

Development Control Plan

Environmental Site Management

Sutherland
Shire
Council



9.3/14
edition 1

Common Questions and Comments

To introduce this document, questions and comments have been developed to provide insight into the purpose of environmental site management. These questions and answers give basic guidance only and any evaluation of a proposal must consider all sections of the document.

For clarification of any terms used in this document, please refer to Section 10 Definitions.

Questions to Consider	Comments	
1 Is my proposed activity considered exempt development (refer to SSLEP2000 Schedule 4)?	Yes	Refer to this document for guidance
	No	Go to question 2
2 Is my proposed activity considered complying development (refer to SSLEP2000 Schedule 5)?	Yes	Refer to Complying Development DCP and this document for guidance and compliance
	No	Go to question 3
3 Is my proposed activity other than exempt/complying development?	Yes	Refer to all relevant DCPs and this document for compliance
	No	Go to questions 1 and 2
4 Do I require Council inspections?	Yes	Refer to Section 6
	No	Go to next question
5 Does my activity involve demolition?	Yes	Refer to Sections 7, 9a i), 9a iii), 9a xi), 9b v), 9b xii)
	No	Go to next question
6 Will the demolition activity include asbestos cement sheeting?	Yes	Refer to WorkCover requirements
	No	Go to next question
7 Do I need to excavate?	Yes	Refer to Sections 8, 9a i), 9a iii), 9a viii), 9b ii), 9b v), 9b viii), 9b x), 9b xii)
	No	Go to next question
8 Will my activity require the use of Council's footpath reserve eg for deliveries and material storage?	Yes	Refer to Sections 9b vi), 9b viii)
	No	Go to next question
9 Will my activity require the use of Council's carriageway?	Yes	Refer to Sections 9b vi), 9b vii)
	No	Go to next question
10 Does my activity involve the use of concrete?	Yes	Refer to Sections 9b ii), 9b iii), 9b v), 9b vii), 9b x)
	No	Go to next question
11 Do I need to hoist building materials from the public way?	Yes	Refer to Sections 9b iii), 9b v), 9b vii)
	No	Go to next question
12 Will I require bulk sand, soil, aggregate and landscape material for my activity?	Yes	Refer to Sections 9a iii), 9a iv), 9a viii), 9a x), 9b iv), 9b v)
	No	Go to next question
13 Is there sufficient area within the road carriageway for the unrestricted parking of tradesperson's vehicles?	Yes	Go to next question
	No	Refer to Sections 9b v), 9b vii)
14 Are there requirements regarding the disposal of stormwater from the site?	Yes	Refer to Sections 9a vi)
	No	Not Applicable (see above)
15 Can I contact Council if I need help regarding Environmental Site Management?	Yes	Refer to Section 5

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APPENDIX A – Legislative Definitions

1. When does the plan apply?

This plan must be considered for any work that may disturb the existing ground surface and/or affect public safety.

This document is intended as an educational tool and will assist in the preparation of Development Applications involving the demolition or construction of buildings.

If your proposed development is listed as Exempt or Complying Development, then this document should be used as a guide to assist you in planning and maintaining effective environmental site management throughout the duration of the construction process.

2. Purpose of the plan

The purpose of this plan is to provide an educational document for use by Council's assessment and compliance staff, applicants and the general community.

The plan:

- describes what environmental site management is and why we need it;
- will assist Council staff in determining if Development Applications have considered all relevant aspects of environmental site management;
- is a guide for applicants on how to prepare, achieve and maintain effective environmental site management; and,
- will be used as a benchmark when judging the outcomes of assessment and construction phases of the project.

3. Objectives of the Plan

The primary objectives of the plan describe the reasons why Council considers environmental site management to be important. They are:

- to avoid potential pollution and minimise waste by effective site management of all construction processes;
- to maintain public safety in all areas affected by construction site activity;
- to minimise the disruption to existing vehicular and pedestrian thoroughfares; and,
- to reinforce the principle that the person using the site is responsible for environmental damage, injury and property damage arising from the activities at the site.

4. Can this Development Control Plan be varied?

In preparing this plan, Council has comprehensively reviewed current site management methods; however, variations to the plan will be considered provided the objectives are achieved. Technical information will be required to support any variations.

This is a plan that sets very few precise, inflexible requirements. It is based on outcomes and provides flexibility in addressing environmental site management provided that the fundamental objectives are achieved.

5. What is an Environmental Site Management Plan (ESMP)?

An Environmental Site Management Plan (ESMP) is a combination of drawings and words recognising Council's objectives and describing how you intend to manage the various construction processes of your project. It should demonstrate an understanding of these processes and identify any particular site constraints.

It should also indicate any Hoarded Zones (see section 9b vi) and Work Zones (see section 9b vii) that may be required.

It should describe how the site will be continually maintained during construction to ensure that all desired outcomes are achieved.

All Development Applications (DA) need to be supported by an ESMP, the complexity of which is related to the scale of the development. Larger developments, such as townhouses, villas, apartments etc, as well as developments on sensitive or difficult sites will require the information included in the ESMP to be approved.

Prior to the preparation of the ESMP, consultation between the applicant and project consultants should be undertaken to recognise any potential problems that may arise during construction.

It should be noted that if a licensed builder has not been engaged at this time then a building consultant must be included in any discussions dealing with the ESMP preparation. If during this stage of the process difficulties are encountered then preliminary discussions with an appropriate Council Assessment Officer/s may be of assistance.

It is strongly recommended that an approved copy of the ESMP be kept onsite at all times to ensure that all components of the plan have been installed and are maintained throughout the duration of the project.

6. Inspections

Activities requiring development consent may be subject to a pre-commencement meeting and a final inspection. However, these inspections are required for all multi-dwelling applications and specific subdivisions.

The pre-commencement meeting is to be convened on-site a minimum 5 days prior to any demolition and/or construction activity and between the hours of 8.00 am and 4.30 pm Monday to Friday. Prior to this meeting the relevant sections of the ESMP must be implemented. The meeting must be attended by a Council Engineering Compliance Officer, the builder/site manager of the building (civil) construction company and where necessary the supervising engineer. The attendance of the owner is required when it is intended to use more than one builder/responsible person throughout the course of construction.

The purpose of the meeting is to:

- inspect the implementation of relevant sections of the ESMP such as safe passage for pedestrians, the installation of sediment and erosion controls, hoardings, Work and Hoarded Zones;
- check the installation and adequacy of all traffic management devices.
- discuss/explain any sections of the development consent that may require clarification or elaboration;
- ensure that the Demolition/construction information sign has been erected and is clearly visible;
- confirm that a Construction Certificate has been issued and all Council fees paid;
- vet the compliance of any special/specific conditions of consent;
- confirm that the supervising engineer has a copy of Council's Specification for Civil Works Associated with Subdivisions and Developments – January 1996;
- confirm that the builder/site manager has a copy of the Environmental Site Management DCP and its associated Specification;
- distribute the information sheet advising of Council's regulatory provisions and the requirements of relevant legislation; and,
- confirm that copies of Public Liability Insurance, Certificates of Currency have been obtained and are current.

Some development consents may be issued in a “staged” format due to special circumstances. “Staged” development consents require the completion of one stage before commencement of further stages. Typically pre-commencement meetings would occur at Stage 1.

Any queries associated with the development consent should be directed to Council’s Engineering Compliance Officer in the first instance. Those attending the meeting will also be advised that the site will be continually monitored with a view to maintaining public safety and minimising environmental impact.

At the completion of construction and after all necessary certificates have been submitted to Council by the Principal Certifying Authority, the applicant must request a final inspection by Council.

The purpose of the final inspection is to:

- assess the condition of the public way relative to the submitted photographic dilapidation survey;
- note any associated construction within the road reserve that does not comply with Council’s Specification for Civil Works Associated with Subdivisions and Developments – January 1996;
- reconcile any outstanding fees, notices, matters, etc;
- arrange for refunds of security deposits, bank guarantees, bonds, etc; and,
- advise other Council officers of final inspection status in order to expedite associated matters/applications.

7. Demolition

Development consent is required for all proposed demolition activities except when the structure being demolished is considered Exempt or Complying Development.

A development application for demolition must be supported by an Environmental Site Management Plan (ESMP). When preparing this ESMP all relevant items listed under Section 9a and 9b of this plan should be considered.

When development consent involves demolition and construction the ESMP must include details for both activities.

Sediment and erosion controls must be in place before the commencement of any demolition activity.

Truck configuration should be suitable for both the site and approved Waste Recyclers. **Semi trailers are not recommended for the transportation of demolition waste from building sites.**



HANDY HINT

It should be noted that Council, the general public and the construction industry are now promoting and supporting the practice of “Waste Minimisation” on all development sites. To assist demolishers in this instance Council has produced the ‘Sutherland Shire Construction and Demolition Recycling Directory’ which is available from Council’s Customer Service Centre.

8. Excavation

The greatest impact on the environment and the public way is from the trucks and/or trailers removing excavated material from a site.

Following demolition, excavation is generally the next activity associated with a development site. Factors to consider during excavation include whether excavated material is to be stored onsite or removed and disposed offsite.

Appropriate selection of plant (size and type of machinery) based on site characteristics and type of development is critical in managing the site effectively. Other factors such as the impact on neighbouring properties, the environment, the public way and noise should be considered.



HANDY HINT

Plant deliveries must not inconvenience neighbouring properties. It is recommended that all plant deliveries be scheduled to correspond with the hours of operation indicated in the development consent.

Vehicles associated with the transportation of excavated material vary from rigid trucks to the largest articulated types (semi trailers). The use of articulated vehicles is only recommended for building sites where entry from and exit to public roads in a forward direction can be achieved.

When within the site these vehicles should travel only on stabilised construction roads thereby assisting other sediment and erosion controls in reducing sediment transfer to the public way.



HANDY HINT

The most effective method of managing excavation is to 'take the material to the truck'.

This method:

- minimises the length of stabilised access point (see 9a i) / construction road required;
- keeps the truck clean;
- reduces the potential for sediment transfer; and,
- allows unobstructed manoeuvring for the excavation plant.

Truck configuration should be suitable for both the site and the approved disposal/temporary off site storage areas.

The proposed excavation process should be discussed with the excavation contractor prior to engagement to ensure that appropriate machinery is available for the given constraints.

Sediment and erosion controls must be in place before the commencement of any excavation activity.

9. Environmental Site Management Standards

9a. Erosion and sediment control

General requirements

1. All activities that have the potential to pollute must comply with standards of the Protection of the Environment Operations Act (POEO Act) 1997.
2. Compliance with Council's Specifications for Site Management Works.
3. Installation of erosion and sediment control prior to the commencement of any activity.
4. Maintenance of all erosion and sediment control measures.
5. Hay bales are not to be used as sediment control devices.
6. Any sediment deposited on the public way (includes footpath reserve and road surface) is to be removed immediately.

Specific requirements

i) Stabilised Access Point

Most sediment transfer problems associated with development activities are caused by the uncontrolled movement of vehicles and tradespersons within and from the site.

A Stabilised Access Point (SAP) controls and defines both vehicular and pedestrian movements to and from the site thereby minimising the transfer of sediment and ensuring the integrity of the public way is maintained. All SAPs should be designed to permit safe pedestrian access.

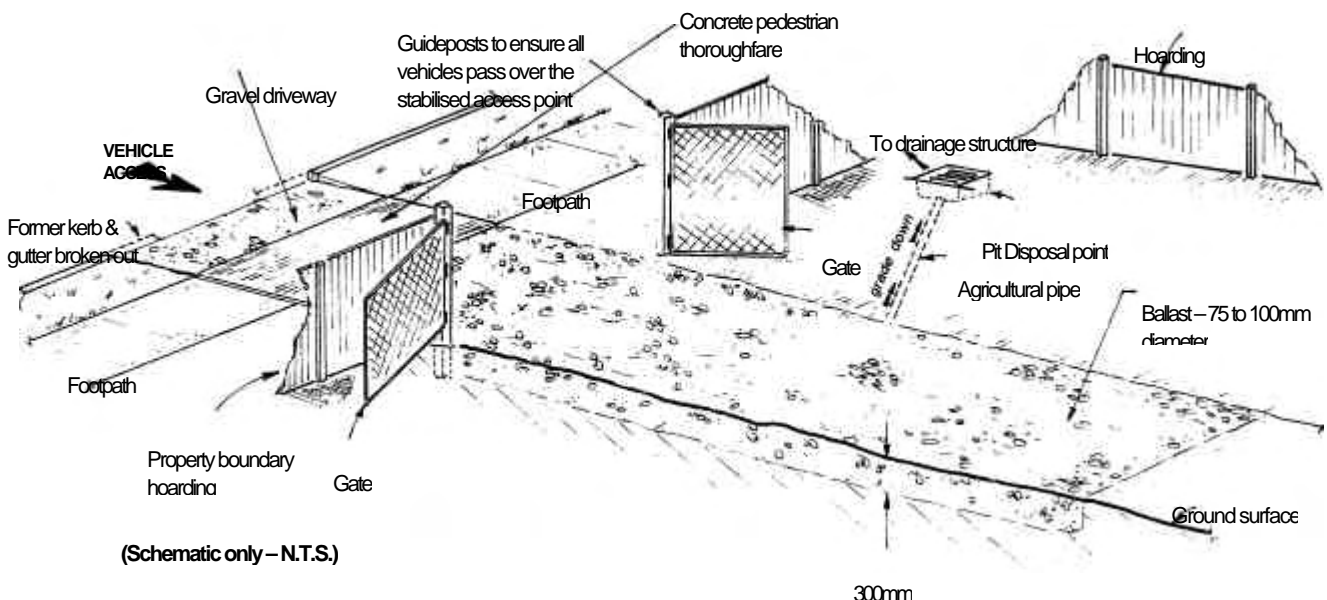
The design of a SAP varies with the type of activity proposed: -

- Type I – Single Dwelling, Dual Occupancy, Exempt and Complying Development (where applicable)
- Type II – All other applications that require Development Consent.

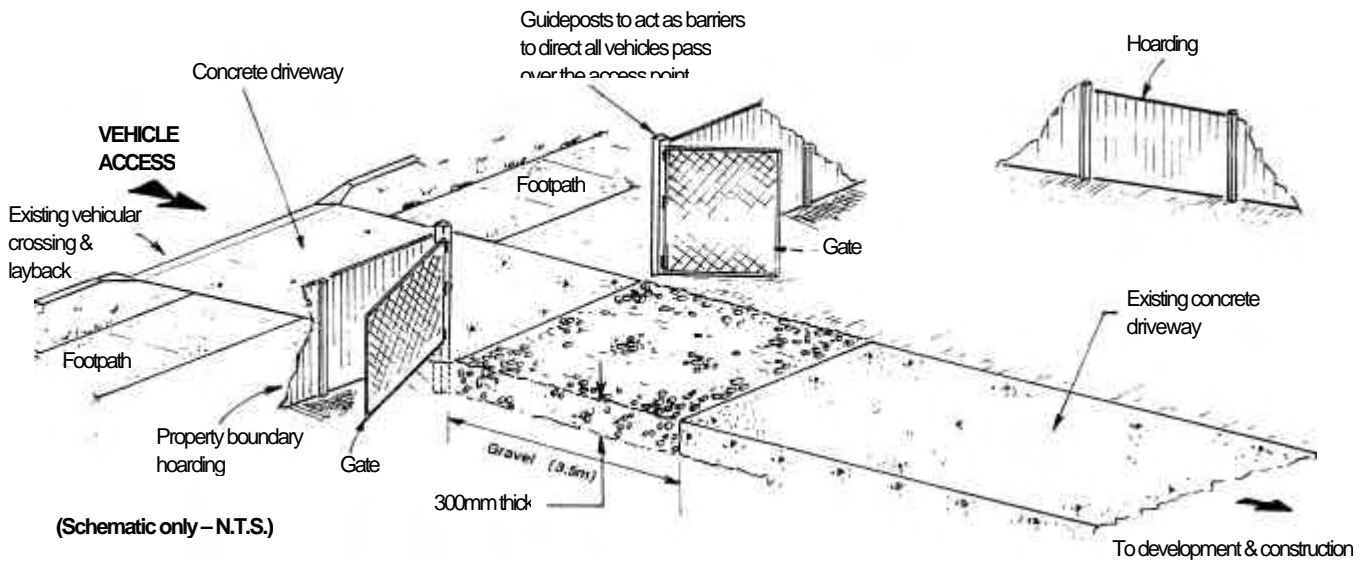
Type I SAP

The Type I SAP design would generally require an area of ballast material both within the site and the public way. The ballast area within the public way (temporary vehicular crossing) must be provided with an all weather pedestrian thoroughfare that aligns with the existing footpath formation. (See diagram)

Stabilised Access Point – Type 1 Option 1



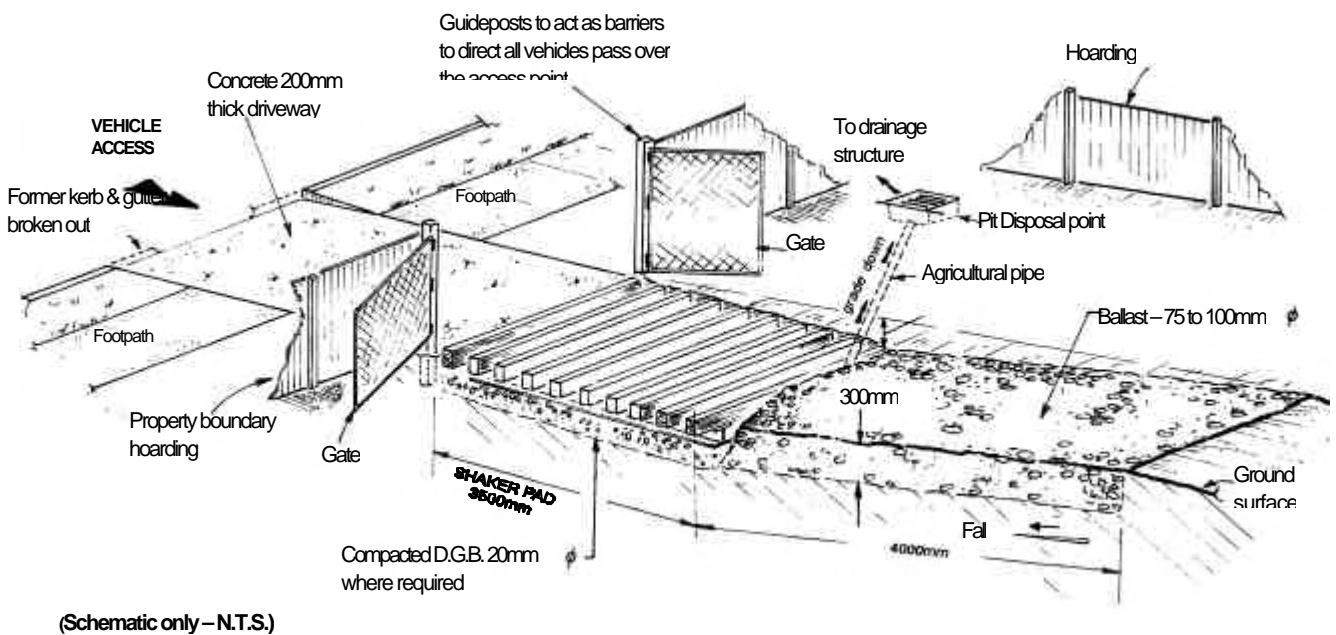
Stabilised Access Point – Type 1 Option 2



Type II SAP

The Type II SAP design is more defined in that it requires an area of ballast within the site combined with a shaker pad; adjacent the shaker pad and in the public way is a temporary (concrete) vehicular crossing (See diagram).

Stabilised Access Point – Type 2



In both Type I and Type II SAPs, the temporary vehicular crossing must:

- Connect to an existing gutter layback (where kerb and gutter exist). If a gutter layback does not exist then the connection must be made to the gutter by removing the adjacent kerb section only.
- Connect to a dish crossing (where kerb and gutter does not exist). If a dish crossing does not exist, then it must be constructed in accordance with details contained in Council's issued Footpath Crossing Levels.

It should be noted that these types of SAPs are considered to be applicable for the majority of activities however some sites may require special consideration.

In determining the design and location of the SAP, consideration should be given to its impact on the temporary stormwater management of the site and any existing drainage structures within the public way. When the SAP is located in a low point, an agricultural pipe should be installed connecting the SAP within the site to the existing section of the temporary stormwater system.

At the completion of construction and prior to the final inspection, all work associated with the temporary vehicular crossing must be reinstated to the satisfaction of the Supervising Engineer and in accordance with Council's *Specifications for Civil Works associated with Subdivisions and Developments – January 1996*.

Some larger sites may require a stabilised construction road, in conjunction with the SAP, in order to define vehicular movement/s across or through the site. Not only do these roads minimise sediment transfer but they delineate vehicular thoroughfares, assist in pedestrian safety and ensure that all other activity areas within the site remain stable.

Good design, implementation and maintenance of these measures will also reduce "downtime" and disruption especially during inclement weather.

It should be noted that Stabilised Access Point/s must be installed PRIOR to the commencement of any site activity (and pre-commencement site meeting where applicable) including demolition and any excavation.

ii) Shaker pad (cattle-grid)

A correctly designed and installed shaker pad will assist in preventing sediment transfer from a site. Any Stabilised Access Point (SAP) can be designed with a shaker pad (compulsory in Type II SAPs).

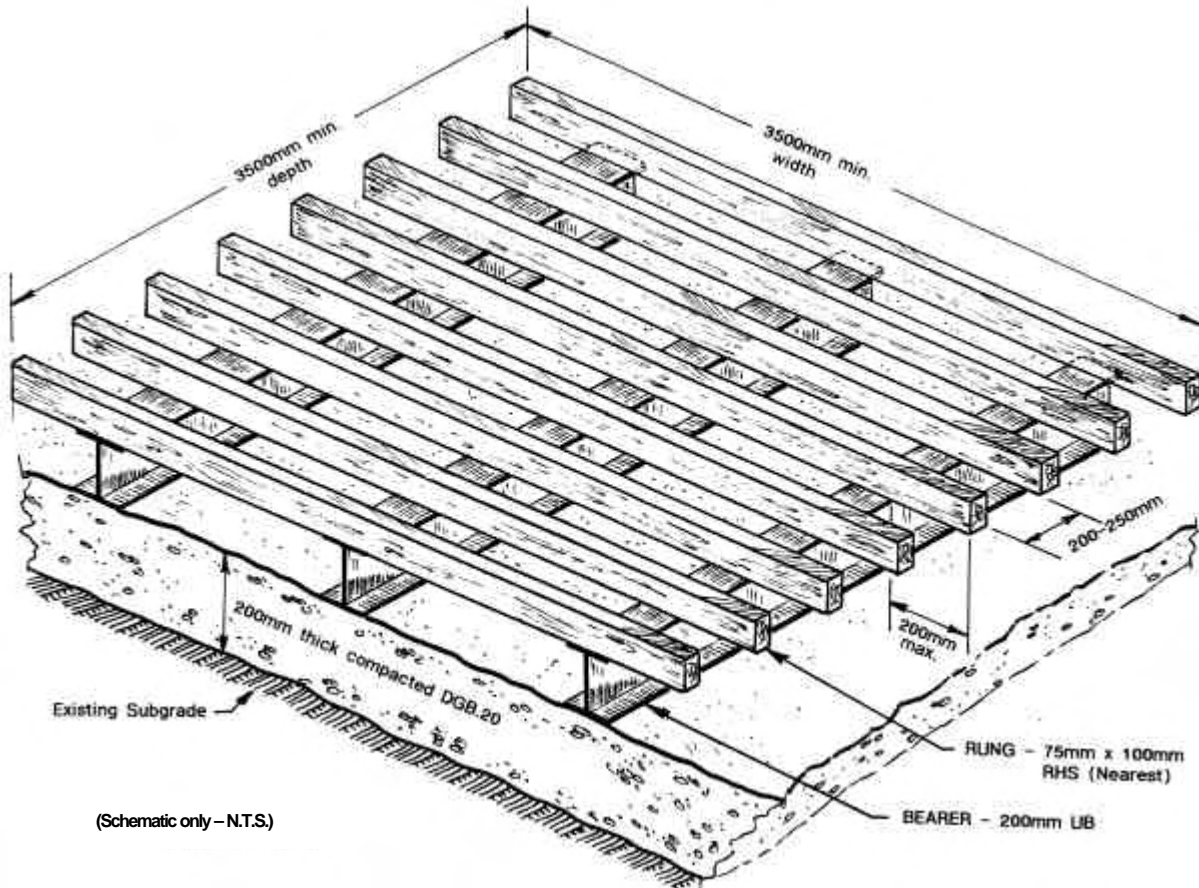
Shaker pads can be designed and constructed to enable re-use on future projects, alternatively, certified shaker pads can be hired at reasonable rates.

The shaker pad: -

- must be designed and certified by a practicing structural engineer. The certified design should be submitted with the Development Application.
- can be constructed from any suitable material
- must be located on a suitably prepared and compacted sub-grade/base material
- must be situated such that the rungs of the shaker pad are level with the adjoining natural surface
- must be a minimum 3.5 m in length
- must be a minimum 3.5 m in width
- must have clear spacing between rungs of 200 – 250 mm
- rungs must have a maximum width (bearing area) of 75mm
- must have a minimum clear depth of 300 mm ie from the top of the rung to the finished sub-grade/base level

The shaker pad must be provided with suitable barriers at the sides to ensure that ALL tyres of vehicles leaving the site traverse the device.

Shaker Pad Detail



iii) Silt fences

“Silt fence” material can be used in many ways to control erosion and sediment transfer. The use of silt fences within a site is the most practical and cost effective way of preventing the transfer of sediment transported by stormwater.

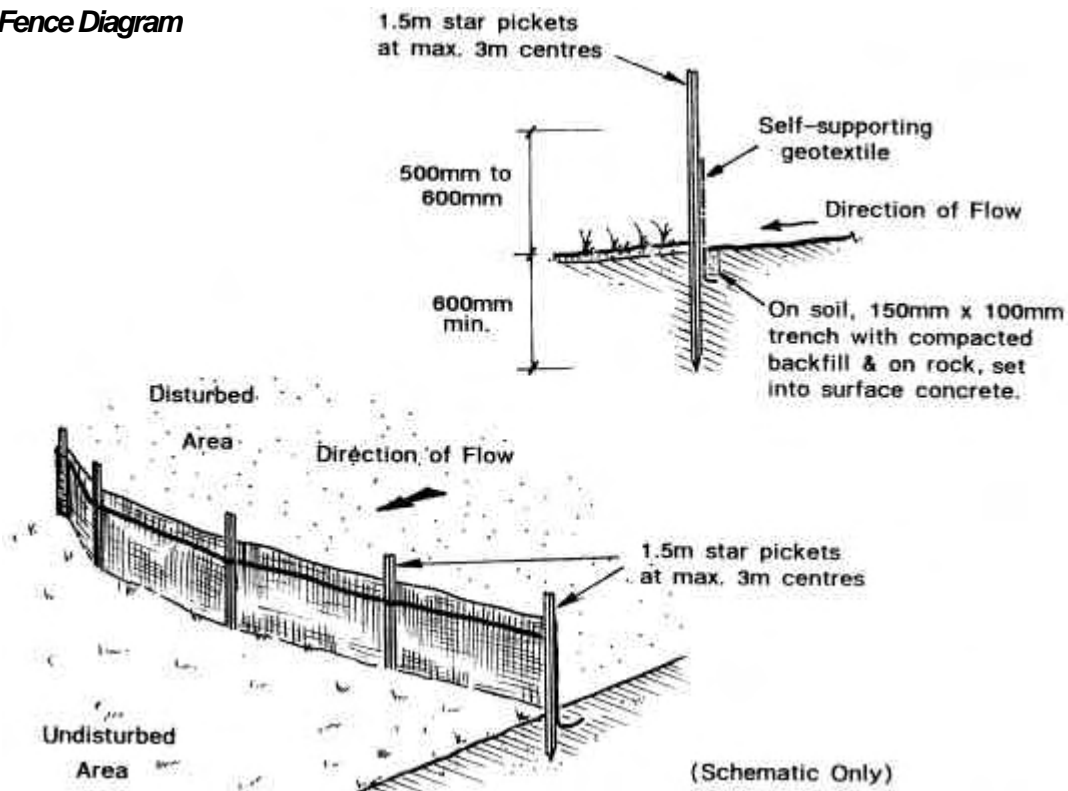
The following parameters must be considered when designing effective silt fences:

- Silt fences should follow the natural contours of the land. The location must also consider the proposed position of the SAP and any stormwater concentration generated by that device. On small building sites the silt fence must be located on the low side and/or corner of the site.
- Silt fences must be installed to ensure that surface stormwater flows are directed through and not underneath the fence. Silt fences must be installed within the site and any other associated Hoarded Zone; these areas may or may not directly adjoin the site.
- All silt fence design must include a ‘maintenance’ notation on the ESMP. Silt fence/s need to be monitored regularly and particularly during or after inclement weather; all damaged sections must be repaired or replaced in accordance with the manufacturer guidelines.

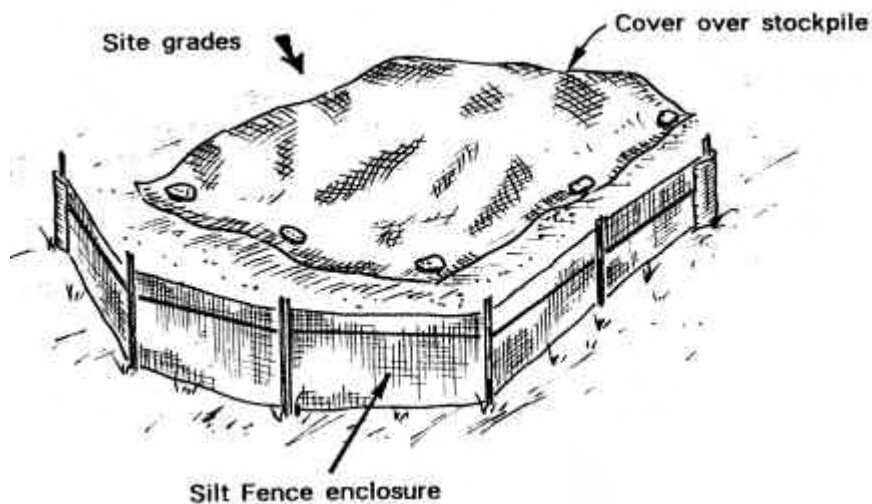
It should be noted that silt fences must be installed PRIOR to the commencement of any site activity (and pre-commencement site meeting where applicable) including demolition and any excavation.

Silt fences and all other sediment and erosion control devices must be kept in place until all activities have been completed or until such time as the site is considered stable ie following the installation of all hard surfaces and completion of all landscaping work.

Silt Fence Diagram



Silt Fence with returns



iv) Stockpile protection

The effective stockpiling of “stripped” topsoil, excavated material and other bulk building materials required for the construction process can save money and reduce environmental waste. The effectiveness of any stockpile is in its location (see 9b iv), accessibility and protection.

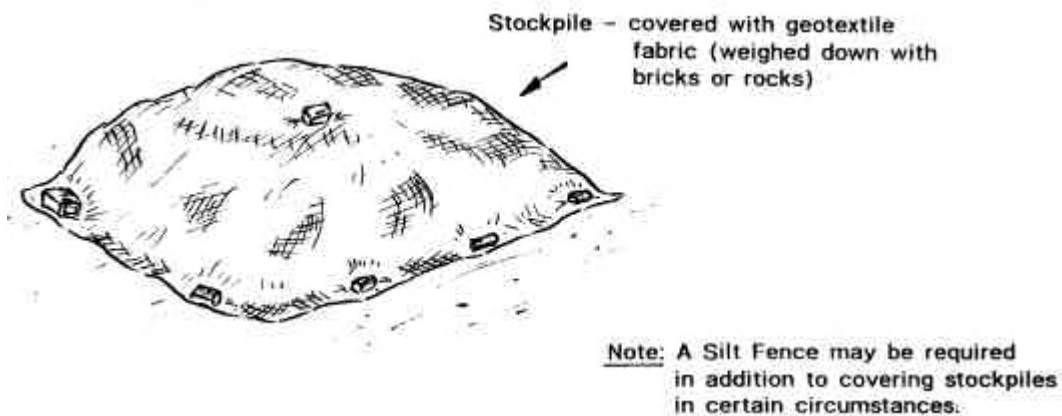
The basis of stockpile protection is to provide adequate sediment and erosion control and/or ensure pedestrian and traffic safety.

Stockpiles such as soil, sand, blue metal, landscape supplies must be covered with geotextile (silt fence) material. These materials permit the infiltration of water thereby minimising dust generation. In addition, silt fences may be installed to assist in containing and separating stockpiles.

Plastic sheeting or membrane must not be used as it prevents the absorption of water by the stockpile and concentrates surface water flow. Wind and sunlight also affect plastic, accelerating its disintegration.

Safety barricading should be used to isolate stockpiles of solid materials such as reinforcement steel, concrete formwork, scaffolding, etc.

Stockpile Protection



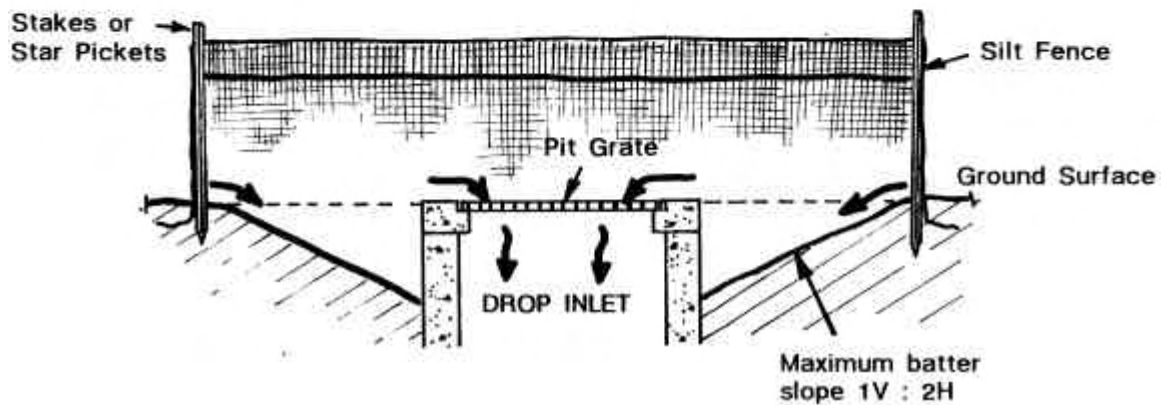
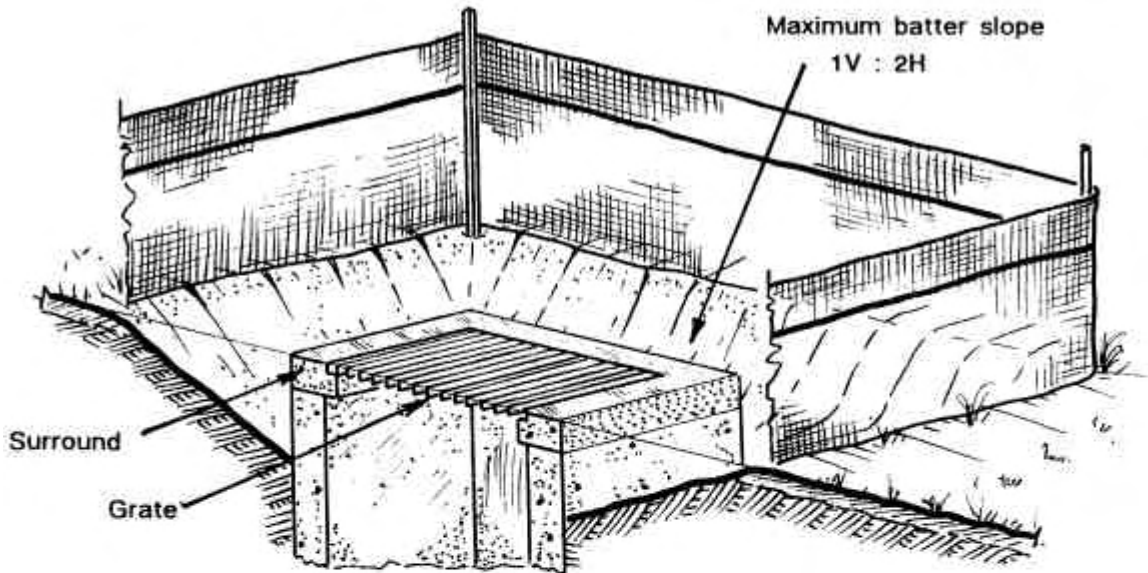
v) **Drainage structure protection on and off the site (kerb and gutter, pits, culverts etc)**

Drainage structures are designed to collect and transport stormwater to a disposal point. These structures must be protected as they have the potential to increase sediment transfer that can directly affect waterway siltation.

Typical protection may include some of the following devices:

- Silt fence enclosures/barriers
Enclosures should be erected around existing surface inlet drainage pits. These devices can be installed directly against the pit or offset with the enclosed area being suitably stabilised. Development sites containing many drainage pits should contour areas surrounding pits to increase the effectiveness of the enclosure (see diagram).

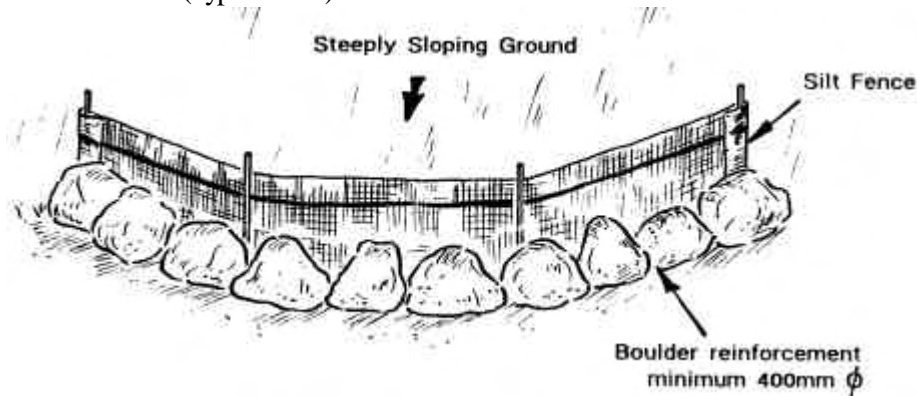
Surface Inlet Pit – Silt Fence Enclosure



Inlet Cross – Section

In areas of steeply sloping land, stormwater flows can exacerbate erosion. In these circumstances, silt fence barriers must be reinforced.

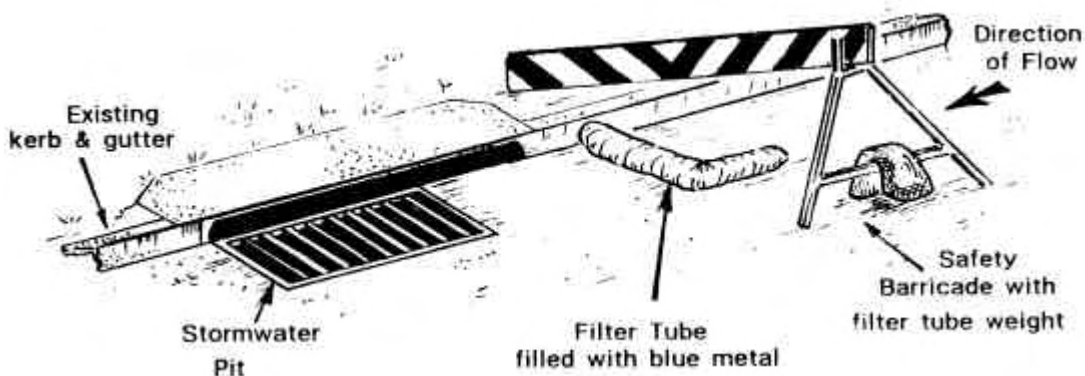
Reinforced Silt Fence - (Typical Detail)



- **Filter tubes**
These devices are generally placed in gutters and/or shallow drainage channels eg dish drains. They are designed to direct and slow the flow of stormwater thereby minimising sediment transfer and erosion. These structures are simple, economical and most efficient when used in groups. They are generally made from geotextile fabric, sealed at one end and ideally filled with aggregate. Aggregate allows water to pass through the filter device faster than it would if it were filled with sand (which due to the smaller pore space has a tendency to dam the water).

Filter tubes are only to be used temporarily in the public way when a pollution incident is possible. Adequate safety barricades must be provided in these situations (See diagram). It should be noted that this technique is not to be used instead of permanent measures within the site.

Filter Tube Silt Trap - (Typical Detail)



Other devices such as sediment baskets and geotextile wrapped grates may be used in certain circumstances. However, it is recommended that these devices only be used in conjunction with other measures.

Regardless of the types and combinations of protective structures used, regular maintenance and removal of accumulated sediment is required for these devices to remain effective.

vi) Sediment settlement basins

Development sites that involve major excavation either at or below the existing natural surface will generally have more difficulty in disposing of polluted site water.

Such sites should consider using settlement pond(s). An effective settlement pond requires:

- the site to be contoured to direct surface flows to it, thereby providing rapid drying time for the remainder of the site;
- the pond to be located in an area of the site where there is minimal activity;
- that it is suitable for the operation of a filtered pump and/or surcharge weir.

Water disposal from settlement ponds by pump/filter or surcharge weir must not exceed 50 parts per million (ppm) or mg/L of suspended solids at the point of discharge. Where this filtration level cannot be achieved the polluted water must be disposed of by way of vehicular water tanker or other approved method.

The filtration discharge point must be located within the site. **It must not be discharged overland in a concentrated flow.** In order to dispose of filtered stormwater, the approved drainage line connecting the discharge point to the existing drainage system within the public way must be constructed prior to the commencement of any excavation.

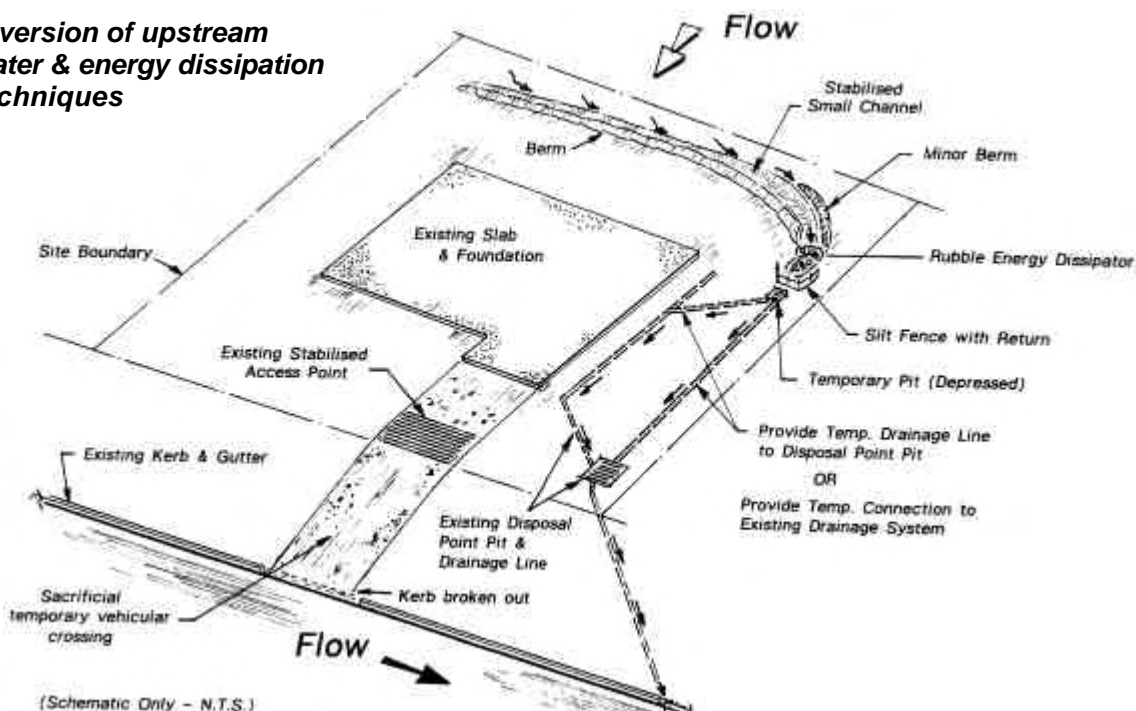
vii) Diversion of upstream stormwater flows

Stormwater flowing from upstream areas through active development sites with unstabilised surfaces have the potential to cause erosion. To reduce the effects of erosion and sediment transfer, diversion or collection controls should be installed to treat these stormwater flows.

Diversion measures involve the use of a formed bank and/or channel constructed within the site as near as possible to the upstream adjoining boundary or stabilised area. Care should be taken to ensure that diverted stormwater does not impact on adjoining properties and/or structures.

As these measures concentrate the stormwater flow, the effect on discharge points should be considered and suitable energy dissipation techniques installed (see diagram).

Diversion of upstream water & energy dissipation techniques



viii) Material Transportation

All vehicles transporting materials to and from the site must ensure that spillage of any nature does not occur within the public way. Before leaving the site, the exterior of all vehicles should be inspected to confirm that all loose material has been removed.

In order to reduce the impact on the neighbourhood, transportation of excavated material from a site must follow a disposal route. A nominated disposal route must be included with the ESMP for approval. Where an ESMP is not required, proposed disposal routes should take into account the amenity of the local neighbourhood.

These vehicles must comply with the Road Transport Act 1999 (NSW) which incorporates the Mass Loading and Access Regulation 1996 and Safety Traffic Management – Road Rules Regulations 1999. Further details regarding regulations associated with this topic can be obtained from the RTA.

All loads must be covered to minimise dust and prevent the transfer of sediment onto the roadway.

All materials should be delivered during normal working hours and in accordance with the site supervisor's instructions. All deliveries to the site should be by vehicles that are suitable for the site and adjacent areas (see Section 9b, v).

ix) Cleaning of the public way

Any material deposited unlawfully/accidentally within the public way must be removed immediately.

Prior to the clean up process, suitable sediment transfer controls eg filter tubes etc together with safety barricading must be in place.

If the material spilt is granular ie sand, soil etc, and the bulk of the spillage has been collected, then the remaining sediment must be removed by broom. If during the sweeping process dust is produced, a light spraying of water must be applied.

At no time should the spillage be removed by excessive watering, ie sufficient to create runoff.

During the excavation stage of development the nominated vehicular disposal route should be monitored continually to ensure that any spillage is removed immediately.

x) Wind borne sediment transfer – “Dust”

During dry weather, active development sites can produce “dust” due to the un stabilised nature of the excavated surface, stockpiling of building materials and associated activities. To minimise this “dust”, light water spraying of the site is required. However, caution should be used to ensure that excessive watering does not produce runoff.

Any machinery/tools used onsite that have the potential to create dust must be fitted with dust arresters and/or collection containers where applicable.

Stockpiles must be covered with geotextile fabric/silt fence material (see 9a iv)).

xi) Minimal site disturbance

Retaining existing vegetation within a site can reduce erosion and the transfer of sediment offsite.

Prior to commencement of any excavation work, the excavation method should be considered to limit these activities to the immediate construction area only.

Maintaining a stabilised public way adjacent the site not only prevents sediment transfer but also complements total site management.

xii) Construction of site stormwater reticulation system

In addressing sediment and erosion control on any site the single most important factor is that of **site water management**.

The complete stormwater reticulation system would include, but not be limited to, all sub surface drainage structures such as pits and pipelines and also above ground structures such as roof gutters and downpipes.

The subsurface component of the system should be constructed and implemented before building work commences. The initial installation of this component will permit the opportunity for:

- additional areas for storage of materials/plant; and,
- advanced construction/completion of some areas eg driveways, landscaping, etc thereby ensuring that these areas are stabilised and require minimal maintenance.

Above ground structures such as roof gutters and downpipes should be constructed and connected to the subsurface system **prior** to the installation of the roofing material. When the roofing material has been fixed, this practice:

- ensures that roof stormwater remains unpolluted;
- reduces the impact of stormwater on the site and in doing so minimises the effects of scouring and erosion; and,
- generally provides a “drier” site thus reducing the demands on existing sediment and erosion control devices.

9b Site Management

General Requirements

1. All works to comply with relevant legislation.
2. All works being undertaken shall comply with relevant Council Specifications.
3. Implementation and maintenance of approved Environmental Site Management Plans.
4. Ensuring Council property is protected and preserved during all construction activities.
5. Ensuring a safe public way for pedestrians and vehicles.
6. Ensuring minimal disruption to existing vehicle and pedestrian thoroughfare.

Specific requirements

i) Dilapidation survey

A dilapidation survey records the physical condition of any existing structure or situation that may be affected by a proposed development activity eg footpaths and driveways. This survey clearly defines the responsibility of both the developer and Council with respect to existing conditions within the public way.

The survey should consist of a series of photographs with supporting text. The text should note details such as the date of survey, orientation and topic of each photo and provide explanation of any existing conditions within the public way.

A dilapidation survey must be included with any development application. It is the responsibility of the applicant to confirm the accuracy of the survey prior to commencement of any work associated with the development consent.



HANDY HINT

It is strongly recommended that a dilapidation survey be prepared for **any** activity (including those not requiring formal Council approval) within a site that may damage any formation within the public way. If the activity did not need development approval, the survey should be retained by the site owner and presented to Council on request.

ii) Geotechnical report (shoring detail)

A geotechnical report is an analysis of subsurface material. The report provides recommendations relating to design criteria for building foundations and the stability of adjoining properties (shoring details). The report may also be required to assess any other excavation where the subsurface material is considered unstable.

The report also assists in determining the effects of vibration on nearby structures when the use of specialised machinery is proposed.

The geotechnical engineer should consult with the project manager to determine the suitability of any recommendations. The determination process should consider all aspects of any shoring method/procedure, site characteristics and the impact on the overall Environmental Site Management Plan.

iii) Building system and construction details

Effective environmental site management appraisal relies mainly on the characteristics of the site and adjacent areas together with good knowledge of the proposed building system and construction process.

The 'building system' comprises the following areas:

- floor types ie concrete, (pre-cast/cast in-situ), timber etc
- wall types ie brick and concrete block, concrete (pre-cast/cast in-situ) panels, timber frame etc
- roof types ie trusses, conventional roofing, tiles, metal sheeting etc

Selection of the most appropriate types of building system will simplify the overall site management aspects for the development. It must be determined if the system requires adjacent resources. For example if erecting pre-cast wall paneling then sufficient area for the construction process eg for location of support ‘props’ and the crane etc, must be available.

Deliveries and storage of building material should be contained within the site, however certain circumstances may require additional space. These resources include but are not limited to Hoarded Areas (see Section 9b, vi) and Work Zones (see Section 9b, vii).

A basic description of the proposed building system should be included in the ESMP.

Please remember! Under no circumstances should any building materials and/or hoisting equipment be positioned and/or operated within the public way, even on a temporary basis, without prior approval from Council. In some circumstances approval will be required from the RTA.

iv) Material storage and site facilities

Provision must be made for the stockpiling of all materials required for the construction and completion of the proposed activity. Details of all proposed stockpiles and site facilities must be included in an ESMP.

Materials needing stockpiles may include:

- excavated material retained for backfilling and landscaping purposes;
- brick laying and filling sand;
- bricks and concrete blocks;
- timber including prefabricated trusses and frames; and
- formwork and steel reinforcement.

Suitable stockpile locations, especially those for bulk materials should:

- allow vehicular accessibility;
- avoid concentrated stormwater flow paths;
- remain clear of site activities;
- not impede the drip zone of any tree; and
- be suitable for the installation and maintenance of erosion and sediment control devices.

Consideration should also be given to the size of the stockpile. Site constraints may result in the use of multiple, smaller stockpiles.

Further assessment of the site and the proposed activities should also consider the situation of temporary site buildings and any possible conflict with designated material storage areas/stockpiles.

All weather pedestrian footpaths should be constructed to connect active work areas to site buildings and the public way.

Toilet facilities should be located adjacent other site buildings but not near habitable rooms of adjoining residences. The facility must be either a flushing type or an approved portable chemical closet. Chemical closets are to be maintained and serviced on a regular basis so that offensive odour is not emitted. Toilet facilities are *not* permitted to be stored in the public way.

Toilet facilities must be installed PRIOR to the commencement of any site activity (and pre-commencement site meeting where applicable) including demolition and any excavation.

A suitable location for waste and its management must also be determined. If it is intended to service the site with waste 'bins' then the bins must be located within the site or an approved zone and be positioned appropriately to ensure timely removal by the service vehicle. If waste is to be stockpiled on-site then the designated area must be provided with an enclosure sufficient for the containment of the waste material.

Material handling devices such as pallets must be stored within the site whilst awaiting collection. **They are *not* to be placed in the public way at any time.**

v) Site vehicle details

A wide range of vehicles can be used during the construction process on building sites and subdivisions.

Inappropriate use and/or selection of vehicles can:

- be hazardous to both vehicular and pedestrian traffic;
- result in a pollution incident; and,
- cause damage to the public way.

When planning site activities, the primary objective is to ensure that all vehicles can be contained within the site.

If site area is insufficient for the vehicles that are to be used: -

- additional area must be provided. When this area is within:-
 - the public way - the road carriageway; the applicant must apply to Council for a Work Zone (see 9b vii);
 - the public way - not the road carriageway; the applicant must apply to Council for a Hoarded Zone (see 9b vi);
 - private property; written consent from the affected owner is required.

Details of proposed vehicle/s including their purpose, dimensions and method of operation should be submitted with the ESMP.

If dimensions of specific vehicles are such that they and/or their operation cannot be contained wholly within a Work Zone and/or any approved Hoarded Zone then a separate Traffic Management Plan (TMP) must be included with the ESMP submission. The TMP must:

- provide a fully dimensional plan of the public way and its structures relative to the area of the proposed activity; the plan should also include any other area that may be adversely affected by the proposal;
- provide full traffic management details including that of pedestrian thoroughfares. These details **must** include provisions for disabled drivers and pedestrians;
- provide written concurrence from all parties that may be affected by the proposal including State Authorities;
- show all existing traffic/parking advisory signs;
- show any proposed/existing Work Zones and Hoarded Zones in the public way;
- advise of the purpose and duration of the activity;
- advise of the dimensions of the specific vehicle and any other vehicles associated with that vehicle and/or vehicles involved in the conveyance activity;
- indicate all sediment and erosion controls that are required and,
- **Only under exceptional circumstances and after all other avenues have been exhausted will Council *consider* a proposal of this nature.**

Parking arrangements for all persons attending the site should be considered and detailed in the ESMP. **It is an offence under Section 197 of the Australian Road Rules to stand a vehicle on a nature strip/footpath reserve within a public way.**

vi) Hoarded Zones

When considering any construction activity it may become apparent that insufficient area is available within the site for that activity. Additional area/s adjacent the site or nearby may be required for these activities as well as those involving specific work practices eg boundary fence construction. These are known as Hoarded Zones.

Types of Hoarded Zones

- “A” Class – are located at ground level
- “B” Class – an elevated area that also provides overhead protection for the pedestrian thoroughfare below.

Hoarded Zones may be located either in the public way or within private land.

When these zones are proposed within the public way:

- an application form for a Hoarded Zone must be submitted to Council for approval
- Proposed Hoarded Zones require the erection of a suitable hoarding.
- “A” Class zones require suitable pedestrian thoroughfares adjacent hoardings
- “B” Class zones must comply with WorkCover’s Code of Practice for *Overhead Protective Structures*. A traffic management plan (TMP) for the construction process is required.

When these zones are proposed within private property written consent from the affected property owner is required. If the zone is associated with a Development Application, this consent must be submitted with that application.

If an ESMP is required for a Development Application, details of all proposed Hoarded Zones must be included in the submission. The approved ESMP must be attached to any Hoarded Zone application for approval by Council.



HANDY HINT

When proposing a Hoarded Zone in the public way, it is prudent to ensure any public authority activity within the area has been considered.

vii) Work Zones

Work Zones are areas within a road carriageway that are generally located adjacent kerb and gutter. They are not required to directly adjoin the frontage of the site but should be in close proximity. Work Zones are restricted to 3 metres in width and are leased from Council or the Roads and Traffic Authority. Work Zones times relate to approved working hours only.

These areas are for the express purpose of assisting with managing construction activities associated with development sites. These areas may also be used for the temporary storage of materials associated with the site but only within the permitted hours of operation as indicated on the “Work Zone” signs. If granular materials are to be stockpiled within the Work Zone, they must be delivered/stored in suitable containers. If a Work Zone is to be used for temporary storage, then suitable sediment controls must be installed and maintained until the material has been relocated to within the site.



HANDY HINT

Work Zones are areas set aside for construction/delivery purposes only. They are not intended as parking areas for persons attending the site (see section 9b vi).

If an ESMP is required for a Development Application, details of all proposed Work Zones must be included in the submission. The approved ESMP must be attached to any Work Zone application for approval by Council.

viii) Hoardings

All proposed development sites must provide for a hoarding/s to be located on the boundary of the site.

Types of acceptable hoardings are: -

- Chain Wire - Continuous chain wire supported by galvanised steel posts with cast in-situ concrete footings and top and bottom straining wire.
- Prefabricated Chain Wire (temporary fencing) - Chain wire sections connected to prefabricated galvanised steel post frames and supported by pre-cast concrete “feet”. As the support “feet” protrude beyond the ‘face’ of the fence, “handrails” must be fitted to remove any potential pedestrian hazard. Alternatively, if handrails are unavailable or inappropriate “feet” can be buried. To ensure the integrity of the fence is maintained, panels must remain connected to each other. By limiting openings in the fence, access is controlled and overall environmental site management is maintained.
- Timber Plywood - consists of plywood formwork panels connected continuously to a timber frame. These hoardings should be painted in a neutral colour so as to blend with the surrounding area.

Support bracing for all types of hoardings must be provided and should be sufficient to ensure stability in all weather conditions.

All hoardings require gates for both vehicular and pedestrian movements. **All gates must open into the site.** The ESMP must show areas required for the operation of all gate/s and ensure that suitable site distance has been provided.

If an alternative hoarding is proposed, full details must be submitted to Council for approval.

Open form type hoardings should be clad with a suitable woven material to assist in minimising the generation of dust. Tight weave materials are not suitable as they do not permit the passage of wind thereby rendering the hoarding unstable.

Hoardings associated with any Hoarded Zone should be provided with appropriate sediment control devices (see Section 9a iii). The location and position of all hoardings that impact on the public way must always consider public safety.
--

ix) Construction staging details

If the proposed construction activity for a development site results in insufficient area for site management, it may be necessary to consider staging the construction.

The circumstances of the site may require initial commencement and possible completion in an area that will become inaccessible as the construction project proceeds. If this strategy is to be adopted, the construction plans may require amendment by the designing consultants.

Although more complicated, the method allows the builder additional opportunities with respect to material and site vehicle storage, which may reduce potential costs associated with Hoarded/Work Zone areas.

x) Noise control/working hours

To reduce noise emissions from construction and demolition sites, all activities should be carried out in accordance with the requirements of Australian Standard Guidelines AS2436 – 1981. ‘*Guide to Noise Control on Construction, Maintenance and Demolition Sites*’.

- Permitted hours for building and demolition work

All building and demolition work shall be carried out only between the hours of 7.00am and 6.00pm Monday to Friday inclusive, 8.00am and 5.00pm Saturdays. No work shall be carried out on Sundays and Public Holidays (unless there is written approval granted by Council to vary the hours of work).

- Noise control during construction and demolition

For construction and demolition periods of 4 weeks or less the Leq level (measured over a period of 15 minutes when the construction or demolition site is in operation), must not exceed the background level by more than 20 decibels (dB (A)).

For construction and demolition periods greater than 4 weeks and not exceeding 26 weeks the Leq level (measured over a period of 15 minutes when the construction or demolition site is in operation), must not exceed the background level by more than 10 decibels (dB (A)).

- Delivery of Heavy/Major Plant

The movement of heavy vehicles on roads is not generally restricted by any Act. Oversize vehicles require a RTA permit and are usually not allowed to travel on major roads during morning (6.00am – 10.00am) and evening (3.00pm – 7.00pm) peak periods. It is not desirable that such large vehicles travel on residential streets between these peak periods.

The delivery process should be undertaken onsite where practical. If necessary the public way may be used for the process, provided no damage to Council’s assets occurs (ie plant is run over boards or similar surface protective material) and public safety is maintained at all times.

The delivery of heavy plant and equipment to a building site is permitted prior to 6.00am Monday to Saturday provided:

- residents within 100 metres of the site are notified either in writing (by letterbox drop) of the time and date of the delivery, and/or a notification of the time and date of the delivery is placed in the public notice section of the local newspaper;
- the Sutherland Police Traffic Sergeant is notified in writing of the time and date and location of the delivery;
- the operation of the heavy plant and equipment is restricted to being unloaded from the transport vehicle and onto the site; and,
- noise emissions are to be minimised.

NOTE: No deliveries of heavy plant and equipment are to be made on Sundays or Public Holidays.

xi) Waste management (recycling/bins)

Construction sites need to be managed appropriately to minimise waste. The proposed development should incorporate the waste minimisation principles of Avoid, Reduce, and Recycle and conform to requirements of the *Waste Avoidance and Resource Recovery Act 2001*.

Waste areas should be established and located to:

- allow suitable access for service vehicles;
- allow sufficient area for the appropriate receptacle system;
- separate the waste area from construction activities thereby reducing the impact on the remainder of the site.

A collection and separation receptacle system must be provided within the waste area. Examples of such systems are:

- Fenced enclosure: is a “U” shaped, temporary device, similar in appearance to a silt fence. The device should be designed and aligned to provide maximum protection against prevailing winds. This device should be installed prior to commencement of construction.
- Removable container: eg skip bins and drums. Areas using this type of receptacle should be located to ensure that collection vehicles can operate wholly within the site.

Covers may be required in certain instances. In many cases a multi-receptacle system may be beneficial as it allows easy separation of waste types at the source. For further information and strategies for reducing waste, refer to Sutherland Shire Council Waste Management Guidelines.

When an ESMP is required for a particular development type, the location of waste area should be indicated.

xii) Demolition and/or Construction Information Sign

Demolition/construction information signs are required when the proposed activity involves demolition and/or alterations of existing structures and erection of new structures. They must be located so they are clearly visible from the public way. One Demolition/Construction Information sign per Development Application will be provided free of charge by Council once the Construction Certificate is issued.

Information displayed on these signs will provide details of the development activity.

Relevant details will be determined by the type of development and must include the following:

- Development other than exempt and complying;
 - site address – correct house number and street name
 - Development consent number
 - Principal Certifying Authority details – name and contact phone number
 - Builder (Civil contractor for subdivisions) details – company name, ACN (if applicable), address, phone number, 24 hour contact name and phone number
 - Demolition contractor details (if applicable) – company name, ACN (if applicable), address, phone number, contact name and phone number
- Complying development;
 - site address – correct house number and street name
 - Complying certificate number
 - Principal Certifying Authority details – name and contact phone number
 - Builder’s details – company name, ACN (if applicable), address, phone number, 24 hour contact name and phone number
 - Demolition contractor details (if applicable) – company name, ACN (if applicable), address, phone number, contact name and phone number
- Exempt development;
 - Sign advising that work being carried out is exempt development

10. Regulatory Provisions

Although Council's priorities are education of Environmental Site Management and co-operation with the public, there are a number of penalties that can apply to non-compliance with Development Consent and breaches of the Protection of the Environment Operations Act.

Council may, if appropriate, issue a Penalty Infringement Notice for any of the following matters.

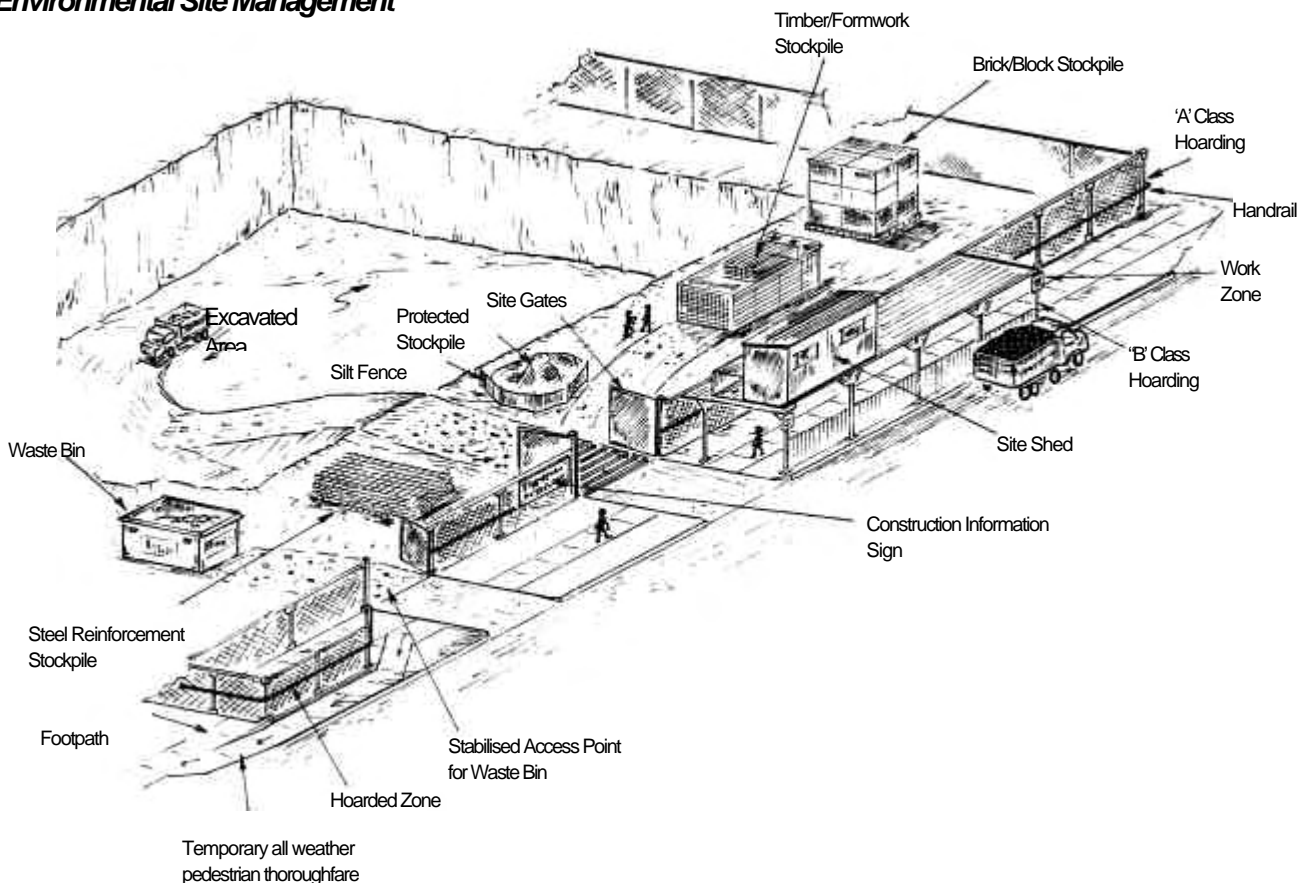
Breach of the Development Consent	\$600.00
Pollute waters	\$750.00(individuals) /\$1,500.00 (corporation)
Fail to comply with clean up notice	\$750.00(individuals) /\$1,500.00 (corporation)
Fail to comply with prevention notice	\$750.00(individuals) /\$1,500.00 (corporation)
Fail to sufficiently cover load (Vehicle)	\$500.00

The above list is an example of common breaches, but is not intended to be an extensive list of all possible breaches that may be enforced by the issue of a Penalty Infringement Notice.

In the case of major pollution incidents or breaches of Development Consent, Council has the option to have the matter determined before a Magistrate at the Local Court or Judge at the Land & Environment Court where the penalties are considerably higher.

Council may also issue Clean Up Notices or Prevention Notices to have certain works undertaken to rectify a potential pollution incident. These notices have a statutory \$320.00 administration fee attached which is payable despite any further penalty infringement notice being issued.

Environmental Site Management



11. Definitions

For the purpose of this plan the following definitions apply:

A class hoarding:

A structure of wire or wood used for enclosing, protecting and securing an area.

B class hoarding:

An overhead protective structure of wood or steel combining an elevated hoarded zone with pedestrian/vehicular thoroughfare directly under. It incorporates an “A” class hoarding on the side adjacent the work area.

Ballast:

Large (75mm-100mm diameter) gravel or recycled concrete used with stabilised access points

Complying Development:

Is local development that can be addressed by specific, pre-determined development standards.

Drainage structure:

Any device or product specifically used for controlling and transporting stormwater from a single or multiple collection points to the principal point of discharge.

Dilapidation survey:

Photographic and written depiction indicating the state of any area, feature, structure or combination of such items prior to the commencement of any activity that may have an adverse impact on those items.

Erosion:

The wearing away of the land and removal of soil by wind or water action

Erosion and sediment controls:

Devices and techniques that prevent/minimise scouring and the transfer of sediment.

Environmental Site Management Plan (ESMP):

A drawing and/or statement that details how all activities associated with a construction site are managed and maintained.

Exempt Development:

Means development, which is identified in an environmental planning instrument as development which is of minimal environmental impact and does not require a development application. (Refer Appendix A)

Footpath Reserve:

This is the area within a public road normally adjacent the road carriageway and used specifically for pedestrian passage and also as a public utility service corridor. It may consist of a “nature strip” with or without a formed footpath.

Hoarding:

A temporary fence surrounding a construction site, Hoarded Zone or other piece of ground.

Hoarded Zones:

Additional area/s adjacent the site or nearby required to assist in construction activities.

Layback:

Altered section of kerb and gutter specifically constructed to allow the passage of vehicles across the footpath reserve.

Public Way: Road related area

- includes an area that divides a road,
- a footpath or nature strip adjacent to a road, or
- an area that is open to the public and is designated for use by cyclists or animals or
- an area that is not a road and that is open to or used by the public for driving, riding or parking motor vehicles, or any other area that is open to or used by the public.

POEO Act 1997:

The Protection of the Environment Operations Act 1997; legislation dealing with monitoring, regulating and preventing pollution incidents.

Pollution (water):

Refer to Appendix A for POEO Act definition

Pollution Incident:

An incident or set of circumstances during or as a consequence of there is, has been or is likely to be a leak, spill or other escape of a substance, as a result of which pollution has occurred, is occurring or is likely to occur. It includes an incident or set of circumstances in which waste has been placed or disposed of on premises unlawfully, but it does not include an incident or set of circumstances involving only the emission of any noise or odour.

Road Carriageway:

This is the area within a public road specifically formed for the passage of vehicles. In nearly all cases the carriageway includes an allowance on either side for the standing of vehicles.

Stormwater Runoff:

This is the result/cause of rainwater falling on the ground and/or structure surface after saturation (if any) of the material medium has occurred. May also be referred to as rainwater or floodwater.

Stabilised Access Point:

The construction access to a development site. It is comprised of a temporary vehicular crossing, shaker pad, and ballast area. The combination of which is classified as Type I or Type II.

Temporary Vehicular Crossing:

A temporary construction in either mass concrete or ballast connecting the road carriageway to the street alignment. It is an integral component of a stabilised access point.

Work Zones:

Areas within a road carriageway used to assist with managing construction activities. They are generally located adjacent kerb and gutter, 3m wide and are only operational within the hours specified on associated signs.

12. Origin

Erosion and sediment control task group draft DCP

Edition 1

Action	Date
Council decision to adopt plan	24 September 2001 (EHC 066-02)
Public Notice in Newspaper	23 October 2001
Exhibition Start	23 October 2001
Exhibition Finish	23 November 2001
In effect from	16 April 2002

13. Advisory Information

Assistance in developing an adequate Erosion and Sediment Control Plan and/or an Environmental Site Management Plan may be obtained from the following sources:

1. Managing Urban Stormwater – Soils and Construction (the Blue Book);
2. SSC Erosion and Sediment control brochure;
3. EPA work sheets and brochures, particularly the *Construction and Demolition Waste Action Plan 1998*;
4. Council Specifications for Site Management Works
5. Workcover requirements;
6. RTA specifications;
7. Local government regulatory procedures; and,
8. Product information.

APPENDIX A

Legislative Definitions

Environmental Planning & Assessment Act

Exempt Development:

(2) Exempt development An environmental planning instrument may provide that development of a specified class or description that is of minimal environmental impact is exempt development. (3) If development is exempt development: (a) the development may be carried out, in accordance with the instrument, on land to which the provision applies without the need for development consent, unless that land: (i) is critical habitat, or (ii) is, or is part of, a wilderness area (within the meaning of the [Wilderness Act 1987](#)), and (b) [Part 5](#) does not apply to the development. A provision made under subsection (2) has no effect at any time during which the land is land to which paragraph (a) (i) or (ii) applies.

Protection of the Environmental Operations Act

Water pollution or pollution of waters means:

1. placing in or on, or otherwise introducing into or onto, waters (whether through an act or omission) any matter, whether solid, liquid or gaseous, so that the physical, chemical or biological condition of the waters is changed, or
2. placing in or on, or otherwise introducing into or onto, the waters (whether through an act or omission) any refuse, litter, debris or other matter, whether solid or liquid or gaseous, so that the change in the condition of the waters or the refuse, litter, debris or other matter, either alone or together with any other refuse, litter, debris or matter present in the waters makes, or is likely to make, the waters unclean, noxious, poisonous or impure, detrimental to the health, safety, welfare or property of persons, undrinkable for farm animals, poisonous or harmful to aquatic life, animals, birds or fish in or around the waters or unsuitable for use in irrigation, or obstructs or interferes with, or is likely to obstruct or interfere with persons in the exercise or enjoyment of any right in relation to the waters, or
3. placing in or on, or otherwise introducing into or onto, the waters (whether through an act or omission) any matter, whether solid, liquid or gaseous, that is of a prescribed nature, description or class or that does not comply with any standard prescribed in respect of that matter, and, without affecting the generality of the foregoing, includes:
4. placing any matter (whether solid, liquid or gaseous) in a position where:
 - (i) it falls, descends, is washed, is blown or percolates, or
 - (ii) it is likely to fall, descend, be washed, be blown or percolate, into any waters, onto the dry bed of any waters, or into any drain, channel or gutter used or designed to receive or pass rainwater, floodwater or any water that is not polluted, or
5. placing any such matter on the dry bed of any waters, or in any drain, channel or gutter used or designed to receive or pass rainwater, floodwater or any water that is not polluted, if the matter would, had it been placed in any waters, have polluted or have been likely to pollute those waters.

Section 223 - What is a penalty notice?

A penalty notice is a notice to the effect that, if the person served with the notice does not wish to have a specified penalty notice offence dealt with by a court, the person may pay the penalty prescribed under [section 227](#) for the offence: within the time specified in the notice (being 28 days from the date on which the notice was served), and to the person specified in the notice

Section 227 - Penalty payable

- (i) The regulations may prescribe the penalty payable under a penalty notice in respect of a penalty notice offence.
- (ii) Any such penalty may not exceed \$1,500 nor the maximum penalty that may be imposed by a court on a conviction for the offence.
- (iii) The regulations may prescribe different penalties for the same penalty notice offence.

public place:

- (a) a public place within the meaning of the [Local Government Act 1993](#), and
- (b) a State forest or flora reserve within the meaning of the [Forestry Act 1916](#), and
- (c) a national park, state recreation area, historic site, nature reserve, state game reserve or Aboriginal area within the meaning of the [National Parks and Wildlife Act 1974](#), and
- (d) a place that is open to the public, or is used by the public, whether or not on payment of money or other consideration, whether or not the place is ordinarily so open or used, and whether or not the public to whom the place is so open, or by whom the place is so used, consists only of a limited class of persons.

The Roads Act

public road:

- (a) any road that is opened or dedicated as a public road, whether under this or any other Act or law, and
- (b) any road that is declared to be a public road for the purposes of [this Act](#).

traffic hazard means a structure or thing that is likely:

- (a) to obscure or limit the view of the driver of a motor vehicle on a public road, or (b) to be mistaken for a traffic control device, or
- (b) to cause inconvenience or danger in the use of a public road, or
- (c) to be otherwise hazardous to traffic.

footway

means that part of a road as is set aside or formed as a path or way for pedestrian traffic (whether or not it may also be used by bicycle traffic).