

SCHEDULE 4

(Conditions 9; 11; 16; 17; 18; 22; Schedules 1, 2, 3, & 6)

Operating conditions for scheduled and non-scheduled forestry activities

The following conditions must be complied with in undertaking all forestry activities commenced during this licence period and permitted by this licence. Note that the environmental outcomes specified in this schedule must be complied with and that the italicised notes are guidance only. Compliance with the guidance notes may not necessarily achieve the required environmental outcomes, and site-specific techniques must be developed and applied.

A. SITE-SPECIFIC CONDITIONS

1. If prior to, or during forestry activities, it becomes apparent that the conditions of this licence are not capable of achieving the objectives of this licence, State Forests must:
 - a) formulate additional special site-specific conditions aimed at achieving the objectives of this licence; and
 - b) place the site-specific conditions determined in 1(a) of this Schedule on file at the Regional Office and produce them on request to an EPA officer.
2. Site-specific techniques to achieve the conditions of Schedule 4 must be identified during the planning process. These site-specific techniques must be documented and placed on file at the Regional Office prior to the commencement of forestry activities, and produced on request to an EPA officer.

B. MAXIMUM SLOPE LIMITS

3. No harvesting is permitted on land mapped as inherent hazard level 4 in accordance with Module 1 of Schedule 3 of this licence. Where there is an area of unmapped inherent hazard level 4 land within the net harvestable area, trees may be felled and the logs subsequently extracted by winching, provided that this unmapped areas is:
 - a) no larger than 50 metres by 50 metres in extent; and
 - b) no larger than 2500 square metres; and
 - c) not contiguous with any other inherent hazard level 4 land, either within the compartment or adjoining it.

Where harvesting operations occur within this unmapped area of inherent hazard level 4, the following restrictions must be applied:

- a) machinery must not enter this area; and
- b) harvesting operations must only be conducted in months where the monthly erosivity value is less than 300; and
- c) the water flow or potential water flow does not occur along the log furrow surface for a distance exceeding 10 metres; and
- d) State Forests must achieve 70% groundcover on all disturbed areas within five days of the completion of felling of trees in the area. This level of groundcover must not be achieved by:
 - i) the respreading or retaining of slash or logging debris; or
 - ii) the spreading of topsoil and seed; and
- e) the area must be clearly identified on the operational map prior to the felling

of trees in the area.

C. SEASONALITY RESTRICTIONS

4. For land classified as inherent hazard level 3 with an average annual rainfall erosivity between 4000 and 6000, no forestry activities are permitted within the compartment during the periods specified in Module 4 of Schedule 3 of this licence.
5. For a compartment or roading area that has an average rainfall erosivity greater than 6000, no forestry activities are permitted on the specified ground slopes for the periods specified in Module 4 of Schedule 3 of this licence.

D. PROTECTION OF DRAINAGE FEATURES

DRAINAGE FEATURE PROTECTION FOR NATIVE FORESTS

6. Filter strips must be retained along all drainage lines, prescribed streams and watercourses and must have a minimum width in accordance with Table 1.

Table 1: Minimum filter strip width for mapped and unmapped drainage lines, prescribed streams and watercourses in native forests (metres - measured along the ground surface).

Stream Order	Inherent Hazard Level 1	Inherent Hazard Level 2	Inherent Hazard Level 3
Unmapped	10	10	15
1st order	10	15	20
2nd order	15	20	25
3rd order or greater	20	25	30

7. The determination of stream order for the purposes of Table 1 must be carried in accordance with Part B of Schedule 2 of this licence.
8. Filter strips must be retained around all wetlands and swamps and must have a minimum width in accordance with Table 2.

Table 2: Minimum filter strip width for mapped and unmapped wetlands and swamps in native forests (metres - measures along the ground surface).

Total Area of Wetlands or Swamps (ha)		
	0.01 - 0.5 ha	Greater than 0.5 ha
Wetlands or Swamps	10	40

9. Filter strips must be retained around all major water storages and must have a minimum width of 100 metres.
10. Notwithstanding condition 9 of this Schedule, State Forests may carry out forestry activities within 100 metres of the top water level of Blowering Dam on the Tumut River.

11. The width of filter strips on watercourses, prescribed streams and drainage lines must be measured from the top of the bank of the incised channel or, where there is no defined bank, from the edge of the channel.
12. The width of filter strips on wetlands and swamps must be measured from the edge of the current saturated zone or from the outer edge of where the vegetation type indicates a wetter micro-environment than the surrounding country, whichever is larger.
13. The area of wetlands and swamps must be measured from the edge of the current saturated zone or from the outer edge of where the vegetation type indicates a wetter micro-environment than the surrounding country, whichever is larger.
14. Where a filter strip extends beyond the boundary of the catchment of the drainage feature that is the subject of the filter strip then the filter strip may be terminated at the catchment boundary.
15. Buffer strips must be retained along all drainage depressions and must have a minimum width of five metres.
16. The width of buffer strips on drainage depressions must be measured from the apparent centre of the drainage depression.

OPERATIONS WITHIN NATIVE FOREST FILTER STRIPS

17. Trees located in a filter strip must not be felled, except for the purposes of constructing a road, extraction track or snig track crossing.
18. Trees must not be felled into filter strips.
19. Where a tree is felled into a filter strip, then no part of that tree can be removed from the filter strip.

(Note: The EPA does not intend to take proceedings where State Forests can demonstrate that the tree was accidentally felled into the filter strip. The tree will not be considered to have been accidentally felled if the felling is a result of poor judgement on the part of the faller).

20. Machinery must not enter a filter strip except for the construction and use of a road, extraction track or snig track crossing.

OPERATIONS WITHIN BUFFER STRIPS FOR NATIVE FORESTS

21. Machinery must not operate in buffer strips when the soil is saturated.
22. Machinery operating within buffer strips must:
 - a) use walkover techniques wherever possible;
 - b) prevent to the greatest extent practicable the skewing of machinery tracks;
 - c) operate with blade up at all times except when conducting earthworks in accordance with condition 23 of this schedule; and
 - d) not snig along drainage depressions.
23. Earthworks must not be undertaken within buffer strips except for the construction of

a road, extraction track or snig track crossing.

E. BORROW PITS AND GRAVEL PITS

24. Runoff from borrow pits and gravel pits must not be discharged into drainage features.
25. Borrow pits and gravel pits must be located outside filter strips.

F. LOG DUMPS

26. Runoff from log dumps must not be discharged into drainage features.

LOCATION

27. Log dumps must be located outside filter strips and buffer strips.
28. For land classified as inherent hazard level 2, log dumps must be located at least 10 metres from the boundary of a filter strip, unless the construction of the log dump at least 10 metres from the boundary of the filter strip would result in additional excavation compared to a log dump located closer to the filter strip.
29. For land classified as inherent hazard level 3, log dumps must be located at least 20 metres from the boundary of a filter strip, unless the construction of the log dump at least 20 metres from the boundary of the filter strip would result in additional excavation compared to a log dump located closer to the filter strip.

DEBRIS MANAGEMENT

30. Debris from log dumps must be located outside filter strips and buffer strips.
31. For land classified as inherent hazard level 2, debris from log dumps must be located at least 5 metres from the boundary of filter strips.
32. For land classified as inherent hazard level 3, debris from log dumps must be located at least 15 metres from the boundary of filter strips.

WET WEATHER RESTRICTIONS

33. Forwarders, excavators and truck mounted loaders may be used as stationary loaders when there is runoff from the log dump. All other machinery on the log dump must remain stationary when there is runoff from the log dump surface. This condition does not apply to gravelled log dumps.

G. BURNING

34. Post-harvest burning must be carried out in a manner that avoids burning the filter strip to the greatest extent practicable. Deliberate or negligent burning of filter strips must not occur.
35. Where a post-harvest burn has intruded into a filter strip, State Forests must put in place soil erosion and sediment control measures within 5 days to prevent water pollution.
36. For land classified as inherent hazard level 2 or 3, post-harvest burning must not be carried out during or within one month prior to those months of the year with an

average monthly rainfall erosivity of greater than 1100.

37. For land classified as inherent hazard level 2 or 3, post-harvest burning carried out during those months of the year with an average monthly rainfall erosivity of 900 to 1100 inclusive must use a ground burning (top disposal) method only.

H. SNIG TRACKS AND EXTRACTION TRACKS

38. Spoil from snig track or extraction track construction, upgrading or maintenance must not be placed in watercourses, drainage lines, prescribed streams, swamps or wetlands.
39. Spoil from snig track or extraction tracks construction, upgrading or maintenance must not be placed in filter strips or buffer strips.
40. Blading-off on snig tracks or extraction tracks is not permitted.
41. For land classified as inherent hazard level 2 or 3, the grade of snig tracks must not exceed 25 degrees except to:
- a) negotiate poorly drained land, rock outcrops or unstable soils; or
 - b) to take advantage of favourable terrain, such as to reach a geologically stable bench or saddle; or
 - c) to take advantage of soil which is more suitable for snig track construction and drainage.

EXTRACTION TRACK AND SNIG TRACK CROSSING OF DRAINAGE FEATURES

42. Snig tracks or extraction tracks must not cross wetlands or swamps.
43. For land classified as inherent hazard level 3, snig tracks or extraction tracks must not cross watercourses.
44. For land classified as inherent hazard level 3, drainage lines must only be crossed using permanent snig track or extraction track crossing structures.
45. The location and type of drainage line and watercourse crossings must be approved by State Forests and marked in the field prior to crossing construction.
46. Drainage features must be crossed using stable structures comprising either causeways, culverts or bridges. Log dams and gully stuffers must not be constructed.
47. Notwithstanding condition 46 of this schedule, existing log dams and gully stuffers may be used where the stability of the structure can be ensured for the duration of the forestry activity. A suitably qualified person must assess the stability of the structure prior to the commencement of forestry activities.
48. The stability of existing log dams or gully stuffers must be inspected twice weekly during forestry activities. Where an existing log dam or gully stuffer becomes unstable, State Forests must replace the crossing structure within five days.
49. Where existing log dams or gully stuffers are used during forestry activities, State Forests must ensure that the crossing structure is stable at the completion of operations at that crossing.

AMENDMENT 6

1 March 2013
 Paragraphs 50
 and 51 modified

50. Drainage feature crossings (except causeway crossings) must be designed, constructed, upgraded and maintained to wholly convey a peak flow from a 1:5 year storm event. The determination of the peak flow must be carried out in accordance with Part C of Schedule 2.
51. Drainage feature crossings (except causeway crossings) must be designed, constructed, upgraded and maintained to withstand the peak flow from a 1:10 year storm event. The determination of the peak flow must be carried out in accordance with Part C of Schedule 2.
52. Clearing associated with crossing construction, maintenance and upgrading must be undertaken at, or as close as practicable to, right angles to the water flow unless an angled approach reduces ground and soil disturbance.
53. Drainage feature crossing construction, maintenance and upgrading must be undertaken in a manner which prevents disturbance to the bed and banks of the drainage feature to the greatest extent practicable.
54. Disturbed areas resulting from drainage feature crossing construction, upgrading or maintenance must be re-shaped and soil stabilisation measures put in place within five days to achieve a stable cross section, unless the soil is saturated. Where the soil is saturated, machinery must not enter the disturbed area and temporary soil stabilisation and sediment control measures must be implemented within the five days. Permanent soil stabilisation measures must be put in place as soon as the soil is not saturated.
55. The construction, upgrading and maintenance of drainage feature crossings must restrict disturbance of vegetation and groundcover in the filter strip or buffer strip to a maximum length of 3 metres upstream and downstream of the crossing. Where clearing beyond 3 metres is necessary during construction, upgrading and maintenance of drainage feature crossings, State Forests may approve additional clearing, and must document the approval and the reasons why it was necessary. This documentation must be kept on file at the Regional Office.
56. Soil erosion and sediment control measures must be employed and maintained during drainage feature crossing construction, maintenance and upgrading operations that takes more than one day to complete. Soil erosion and sediment control measures must be:
- a) properly installed, constructed and maintained;
 - b) prevent to the greatest extent practicable the flow from the extraction track or snig track entering the disturbed areas; and
 - c) prevent to the greatest extent practicable the deposition of spoil into the drainage feature.
57. Soil stabilisation must be undertaken to all disturbed areas within 20 metres either side of snig track or extraction track crossing of watercourses or drainage lines. This does not include the track surface or track drainage structures within 20 metres either side of the watercourse or drainage line. Soil stabilisation must be completed within five days of crossing construction, upgrading and maintenance operations.

BRIDGES

58. Soil stabilisation measures must be used to protect bridge embankments from table drain discharge. This must be completed within five days of construction, upgrading and maintenance operations at that crossing.

59. Where soil or gravel is used as the pavement for the bridge surface, structures must be installed to prevent soil or gravel from entering the drainage feature. Soil or gravel deposited within the drainage feature must be removed. Removal of soil or gravel must be undertaken in a manner which prevents disturbance to the bed and bank of the drainage feature to the greatest extent practicable.
60. Disturbed areas resulting from the removal of soil or gravel from the drainage feature must be re-shaped and soil stabilisation measures put in place within five days to achieve a stable cross section, unless the soil is saturated. Where the soil is saturated, machinery must not enter the disturbed area and temporary soil stabilisation and sediment control measures must be implemented within the five days. Permanent soil stabilisation measures must be put in place as soon as the soil is not saturated.

CULVERTS

61. Fill material, including soil or gravel, placed on pipes and used as the crossing surface must not be placed upstream of the culvert inlet or in the downstream flowpath of the culvert outlet.
62. Soil stabilisation measures must be used to protect the upstream and downstream fill batters surrounding the culvert pipe(s). This must be completed within five days of crossing construction and maintenance operations.
- 62A. Where soil or gravel is used as the pavement for the road surface over the culvert, structures must be installed to prevent soil or gravel from entering the drainage feature. Soil or gravel deposited within the drainage feature must be removed. Removal of soil or gravel must be undertaken in a manner which prevents disturbance to the bed and bank of the drainage feature to the greatest extent practicable.
63. Pipe outlets must discharge onto a stable surface capable of handling concentrated water flow. Scouring at the pipe outlet must not undermine the crossing structure or initiate gully erosion.
64. Culvert recovery and removal of associated soil fill must be undertaken in a manner which prevents disturbance to the bed and banks of the drainage feature to the greatest extent practicable.
65. Where a culvert is removed, the disturbed areas within the drainage feature must be re-shaped and soil stabilisation measures put in place within five days to achieve a stable cross section, unless the soil is saturated. Where the soil is saturated, machinery must not enter the disturbed area and temporary soil stabilisation and sediment control measures must be implemented within the five days. Permanent soil stabilisation measures must be put in place as soon as the soil is not saturated.

AMENDMENT 6
1 March 2013
Paragraph 62A.
added

CAUSEWAYS

66. The bed and banks of causeway crossings must consist of a stable surface or be constructed of an erosion resistant material.

TEMPORARY EXTRACTION TRACK AND SNIG TRACK CROSSINGS

67. Temporary crossings must be immediately removed at the completion of their use. Removal of temporary crossings must prevent disturbance to the greatest extent practicable to the bed and banks of the drainage line or watercourse.
68. Where a temporary crossing is removed, the crossings must be re-shaped and soil stabilisation measures put in place within five days to achieve a stable cross section, unless the soil is saturated. Where the soil is saturated, machinery must not enter the disturbed area and temporary soil stabilisation and sediment control measures must be implemented within the five days. Permanent soil stabilisation measures must be put in place as soon as the soil is not saturated.

DISPERSIBLE SOILS

69. Where snig track or extraction track crossings of drainage lines or watercourses are constructed, upgraded or maintained in dispersible soils, State Forests must achieve at least 70% groundcover on the track surface within 20 metres either side of the crossing. This must be achieved at the completion of operations at each crossing.

(For example this could be achieved by one of the following techniques, or a combination thereof:

- a) *retain at least 70% existing ground cover using walkover techniques;*
- b) *retain or respread slash and logging debris over at least 70% of the snig track or extraction track surface within 20 metres; or*
- c) *providing a non-dispersive cover, over at least 70% of the snig track or extraction track surface within 20 metres).*

DRAINAGE OF EXTRACTION TRACKS AND SNIG TRACKS

70. Snig track and extraction track drainage must be located and constructed to ensure that water flow or potential water flow does not occur on snig track or extraction track surfaces for distances exceeding those given in Table 3.

(For example this could be achieved by one of the following techniques, or a combination thereof:

- a) *retain existing ground cover using walkover techniques;*
- b) *retain or cover track surface with slash and logging debris;*
- c) *construct or maintain track with outfall drainage; or*
- d) *constructed track drainage structures).*

71. Where extraction tracks are used, existing groundcover must be retained by using walkover techniques, or cover the track surface with slash and logging debris. Where concentrated water flow or potential water flow occurs along bare ground in wheel ruts, State Forests must ensure that the distance of the water flow does not exceed those specified in Table 3.

Table 3: Maximum distance of water flow or potential water flow along snig track or extraction track surface (metres - measured along the ground surface).

Track Grade (degrees)	Maximum Distance (metres)
5	100
10	60
15	40
20	25
25	20
30	15

Table 3 may be interpolated to derive site-specific maximum spacings.

72. Where track drainage structures are used they must be located, constructed and maintained to:
- a) have sufficient capacity to convey the peak flow from a 1:2 year storm event. The determination of the peak flow must be carried out in accordance with Part C of Schedule 2; and
 - b) divert water onto stable surfaces capable of handling concentrated water flow and which provide for efficient sediment trapping.
73. Where crossbanks are used, State Forests may elect not to calculate the capacity of the crossbanks in accordance with condition 72(a) of this schedule. In these cases the crossbanks must be constructed to a minimum unconsolidated effective height of 35 cm or a consolidated effective bank height of 25 cm. A maximum height of 50 cm unconsolidated is recommended. Where State Forests elects to calculate the capacity of the crossbank in accordance with condition 72(a) of this schedule, the calculations must be kept on file at the Regional Office.
74. Snig tracks and extraction tracks must be drained between 5 metres and 20 metres from drainage line or watercourse crossings. This distance must be measured from the top of the bank of the incised channel, or where there is no defined bank, from the edge of the channel. Where this cannot be achieved between 5 metres and 20 metres from the drainage line or watercourse, site-specific techniques must be employed to prevent the pollution of waters.
75. Where practicable, constructed snig tracks must be drained between 5 metres and 20 metres from drainage depression crossings. The distance must be measured from the apparent centre of the drainage depression.
76. Where a storm event exceeding the design criteria of track drainage structures occurs within 12 months of the completion of forestry activities, State Forests must assess track drainage structures and repair any that do not comply with the requirements of condition 72 of this schedule, unless such track repair work increases the risk of water pollution. Additional track drainage structures must be constructed and soil stabilisation works undertaken, where this would reduce the risk of water pollution.

77. Crossbanks must not be constructed of bark.
78. Windrows resulting from snig track construction, upgrading or maintenance operations must be removed from the shoulders of snig tracks unless specifically constructed to prevent erosion of fill batters or where infall drainage is used. Where it is not possible to remove windrows they must be cut through at regular intervals to ensure that water flow on the track surface does not exceed the distances specified in Table 3.
79. Drainage must be effected as soon as practicable at the completion of operations on each extraction track or snig track, and in any event within two days, unless the soil is saturated. State Forests must document instances where saturated soil conditions preclude the construction of effective drains.
80. Drainage must be installed if the use of an extraction track or snig track is to be temporarily discontinued in excess of five days, unless the soil is saturated. State Forests must document instances where saturated soil conditions preclude the construction of effective drains.

WET WEATHER RESTRICTIONS

81. Tracks must not be used where:
 - a) there is run off from the snig track surface; or
 - b) there is a likelihood of significant rutting leading to turbid runoff from the track surface.

DOWNHILL SNIGGING

82. Where downhill snig tracks connect directly with a log dump or log landing, one of the following techniques or a combination thereof must be used:
 - a) snig tracks must enter the log dump or log landing from the side or below; or
 - b) a drainage structure must be in place immediately before a snig track enters the log dump or log landing at the end of each day's operation.

I. STORAGE AND HANDLING OF HAZARDOUS SUBSTANCES AND WASTE

83. Fuel oils must be stored and handled in compliance with the requirements of AS1940 (1993)- "The storage and handling of flammable and combustible liquids".
84. Mobile fuel tanks must not be located within, or within 10 metres of the boundary of a filter strip.
85. The transportation and storage of fuel, and the refuelling of equipment must be carried out in a manner which prevents the pollution of waters as a result of the escape of fuel.
86. Chemicals must be stored and handled in compliance with the requirements of the Control of Workplace Hazardous Substances - National Model Regulation and National Code of Practice, June 1991, published by Worksafe Australia.

87. Plant and equipment and other substances and materials on the site of forestry activities must be handled, operated, moved and stored in a proper and efficient manner for the purposes of preventing the pollution of waters.
88. All servicing and repairs of equipment must be carried out in a manner which prevents the pollution of surface and ground waters.
89. Waste must not be buried or otherwise deposited in a compartment or roading area.
90. The general work area must be kept free of waste generated during forestry activities.
91. Waste must be properly and efficiently stored until it can be removed from the forest.
92. Waste stored for removal must be removed within seven days after completion of harvesting or roading operations in the compartment or roading area.
93. Waste must be removed from the forest and disposed of in a proper and efficient manner at an appropriate facility.
94. In conditions 89 to 93 of this Schedule, "waste" includes but is not limited to tyres, drums, wire rope, sump oil and litter, but does not include forest or logging debris.