



**Schedule "C"**  
**THE DISTRICT OF MAPLE RIDGE**  
Watercourse Protection Bylaw 6410 – 2006

**Sediment and Erosion Control Plan**  
(Small Scale Building Projects)

**Sediment and Erosion control** for ***Small Projects*** (small additions, landscaping, decks, in ground pools, accessory buildings and structures, single family dwellings, and duplexes less than 2000 metres<sup>2</sup> will require the following measures to be implemented before construction works begin and maintained for each property until an Occupancy Permit has been issue by the Building Department. Responsibilities include the following:

**Access, Staging Areas, and Soil Protection**

1. Excavated/imported soils are not to be stockpiled/unloaded on roadways, curbs, or sidewalks. If soils are stockpiled within the boundary of the lot, then the stockpiles shall be covered with polyethylene sheeting and weighted down.
2. Stockpiled material (native and non-native soils) will not be placed closer than 2 metres from sediment and erosion control facilities (catch basins, conveyance trenches/ditches, swales or others).
3. Provide access area and a staging area for heavy construction vehicles in the form of a paved driveway or gravel pad (4.5m wide, minimum 6 inches depth and 100 mm diameter angular rock). Pad must be large enough to cover the staging and cleanup areas where heavy construction vehicle traffic is expected such as lumber trucks, excavators, dump trucks, or pumper trucks.
4. Vehicles/machinery shall not be permitted to park/drive upon boulevard areas (i.e. areas between the curb and sidewalk comprised of soils and/or grass sod).
5. No major grade changes are allowed (must be less than 0.5 metres difference from existing grade) and/or re-contouring of landscape exceeding 100 square metres of the entire lot without permission and a fill permit from the District.
6. Cover up all exposed soils during rain events, when rains are expected, or when a construction area is not being immediately used for more than 2-3 days (weekends) with polyethylene / tarps and weighted down.
7. Stop heavy construction work activity and use of heavy construction vehicles on site during heavy rain events at the discretion of the contractor and/or monitor.

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## Erosion and Sediment Control Measures

8. Management of erosion and sediment on site must include the following mitigation:
  - Retain existing vegetation and ground cover where possible.
  - A silt fence must be located on the lowest point of the lot abutting a road and around disturbed slopes within 50 metres of a watercourse, ditch, or body of water.
  - Divert runoff away from disturbed areas and roadways by use of perimeter ditches and diversion swales to onsite sediment controls or vegetated areas.
  - To facilitate velocity reduction / water detention and sediment retention all drainage ditches installed within the boundaries of the site will be lined with clean rock or other acceptable and permeable material and cross-bermed with check-dams and silt fences at 3 and 5m intervals.
  - Collect sediment runoff into on site sediment traps, sediment ponds, or into vegetated areas within the property to take advantage of natural infiltration of soils where appropriate.
  - waters captured within the building foundation shall be pumped into the excavated sump, not onto surrounding exposed soils or roadways;
  - Re-vegetate disturbed areas as soon as practically possible and within 30 days of completion of construction works.
9. Cutoff swales, perimeter drains, and the sump shall be lined with rock; a perforated riser pipe (surrounded with drain rock) within the sump shall be connected to the lead that discharges to the stormwater sewer system; for additional details, please refer to the Corporation of the District of Maple Ridge's drawing titled "Single Lot Development Erosion And Sediment Control Guidelines" (Attachment A);

### Maintenance

10. Roadways (fronting the respective lots) are to be swept free and cleaned of accumulated soils, fines/sediments on a regular basis (at least once a day during rain events). No flushing of these soils on the road is permitted.
11. Concrete truck wash and construction wash of exposed aggregate surfaces is not to be directed into any drainage system or catch basin.
12. The contractor and/or the designated environmental monitor must inspect the site on a regular basis to ensure all traps, sediment ponds, silt fences, access pads, and any other facilities are maintained on a regular basis.
13. Maintain a tidy site during construction and the contractor shall provide on site disposal facilities at all times. Disposal of waste shall be maintained on a regular basis.
14. Remove all temporary control measures and construction materials at the end of the project. Ensure site has been properly cleaned up, vegetated, and stabilized after construction works are complete.

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## Added Protective Measures

15. An applicant/contractor will be required by the Building Department to retain a qualified environmental monitor to provide a single lot Erosion and Sediment Control Plan as demonstrated in the attached Schedule C for each lot where the following variables apply:

- a) Building permit applications for single family dwellings that require construction works to take place during the rainy periods (October 15 – April 15)
- b) Lots with slopes or final grades with an average slope greater than 5 % percent;
- c) Lots located adjacent to watercourses or lots located within a designated watercourse setback area.
- d) Lots that were previously included in a subdivision and servicing development ESC plan where the designated developer has not yet been issued a final Certificate of Acceptance by the District.

The environmental monitor will be required to

- (i) submit a sketch plan to the Building Department for erosion sediment control as part of the Building Permit requirements; and
- (ii) Implement the ESC controls in accordance with Schedules C, the sketch plan, and with the Watercourse Protection Bylaw requirements.
- (iii) monitor the site for the remainder of the construction works in accordance with the Watercourse Protection Bylaw requirements to ensure compliance with performance requirements.
- (iv) Submit a final letter of inspection and compliance to the Building Department before an Occupancy Permit will be issued or security deposit returned.

16. Where **added protective measures** are required, an environmental security deposit of \$1,500.00 per lot will be required at the time of application to ensure that Municipal Drainage systems are not impacted during construction.

17. At the request of the Building Department, the applicant may be required to submit a **Large Scale Building Application** (Schedule B) and the applicable security deposit to the Building Department where any of the following variables apply:

- a) Lots with complex drainage issues, geotechnical issues, or where there is a significant presence of sensitive soil types (i.e. Haney Clays)
- b) Lots with a proposed disturbed area > 2.5ha (1 hectare)
- c) Lots where the majority of property has a natural or graded slope >15% percent
- d) Lots that require a grading permit from the Building Department; or
- e) Where a builder has construction works proceeding on five or more lots that are located adjacent to one another within a subdivision area.

The owner and/or all contractors associated with the project shall be responsible for ensuring compliance with these requirements, in addition to the requirements of the Watercourse Protection Bylaw at all times and shall be held responsible for any contravention of the Bylaws. A contravention may result in tickets, fines, and/or a Stop Work Order at any time.

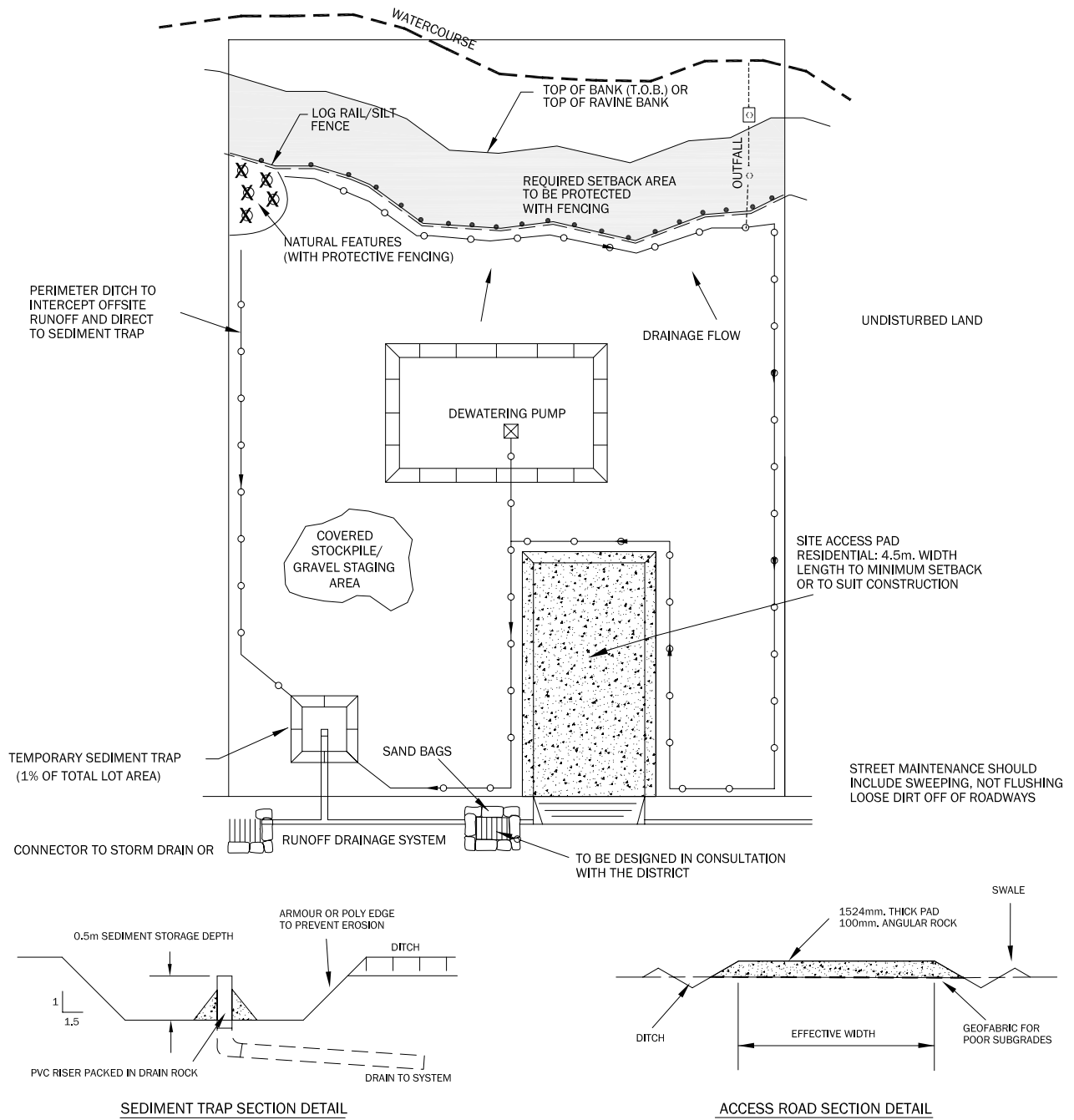
***Sediment and erosion controls may be inspected by a municipal inspector or bylaw enforcement officer as per the approved plans.***

\_\_\_\_\_  
Applicant signature

\_\_\_\_\_  
Applicant name (please print)

**Address:** \_\_\_\_\_

**Read the fine print:** By signing this form the applicant is committing to installing these sediment and erosion control measures in the field. Inspection of ESC controls may be required by a municipal inspector. Where the holder/holders of an ESC Permit has failed to maintain the validity of the ESC Plan or meet the provisions of the Watercourse Protection Bylaw, a municipal manager or designate may serve on such persons a Cease Work Order in addition to a fine of up to \$1,000 dollars per day. Following issuance of a Notice to Comply, all Construction on the site shall cease except for those works necessary to achieve compliance until the site has been issued approval to continue from the District.



**NOTES:**

1. Applicants must comply with the requirements of the Watercourse Protection Bylaw and the attached Schedule C.
2. Erosion and sediment control (ESC) works to be installed and operational prior to any other on-site activities.
3. No sediment laden water is to be discharged from the site.
4. Soil stockpiles to be covered with poly or tarp and weighted down and maintained.
5. Site access pad is to be 4.5m wide at all access points to site.
6. Swales to be installed as needed based on lot grading.
7. It is the owner's responsibility to sweep roads and clean site regularly.
8. Concrete truck wash and construction wash of exposed aggregate surfaces is not to be directed into any storm sewer system or catchbasin.
9. ESC security deposit will be returned after final occupancy and final letter of approval for site stabilization by the monitor of record.



SCALE:  
N.T.S.

**SMALL SCALE BUILDING PERMITS  
EROSION AND SEDIMENT CONTROL  
SAMPLE SKETCH**



CORPORATION OF THE  
DISTRICT OF MAPLE RIDGE  
PLANNING DEPARTMENT

DRAWN BY: RO

DATE: Nov. 9, 2007

FILE:

## Letter of Final Inspection and Site Cleanup

To: The District of Maple Ridge  
From: (insert name and firm of qualified environmental monitor)  
RE: Final Inspection For Premises located at (insert address)

This is to certify that in accordance with Schedule "C" Small Scale Erosion and Sediment Control requirements (section 15) for building sites with added protective measures of the Watercourse Protection Bylaw 6410-2006, the qualified environmental professional identified in this certification:

1. has been the designated environmental monitor of record for this site.
2. has completed an inspection of the Premises on \_\_\_\_\_ date);
3. has remediated the premises in accordance with Schedule C and the attached landscape completion standards. This includes
  - clean up and stabilization of all disturbed soil areas,
  - removal of all temporary control devices or construction debris;
  - completion of all surface treatments and landscaping requirements as outlined in DMR landscape completion standards for builders

The undersigned professional may be contacted at: (insert business telephone number).

CERTIFIED AS OF \_\_\_\_\_(date)

(Print name of environmental monitor and company)

\_\_\_\_\_  
Authorized Environmental Monitor Signature

## DMR LANDSCAPE COMPLETION STANDARDS FOR BUILDERS

- Ensure the site has been properly cleaned up, disturbed soils have been stabilized, and adequate surface treatments have been carried out to ensure proper drainage and re-vegetation opportunities as listed below.
- The final inspection letter must be submitted to the Building Dept. prior to inspectors conducting their final building inspection and prior to the return of the environmental security deposit.

### Soil Surface Treatments Standards and Guidelines

Work with qualified landscapers, certified landscape architects, or qualified environmental professionals to provide adequate surface treatments, site restoration, and landscaping. Applicants must comply with the following:

- All debris and / or excess materials from landscape operations shall be collected and disposed of in accordance with all regulatory requirements.
- To restore a site back to a respectable condition, basic surface treatments have to be carried out by the builder before sod or final planting is carried out. To prepare front yards and back yards for final building inspection, landscaping requirements must meet the following District minimal landscape and surface treatment standards:

### District of Maple Ridge Landscape and Surface Treatment Requirements

1. **Grading.** Water must flow away from footings and foundations. The slopes on site and surrounding the structure should be designed and graded so drainage flows are away from the house structure and must respect neighboring properties as well as other applicable bylaws.
2. **Drainage.** For drainage purposes, a minimum of three to six (3-6) inches of coarse sand is to be placed on exposed, disturbed, or compacted areas to allow for adequate drainage, especially where existing soils on site are compacted or consist mostly of clays. The sand layer should be graded at even depths throughout. On clay soils, the surface should be dry when the sand layer is placed. Note that too much sand would require more lawn watering as water would perk away faster.
3. **Topsoil.** A minimum three to six 3 - 6 inches of appropriate topsoil should be placed above the sand layer to support re-planting and slope stabilization. This should be completed for both back yards as well as front yard areas. The topsoil depth will depend on soil quality. The better the soil, the less depth required. Topsoil should be rolled, scarified lightly then seeded. Water is critical after seeding. For disturbed areas that require re-planting of trees or riparian areas that are to be enhanced and replanted, additional top soil may be required by the Environmental Professional of record for the site.
4. **Site stability.** For sites that require geotechnical assistance, the professional engineer of record must be consulted by the landscaper or environmental professional to ensure surface treatments will not compromise the integrity of the slopes.
5. **Re-planting.** All labour and plant installation shall be conducted in accordance with the BC Landscape Standard jointly produced by the BC Society of Landscape Architects and the BC Nursery Trades Association.

### Additional Resources

- *BC Landscape Standards* 6<sup>th</sup> edition. BC Landscape Nursery Association
- Native Plant Society of British Columbia <http://www.npsbc.org/index.htm>
- *Natural Lawn Care*. Greater Vancouver Regional District 2000