properties adjacent to a public footway, roadway or the like.

Development standards

The standards to achieve the objectives are:

4.2 Type A Hoardings

Type A hoardings is to be constructed where demolition, building, maintenance or other works are being carried out on a building having a rise of two storeys or less above the public footway, roadway or the like where these works are:

- a) adjacent to or within 3600mm of the public footway, roadway or the like; and
- b) adjacent to or within 3600mm of vacant land.

Type A hoardings are (subject to Council approval) permitted to encroach a maximum of 1200mm onto the public footway.

4.3 Type B Hoardings

Type B hoardings are to be constructed where demolition, building, maintenance or other works are being carried out on a building:

- a) where material is being hoisted over or across a public footway, roadway or the like; or
- b) having a rise of three or more storeys above the public footway, roadway or the like where these works are:
 - i) adjacent to or within 3600mm of the public footway, roadway or the like; or
 - ii) adjacent to or within 3600mm of vacant land.

Period of installation

- The hoarding is to remain in position until construction is completed or for the period specified on the permit.

Maintenance

- Hoarding is to be painted white and maintained in clean and well painted condition throughout the construction.

Lighting

- Lights are to be installed at each end of the hoarding and other positions to adequately illuminate the public area and to be alight from sunset to sunrise.

Advertising

- No advertisement of any kind to be allowed except a 1800mm x 1200mm sign stating the builder's/architect's name, also "Bill Posters will be Prosecuted" sign must be printed on the front of the hoarding at spacings. Hoardings to be maintained free of advertising or other posters.

No obstruction of services

- Hydrants and sewer manholes etc to have free access and are not to be covered with temporary crossings or the like.
- The water channels are not to be blocked or obstructed with debris.

4.4 No damage to or obstruction of Council footway and roadway

- Uprights are not to be inserted in the roadway or footway surfaces but shall be tenon jointed into sole plates if provided.
- The kerbside is not to be cut to ease access to the property.
- The use of the roadway or footway for the storage of building materials is not allowed (except with written Council permission).
- The builder is to contact the Local Police Department concerning temporary road signs, precautions and time of the day when traffic can be controlled for the loading and unloading of material.
- The footway is to be protected from damage by vehicles by timber, crossings, eg. 4500mm wide 75mm x 50mm planks with 170mm splayed edges held together by four (4) strands or hoop iron. Such timber crossings are to cover the full width of the footway and full width of access. The builder is to ensure footways and kerbs are protected from damage at all times.
- Where gates are installed, such gates are to be constructed so as to swing inwards only.
- Pedestrian crossings are to be freely accessible at all times; where vehicles are required to cross footways, the builder is to provide employees or signage/signals system to warn the pedestrians or traffic.
- The licensee may be held responsible for any damage or accident that may occur on account of the roadway or footway being occupied.
- Further, the licensee may be required to pay for the re-instatement of any portion of the footway or roadway that may be disturbed or damaged by operations including removal of all superfluous material.
- The licensee may be responsible for all accidents, re-instatements, damage etc, resulting from the erection of the hoarding.
- Hoardings on corner allotments are to be so constructed so as not to present a danger or hazard to traffic and pedestrians.
- A hoarding erected over a vehicular access road is to satisfy any special conditions contained in the development consent.

Hours of work

- All work on the face of the building is to be carried out in accordance with the development consent.

Authority approvals

- The location of the hoarding is to be in accordance with any development consent requirements.
- Approval of the WorkCover Authority and approval of the Police Department (if required) is to be obtained before commencement of work.
- The requirements of the Local Government (Approvals) Regulation 1993 relating to development, building and demolition works adjacent to allotment boundaries and other buildings is to be complied with.

5 Construction traffic management

Construction Traffic Management is often a function of volume of demolition, type of materials demolished (e.g. whether or not it contains hazardous materials), extent of excavation (and whether or not contaminated or acid sulphate soils are included) in terms of the type and destination of construction traffic.

The traffic management of the site will however, include as a minimum, the following:

5.1 Pedestrian Public Traffic

- Prior to commencing the works, the work site will be inspected to identify footpaths, tracks and other areas that are regularly used by pedestrians and cyclists. This applies especially to any areas that may be used by school students etc.
- A pedestrian traffic control plan will be established that will aim to isolate the pedestrians and cyclists identified in 5.1 above from any high risk hazards associated with the construction works.
- The pedestrian traffic control plan will be prepared by a qualified Traffic Planner in accordance with industry standards and submitted to the site supervisor for review and acceptance, prior to the high risk hazard works proceeding.
- Where pedestrian public traffic will be exposed to hazards associated with moving construction traffic (plant and vehicles), qualified traffic controllers will be used to control the movement of construction traffic.
- Where pedestrians and cyclists will be exposed to hazards associated with deep excavations or other high risk hazardous construction activities, the construction works will be isolated via security fencing and other barriers.
- Where necessary, effective temporary signage will be implemented to re-route pedestrian traffic away from the construction works.

5.2 Vehicular Public Traffic

- Traffic control plans will be prepared in the event that:
 - The flow of public vehicular traffic is affected by the construction works.
 - The health and wellbeing of people (the public and site construction workforce) is potentially affected by high risk hazards associated with moving plant and vehicles and the construction works.
- The vehicular traffic control plan will be prepared by a qualified Traffic Planner in accordance with industry standards and submitted to the site supervisor for review and acceptance prior to the high risk hazard works proceeding.
- Traffic control plans will address traffic control measures required for day and night conditions, as applicable.
- Prior to commencing works and establishing the traffic control plans, the construction work site area will be inspected and the most suitable entry/exit points identified. The aim will be to minimise impacts on:
 - the flow of vehicular public traffic,
 - the daily lives and well-being of local residents, and
 - people working in or travelling through the area.

- Traffic control plans will be regularly reviewed for their effectiveness and will be amended:
 - As and when deemed necessary to maintain or improve the safety of the public, the construction workforce and/or road users.
 - When there are changes to the construction works that will affect traffic movements on public roads.
 - When existing traffic control measures must be amended to improve traffic flow or to minimise the impacts of construction traffic on road users.