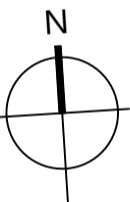


CONCEPT DRAINAGE PLAN



CONCEPT STORMWATER DRAINAGE PLAN

- 1:200
- All drainage lines shall be UPVC (Class SH) Stormwater Drainage Pipe, UNO.
 - All drainage lines shall be laid @ 1% minimum fall, UNO.
 - (A) = Easement to drain water 0.915 wide (L138868, R516192, R666437, L222525)

LEGEND	
DP	Downpipe - Refer Gutter Schedule
SP1	450 SQ x 150 Deep Sump
150	150 dia. UPVC Stormwater Drainage Line
225	225 dia. UPVC Stormwater Drainage Line

STORMWATER DOWNPIPE AND GUTTER SCHEDULE			
MARK	TYPE OF GUTTER	SIZE OF GUTTER	SIZE OF DOWNPIPES
GS1	Eaves Gutter	200 Wide x 150 Deep	150 DIA.
GS2	Box Gutter	450 Wide x 150 Deep	150 DIA
SG1	Soaker Gutter	400 Wide x 50 Deep	N/A
EBG	Ex. Box Gutter	TBC	TBC
EEG	Ex. Eaves Gutter	TBC	TBC

NOTE: All Gutter Systems shall be GS1, UNO.

NOTE:
A full site survey including pit sizes, invert and pipe sizes shall be submitted to the engineer to prepare the final stormwater design.
Existing gutter and downpipe sizes shall be submitted to engineer for approval.

GENERAL

- These drawings shall be read in conjunction with the architectural and other consultants' drawings / specifications and with other such written instructions as may be issued during the construction. Any discrepancy shall be referred to the Engineer before commencing the work.
- All dimensions are in millimeters, UNO (unless noted otherwise).
- These drawings shall not be scaled, refer to dimensions given only or refer to the Architectural drawings.
- All levels and setting out dimensions shown on the drawings shall be checked on site prior to the commencement of the work.
- During construction the structure shall be maintained in a stable condition with no part being overstressed.
- Existing services, where shown, have been drawn based on supplied information and as such their accuracy can not be guaranteed. It is the responsibility of the contractor to determine their exact location prior to the commencement of work.
- All service trenches under vehicular pavements shall be back filled in accordance with the respective authorities requirements.
- All trench backfill material shall be compacted to the same density as the surround material.
- All site disturbed areas shall be reinstated to the original condition, including kerbs, footpaths, concrete areas, gravel and grassed areas, etc.
- It is the contractors responsibility to obtain all authority approvals.

STORMWATER DRAINAGE

- The stormwater drainage design has been carried out in accordance with AS / NZS 3500.3 "Stormwater Drainage" & AS / NZS 3500.2.3 "Stormwater Drainage - Acceptable Solutions".
- Any variations to the design levels shall be referred to the engineer immediately for approval.
- Any variations to specified products or details shall be referred to the engineer for approval prior to their installation.
- Subsoil drainage shall be provided to all retaining walls & embankments. They shall be a minimum of 100 slotted pipe in filter sock surrounded by crushed rock. They shall drain to the stormwater drainage system.

SEDIMENT & EROSION CONTROL NOTES

- The sediment & erosion controls shall be maintained effectively for the duration of the project. They shall not be removed until the site has been stabilized or landscaped to the principal certifying authorities satisfaction.
- A single all weather access way shall be provided at the front of the property consisting of 50-80 mm aggregate or similar material with a minimum thickness of 150 mm laid over needle-punched geotextile fabric (Bidim A14 or similar) and installed prior to any works being commenced on site.
- Where the building works are greater than a single dwelling development, a shaker pad must be installed as part of the vehicular accessway. The shaker pad shall be:
 - Established on suitable prepared & compacted material.
 - Constructed such that it is flush with the adjoining surfaces.
 - A minimum of 5000 mm in length and breadth.
 - Designed with rungs spaced 200-250 mm apart & with a maximum width of 75 mm each.
- The contractor shall ensure that no spoil or fill encroaches upon adjacent areas during the project.
- The contractor shall ensure that all kerb inlets and drains affected by stormwater flow from the site are protected at all times during the project. Kerb inlet sediment traps shall be installed along the immediate vicinity along the street frontage. These shall be regularly maintained during the project.
- The street / road shall be kept clean from dirt and debris from vehicles departing the site.
- Sediment fencing shall be secured to posts (please note that if star pickets or similar are used then high visibility plastic safety caps shall be installed on top of the posts) at 2000 mm intervals with the geotextile fabric embedded a minimum of 200 mm in to the soil.
- All the topsoil stripped from the site shall be stockpiled such that it does not interfere with drainage lines and stormwater inlet pits. The stockpile shall be suitably covered with an impervious membrane and screened by sediment fencing.

SOIL CONSERVATION NOTE:

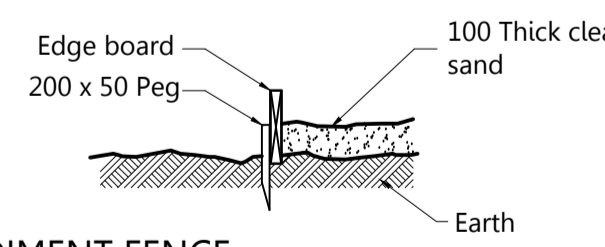
- Prior to the commencement of the site works the following shall be provided to capture water borne sediments:
 - Sediment fencing
 - Sediment trap
 - Washout area
- These shall be maintained regularly during the course of the construction with the sediment trap cleaned after each storm event.

SEDIMENT TRAP

- A 1000 x 1000 mm square by 500 mm deep pit located at the lows point of the site.

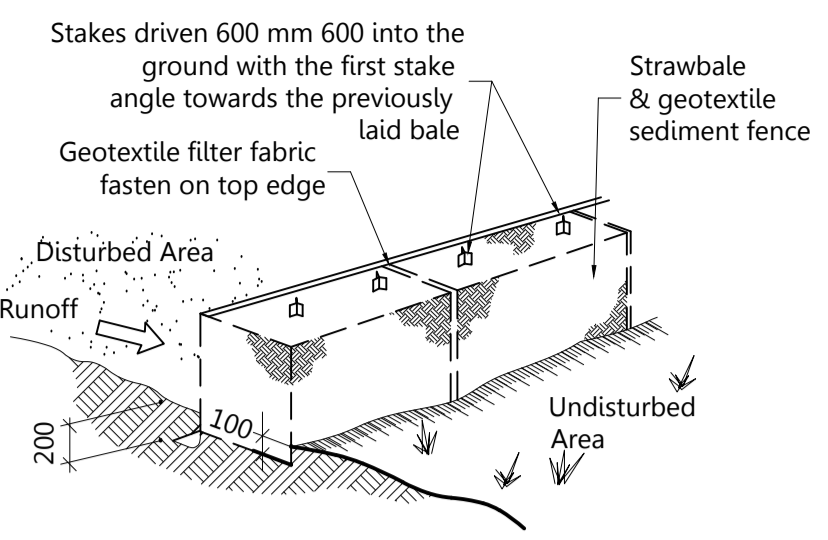
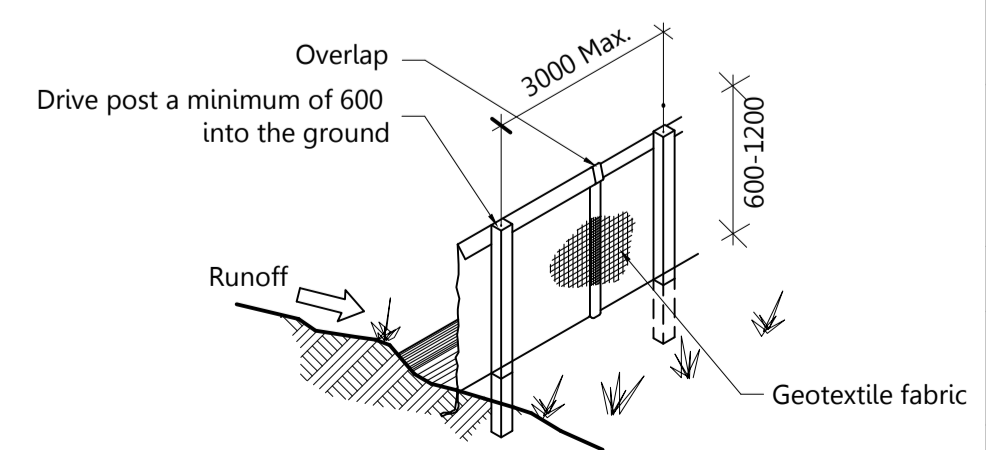
WASHOUT AREA

- The washout area shall be 1800 x 1800 mm allocated for the washing of tools & equipment in accordance with the detail below:



SEDIMENT FENCE

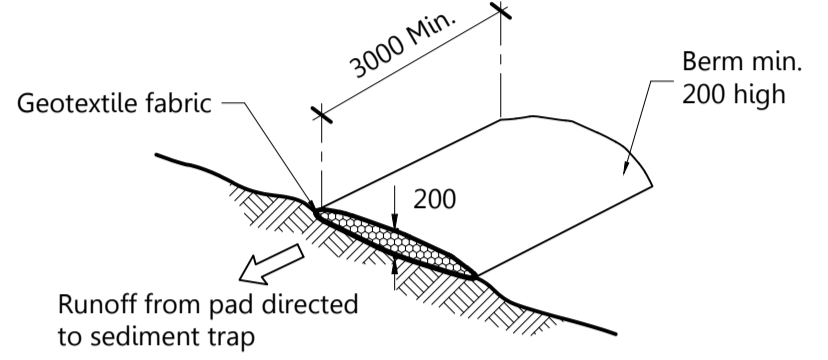
- Provide sediment fence on down slope boundary as shown on plan.
- Geotextile fabric to be buried 200 mm below tim tam at the lower edge.



- Drainage area is 0.5 HA with a maximum slope gradient 1:2 maximum and a maximum slope length of 50 m.

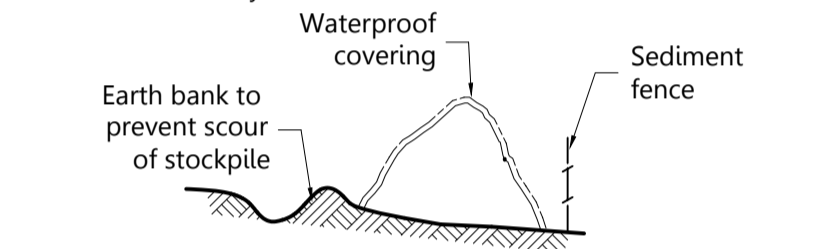
VEHICLE ACCESS TO SITE

- Vehicle access to the building site shall be restricted to a single point so as to reduce the amount of soil deposited on the street pavement.



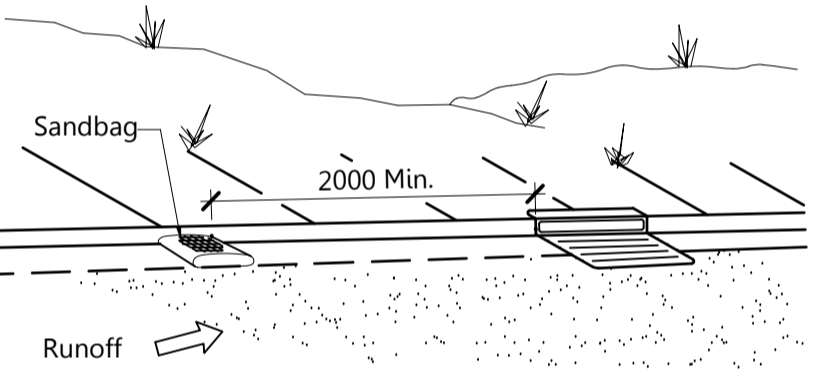
BUILDING MATERIAL STOCKPILES

- Where there are stockpiles of material on site they shall be located at least 2000 mm away from any hazard including surfaces with grades greater than 15%, away from zones of concentrated stormwater flows, away from driveways, temporary vehicular accessways, footpaths, nature strips, kerbs, open swales & the drip zone of trees.
- Sediment fencing shall be installed down slope of all stockpiles.
- The stockpile shall be covered with a impervious cover and held down firmly at all corners and sides.



SANDBAG KERB SEDIMENT TRAP

- In certain circumstances extra sediment trapping maybe needed in the street gutter.



REVISION	DATE	AMENDMENT DESCRIPTION
A	06.10.21	GENERAL REVISIONS

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Proposed Development		
145 Old Pittwater Road, Brookvale		
For Williams River Steel		
Concept Stormwater Drainage Plan		
DRAWN: JH	DATE: 2 Sept 2021	PROJECT: 16289
DESIGN: JH	SCALE: 1:200	DWG / REV: SW01 A