



Site-specific operating conditions for Bungawalbin State Forest, Compartments BWN 001, 002, 003, 004, 005

I, Richard Bean, Chief Executive Officer of the Environment Protection Authority (EPA), for and on behalf of the EPA, grant the site-specific operating conditions set out below to Forestry Corporation of NSW pursuant to condition 23.4 of the Integrated Forestry Operations Approval for the Coastal Region (the **approval**) dated 16 November 2018.

Interpretation

1. The words used in this document have the same meaning as in the **approval**, except where contrary intention appears. All defined terms are printed in bold and italics.
2. In addition to the terms defined in the **approval**, the following definitions apply in this document:

Coarse woody fire debris means dead timber (including a log or head of a tree) that has fallen on the forest floor due to fire and:

- (a) the smallest end of the dead timber has a minimum diameter of 10 centimetres or greater under bark; and
- (b) is greater than three metres long.

Dead tree means a tree that has no epicormic and/or lignotuber growth (at the time of the **forestry operation**).

Erosion control measure means a control measure used to mitigate, reduce or prevent **erosion**.

Giant (dead) tree means:

- (a) in relation to Blackbutt or Alpine Ash trees, any **dead tree** of these species with a **diameter at stump height over bark (DSHOB)** of 160 centimetres or greater; and
- (b) in relation to all other tree species, a **dead tree** with a **diameter at stump height over bark (DSHOB)** of 140 centimetres or greater.

Greater glider feed trees means a live tree over 20cm **DBH** that:

- (a) has either epicormic growth, young leaves or green foliage in the canopy; and
- (b) is one of the following tree species:

- i. *Eucalyptus viminalis*
- ii. *Eucalyptus dalrympleana*
- iii. *Eucalyptus radiata*
- iv. *Eucalyptus fastigata*
- v. *Eucalyptus campanulate*
- vi. *Eucalyptus andrewsii ssp. Campanulate*
- vii. *Eucalyptus laevopinea*
- viii. *Eucalyptus saligna*
- ix. *Eucalyptus microcorys*
- x. *Eucalyptus cypellocarpa*
- xi. *Eucalyptus ovata*
- xii. *Eucalyptus obliqua*.

Partially burned area means the area covered by a spatial data set held by the **EPA** and provided to **FCNSW** that the **EPA** is satisfied adequately shows partially-burned areas at the **site**, as amended from time to time.

Temporary feed tree clump has the meaning given in condition 28 of these **site-specific operating conditions**.

Unburned area means the area covered by a spatial data set held by the **EPA** and provided to **FCNSW** that the **EPA** is satisfied adequately shows unburned areas at the **site**, as amended from time to time.

Site means Bungawalbin State Forest **compartments** BWN 001, 002, 003, 004, 005 (formerly known as **compartments** 46, 47, 48).

Specific site(s) to which these **site-specific operating conditions** apply

3. These **site-specific operating conditions** apply to all **forestry operations** at the **site**.

Duration of these **site-specific operating conditions**

4. Subject to condition 5 of these **site-specific operating conditions**, for the purposes of condition 23.4 of the **approval**, the **EPA** specifies that these **site-specific operating conditions** apply until the earlier of:
 - (a) the date that the **site-specific operating conditions** are revoked in writing by the **EPA**; and
 - (b) the date that is 12 months from the date the **site-specific operating conditions** are granted.
5. Any condition of these **site-specific operating conditions** which by its nature should continue to apply beyond the expiry of these **site-specific operating conditions** continues to apply, including conditions 62 to 66 of these **site-specific operating conditions**.

Continuation of the **approval**

6. The conditions of the **approval** and the **protocols** continue to apply, except as otherwise provided by these **site-specific operating conditions**.

Inconsistency between instruments

7. In the event of inconsistency between these **site-specific operating conditions** and a condition of the **approval**, the **site-specific operating conditions** prevail to the extent of the inconsistency.

Schedule has effect

8. Any conditions in Schedule 1 of these **site-specific operating conditions** have effect.

Restrictions on harvesting method

9. Despite any condition to the contrary in the **approval**, including condition 13.1 of the **approval**, the following **forestry operations** must not be conducted at the site:
 - (a) **intensive harvesting**;
 - (b) **mixed intensity harvesting**;
 - (c) **alternate coupe logging**;
 - (d) **forest product operations** which involve removal of vegetation (other than trees or timber); and
 - (e) **burning operations**.

Adjustments to selective harvesting processes

10. Where **forestry operations** are conducted at the **site**, **harvesting operations** must only be conducted as **selective harvesting** in burned areas at the **site**.

Retention of unburned areas and partially burned areas within clumps

11. Any **unburned area** or **partially burned area** of at least 0.05ha (or approximately 20 by 20 metres) is taken to be an **ESA** under the **approval**. Those **unburned areas** or **partially burned areas** over one hectare in size are taken to be a **Category 2 ESA**. Those **unburned areas** or **partially burned**

areas between 0.05ha and one hectare in size are taken to be a **Category 1 ESA**. Despite anything to the contrary in the **approval**, these areas can be included as a **wildlife habitat clump** or **tree retention clump** if they otherwise meet the habitat standards listed in Protocol 22.

Prioritising wildlife habitat clumps and tree retention clumps

12. When applying Protocol 22, FCNSW must prioritise the establishment of **tree retention clumps** and **wildlife habitat clumps** in **unburned areas** or **partially burned areas** or in areas with unburned **groundcover**, over other areas.

Adjustments to flora and fauna surveys

13. **FCNSW** is not required to comply with condition 57.1 (c) of the **approval**.
14. Despite any condition to the contrary in the **approval**, a **forestry operation** must not be conducted in any part of an **operational area** unless and until a **broad area habitat search** has been completed since the last date on which any part of the **operational area** was burned in 2019-20.
15. Despite any condition to the contrary in the **approval**, that part of the **broad area habitat search** that involves looking for, identifying and recording any of the trees referred to in conditions 19, 22, 24 and 26 of these **site-specific operating conditions**, or looking for, identifying and recording **Glossy Black-Cockatoo feed trees** or **Glider sap feed trees**, must be carried out by a **suitably qualified person** at least 50 metres in advance of the **harvesting operation**.
16. **FCNSW** can undertake the **broad area habitat search** described in **Protocol 20: Pre-operational surveys** in a **patch** via any means that is capable of identifying the **habitat features** or **species** in Table 2 of condition 57 of the **approval**, which may include by foot, vehicle or unmanned aerial vehicle or a combination of these methods. A **broad-area habitat search** must be undertaken on foot wherever in the reasonable opinion of **FCNSW** it is safe to do so. **FCNSW** must record the method(s) used and date of the **broad-area habitat search** for each **patch**.
17. Where a **patch** subject to a **broad area habitat search** cannot be surveyed to meet conditions 14, 15 and 16 of these **site-specific operating conditions**:
 - (a) **FCNSW** must consult with the **EPA** to identify alternative approaches before **forestry operations** can occur in that **patch**; and
 - (b) the **EPA** may approve an alternative approach to conditions 14, 15 and 16 of these **site-specific operating conditions**.
18. Where the **EPA** has approved an alternative approach pursuant to condition 17(b) of these **site-specific operating conditions**, **FCNSW** must comply with that alternative approach but need not comply with conditions 14, 15 and 16 of these **site-specific operating conditions** in respect of the **patch** for which the **EPA** has approved an alternative approach.

Adjustments to retained trees requirements

Adjustments to the retention requirements for hollow-bearing trees

19. Despite any condition to the contrary in the **approval**:
 - (a) All **hollow-bearing trees**, and any trees that would fit the definition of **hollow-bearing trees** if they were alive, must be permanently retained.
 - (b) The trees referred to in condition 19(a) of these **site-specific operating conditions** above must be prioritised for inclusion in a **tree retention clump** or **wildlife habitat clump**, provided that the other requirements in the **approval** relevant to **tree retention clump** or **wildlife habitat clump** are met, including the requirements in Protocol 22.
20. Trees selected for the purpose of condition 19 of these **site-specific operating conditions** must be identified, recorded and protected in accordance with **Protocol 23: Tree retention as retained trees**.

Adjustments to retention requirements for dead standing trees

21. **FCNSW** is not required to comply with condition 64.2(b) of the **approval**.
22. **FCNSW** must permanently retain at least 10 **dead standing trees** per hectare of **net harvest area**, where they occur.
23. Trees selected for the purpose of condition 22 of these **site-specific operating conditions** must be identified, recorded and protected in accordance with **Protocol 23: Tree retention as retained trees**.

Adjustments to retention requirements for giant (dead) trees

24. Despite any condition to the contrary in the **approval**:
 - (a) All **giant (dead) trees** must be permanently retained.
 - (b) **Giant (dead) trees** must be prioritised for inclusion in a **tree retention clump** or **wildlife habitat clump**, provided that the other requirements in the **approval** relevant to **tree retention clump** or **wildlife habitat clump** are met, including the requirements in Protocol 22.
25. Trees selected for the purpose of condition 24 of these **site-specific operating conditions** must be identified, recorded and protected in accordance with **Protocol 23: Tree retention as retained trees**.

[Note: condition 64.2(a) of the **approval** requires that all live **giant trees** be permanently retained].

Adjustments to retention requirements for feed trees

26. Despite any condition to the contrary in the **approval**, **FCNSW** must:
 - (a) permanently retain all live Red Gum (*E. Tereticornis*, *glauca*, *seeana* and hybrids) and Swamp Mahogany *E. robusta* trees over 20cm **DBH**,
 - (b) retain all live *Allocasuarina* spp. trees over 30cm **DBH**; and
 - (c) retain all unburnt and mature banksia spp., acacia spp. and xanthorrhoea spp.
27. Trees selected for the purpose of condition 26 of these **site-specific operating conditions** must be identified, recorded and protected in accordance with **Protocol 23: Tree retention as retained trees**.

[Note: condition 64.3 of the **approval** provides that all **Glossy Black-Cockatoo feed trees** must be retained, being trees of an *Allocasuarina* spp. which shows evidence of Glossy Black-Cockatoo feeding by the presence of characteristic crushed cones at, or around, its base].

[Note: For the purpose of condition 26(b) of these **site-specific operating conditions**, the trees to be retained must be those that are capable of fruiting, flowering and providing foraging habitat or refuge].

Retention of temporary feed tree clumps for koalas, gliders and nectar feeding species

28. For the purposes of these **site-specific operating conditions**, a **temporary feed tree clump** means a clump of trees which:
 - (a) is a minimum of 0.1 hectare and a maximum of two hectares in size;
 - (b) is retained for the purpose of protecting and retaining, to the greatest extent possible:
 - i. **Koala browse trees**;
 - ii. **nectar trees**;
 - iii. **Greater glider feed trees**; and

- iv. live *Allocasuarina* spp. trees that in the reasonable opinion of **FCNSW** are capable of producing cones;
 - (c) does not include known **ESAs** or other areas that would otherwise require permanent protection under the **approval**;
 - (d) does not include areas identified and protected as **tree retention clumps** or **wildlife habitat clumps**; and
 - (e) may include trees permanently retained under condition 26(a) of these **site-specific operating conditions**.
29. **Temporary feed tree clumps** must be identified and retained at least 100 metres in advance of a **harvesting operation** in any part of the **site** at a rate of 7 per cent of the area available for **harvesting operations** at the **site** (less all **exclusion zones** and **ESAs**).
30. For the purposes of condition 29 of these **site-specific operating conditions** above, **temporary feed tree clumps** must be identified and retained based on the following factors:
- (a) the **temporary feed tree clumps** must maximise landscape connections between other retained patches of vegetation or as **habitat** islands within a large cutover area (for example, as either corridors or islands); and
 - (b) **temporary feed tree clumps** must be dispersed through the range of **habitat** types and topographic positions that occur within the **site**.
31. **Temporary feed tree clumps** identified and retained under condition 29 of these **site-specific operating conditions**:
- (a) must be retained during and at the **completion** of the **forestry operation**, and are not required to be permanently retained;
 - (b) must be mapped in accordance with condition 117.4 of the **approval**, as if that condition applied to **temporary feed tree clumps**;
 - (c) must be recorded in the “Temporary_Feed_Tree_Clump” **spatial dataset**, which must specify the types of trees prioritised in accordance with condition 28(b) of these **site-specific operating conditions** in the **temporary feed tree clump**.

[Note: conditions 64.3(c) and 65 of the **approval** continue to apply]

Adjustments to fauna and/or flora protections

Application of site-specific biodiversity conditions

32. For the avoidance of doubt, **FCNSW** must comply with all requirements of condition 21 of the **approval** and condition 31.3 of **Protocol 31: Matters covered by the approval**.

Flora

33. **Forestry operations** must not be conducted in an area unless and until:
- (a) **FCNSW** has updated all pre-existing **species management plans** and **flora road management plans** relevant to that area to take into account fire impacts from the 2019-20 bushfires; and
 - (b) The **EPA** has approved each relevant plan referred to in condition 33(a) above.

[Note: condition 81.1(b) of the **approval** continues to apply]

Adjusted Environmentally Significant Areas for specified features

34. Despite any condition to the contrary in the **approval**, an **exclusion zone** of at least 30 metres must be retained around all **heath and scrub** and **rocky outcrops and cliffs**.
35. An additional **exclusion zone** of at least 10 metres must be retained around all **rainforest** and this area is taken to be a **category 1 ESA**.

36. Areas retained for the purpose of conditions 34 or 35 of these **site-specific operating conditions** can be included in a **wildlife habitat clump**, provided that:
- (a) areas of unburned habitat are prioritised first, and
 - (b) the requirements in the **approval** relevant to a **wildlife habitat clump** are met, including the requirements in Protocol 22.
37. In addition to the requirements of the **approval** in relation to **coarse woody debris** (including conditions 62 and 91), damage or disturbance to **coarse woody debris** or **coarse woody fire debris** must be minimised to the greatest extent practicable.

Adjusted riparian protection

38. Despite any condition to the contrary in the **approval**, and to replace the **riparian exclusion zones** in Tables 6a and 6b of the **approval** to the extent of any inconsistency, a **riparian exclusion zone** with a minimum width as specified in **Table 1** below must be retained on each side, and for the entire length of, each of the drainage categories listed in column one of the table.

Table 1

Drainage Category	Riparian Exclusion Zone	
	Minimum width of <i>riparian exclusion zone</i> (metres)	ESA Category
Drainage depression (mapped or unmapped)	10m, unless otherwise approved by the EPA	Category 2 ESA
Unmapped drainage lines	20m	Category 2 ESA
Class 1 classified drainage line	20m	Category 2 ESA
Class 1 classified drainage line within class 1 aquatic habitat	20m	Category 2 ESA
Class 2 classified drainage line	30m	Category 2 ESA
Class 3 classified drainage line	40m	Category 2 ESA
Class 4 classified drainage line	60m	Category 2 ESA

Additional conditions to prevent or minimise erosion and water pollution

39. **Harvesting operations** must:
- (a) only use **walkover techniques** where it is possible to do so;
 - (b) minimise skewing; and
 - (c) limit further ground disturbance to the greatest extent possible.
40. Unless otherwise approved in writing by the **EPA**, new **roads** must not be constructed at the **site**.
41. **Tracks, side-cut snig tracks** and **track crossings** may only be constructed at the **site** where a **suitably qualified person** confirms in writing that the relevant **tracks, side-cut snig tracks** or **track crossings** will be **stable**, and not cause **erosion** or **water pollution**. For the avoidance of doubt, this condition does not apply to **roads**.
42. Subject to condition 43 of these **site-specific operating conditions**, water flow must not occur on **roads** or in **table drains** for distances exceeding the maximum distance specified for the grade of **road** or **table drain** in Table 2 below.

43. If:

(a) the only practicable way to ensure that water flow does not occur on **roads** or in **table drains** for distances exceeding the maximum distance specified for the grade of **road** or **table drain** in Table 2 below is to install new **relief pipes**; or

(b) in the opinion of a **suitably qualified person**, the **road** and **table drains** are **stable**,

then

(c) **FCNSW** is not required to comply with condition 42 of these **site-specific operating conditions**; and

(d) **FCNSW** must instead use best practice measures to minimise the flow of water on **roads** and **table drains**, minimise **erosion** and ensure sediment laden water is not discharging directly into **drainage features**.

Table 2. Maximum distance of water flow along road surfaces and table drains

Road or table drain grade (degrees)	Maximum distance (metres)
1	125
2	100
3	75
4	65
5	50
6	45
7	40
8 - 9	35
10 - 11	30
12 - 13	25
14 – 15 +	20

44. Water flow must not occur on **tracks** for distances exceeding the maximum distance specified for the grade of **track** in Table 3 below.

Table 3. Maximum distance of water flow along track surfaces

Track grade (degrees)	Maximum distance (metres)
up to 5	50
6-10	30
11-15	20
16-20	15

45. Despite condition 104.1 of the **approval**, **tracks** must be drained to divert water flow from the **track surface** on completion of use of the **track** for the **forestry operation** as follows:
- (a) where soil on the **track** is not **saturated soil** – the **track** must be drained within two days; or
 - (b) where soil on the **track** is **saturated soil**:
 - i. temporary **stabilisation** and **sediment control measures** must be implemented within two days; and
 - ii. the **track** must be drained as soon as the soil is not **saturated soil**.
46. Where water flows or has the potential to flow from a **track** to a **log dump**, a **track drainage structure** must be put in place within 5 metres of the outer edge of a **log dump** to prevent water flow from the **track** to the log dump.

Monitoring and maintenance of drainage structures

47. **FCNSW** is not required to comply with condition 101.1(b)(i) and (ii) and 104.3(a) of the **approval**.
48. **Drainage structures** and **drainage structure outlets** must be properly installed, constructed and maintained in a manner so that they are in a proper and efficient condition and minimise **erosion**.
49. Where a **drainage structure outlet** is causing erosion or discharging sediment or water flow directly into a drainage feature, **sediment control measures** and **erosion control measures** must be installed to ensure the **outlets** are **stable**.
50. Any **drainage structures** that are not in a proper or efficient condition must be repaired within 2 days, unless otherwise approved by the **EPA**.

Log dumps

51. Despite condition 107.2 of the **approval**, each **borrow pit**, **gravel pit** and **log dump** must be located at least 20 metres from the outer edge of any **riparian exclusion zone** or **ground protection zone** on a class 1 **classified drainage line** or class 2 **classified drainage line**.
52. Each **log dump** must be **stabilised** on completion of its use by applying one of the following methods:
- (a) spreading bark evenly across the **log dump** surface to achieve at least 70% **groundcover**;
 - (b) ripping across the **log dump** surface to reduce **runoff** volume from the **log dump**; or
 - (c) construct berms across the **log dump** to reduce **runoff** volume from the **log dump**.
53. Within 5 days of any ripping or construction of berms in accordance with condition 52 of these **site-specific operating conditions**, seeds of **groundcover** species must be spread if the **log dumps** have less than 70% **groundcover**, for the purpose of achieving more than 70% **groundcover**.

Directional felling to reduce runoff and erosion

54. Trees should be felled across the fall of the slope so that the remaining **coarse woody fire debris** assists with the establishment of **groundcover** and assists in reducing **runoff** and/or **erosion**.

Harvesting debris

55. To reduce runoff, **harvesting debris** (including non-merchantable logs) must be spread on the ground surface so that to the fullest extent practicable it is in contact with the ground surface.

Slope restrictions to prevent or minimise erosion and water pollution

56. **Harvesting operations** must not be carried out on **ground slopes** greater than 20°.

57. Despite condition 56 of these **site-specific operating conditions**, **FCNSW** may construct and use a **track** on slopes up to 25° where a **suitably qualified person** confirms in writing that the construction and use of the **track** will not cause **erosion** or **water pollution**.

Additional soil conservation measures

58. **Forestry operations** must not be carried out in:
- (a) areas of **dispersible soils**;
 - (b) areas identified as **soil regolith** class 2 or **soil regolith** class 4 under **Protocol 15: Inherent soil erosion and water pollution hazard assessment**; or
 - (c) areas identified as **inherent hazard level (IHL) IHL3** or **IHL4** under **Protocol 15: Inherent soil erosion and water pollution hazard assessment**.

Measures to avoid the mass movement of soil

59. **Forestry operations** must not be carried out in areas where **mass movement** hazard is identified under **Protocol 13: Mass movement assessment** unless otherwise approved by the **EPA**.

Adjustment of seasonality restrictions

60. **FCNSW** is not required to comply with Condition 108.2 of the **approval**.
61. **Forestry operations** must not be carried out from 1 December to 30 April in any year in **compartment**s where **rainfall erosivity** levels are greater than 6000 under **Protocol 12: Seasonality restrictions**.

Regeneration

62. For the avoidance of doubt, condition 4.2(3)(x) and 4.2(7)(a) of **Protocol 4: Operational plans** apply to the **site**, and **operational plans** must include management actions to mitigate the impact or further spread of **Bell Miner associated dieback**, **biosecurity matter** or other **regeneration** risks as a consequence of fire impacts and subsequent **forestry operations**.
63. Despite any condition to the contrary in the **approval**, the **EPA** may request in writing that **FCNSW** prepare a **regeneration remedial action** and site-specific **regeneration rehabilitation plan** to be approved by the **EPA** in writing for the **site**.
64. **FCNSW** must comply with any request from the **EPA** in writing under condition 63 of these **site-specific operating conditions** within 1 month of the request being made.

Monitoring of effectiveness of site-specific measures

65. **FCNSW** must monitor the effectiveness of the **site-specific operating conditions** that apply to the **site**, and submit a further report to the **EPA** in relation to the **site** under condition 23.4 of the **approval** if in the reasonable opinion of **FCNSW**:
- (a) these **site-specific operating conditions**:
 - i. result in poor environmental outcomes;
 - ii. do not effectively mitigate **erosion** and **water pollution** risks;
 - iii. are not delivering the **objectives** and **outcomes** of the **approval**; or
 - iv. are unable to be complied with, or
 - (b) **FCNSW** identify that the spatial data sets held by the **EPA** showing **partially burned areas** and **unburned areas** are inconsistent with those areas that appear to have been partially burned or unburned at the **site**.



66. **FCNSW** must work with the Natural Resources Commission, or other agency agreed by the **EPA**, to monitor the long-term impacts and recovery of the **site** as part of the **monitoring program**.

RICHARD BEAN
Chief Executive Officer
Environment Protection Authority
3 March 2020

Schedule 1

67. Despite any condition to the contrary in the **approval**, including condition 81.1 of the **approval**, an **exclusion zone** with a radius of 50 metres or greater must be retained around each individual **record** of a **plant** of a species listed in **Table 4** below.

Table 4

Species name	Common name
Eucalyptus glaucina	Slaty Gum
Indigofera baileyi	Bailey’s Indigo
Cyperus aquatilis	Water Nutgrass

[Note: Except as otherwise provided by these **site-specific operating conditions**, the requirements of the **approval** for species listed in this condition continue to apply including the requirements of Chapter 4 of the **approval** and **Protocol 31: Matters covered by the approval** in relation to **species-specific conditions**].

68. Despite any condition to the contrary in the **approval**, the Emu population in the NSW North Coast Bioregion and Port Stephens local government area is taken to be a **species** to which condition 21.1(a) of the **approval** applies, such that the conditions of the **approval** relating to **site-specific biodiversity conditions** apply to the Emu population in the NSW North Coast Bioregion and Port Stephens local government area (including but not limited to conditions 21.2 to 21.6 of the **approval**).