

## Site-specific operating conditions for Bagawa State Forest compartment BGW028

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 Bagawa State Forest **compartment** BGW028.

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
<b>Drainage depression (mapped or unmapped)</b>	10m, unless otherwise approved by the <b>EPA</b>	<b>Category 2 ESA</b>
<b>Unmapped drainage lines</b>	20m	<b>Category 2 ESA</b>
Class 1 <b>classified drainage line</b>	20m	<b>Category 2 ESA</b>
Class 1 <b>classified drainage line</b> within <b>class 1 aquatic habitat</b>	20m	<b>Category 2 ESA</b>
Class 2 <b>classified drainage line</b>	30m	<b>Category 2 ESA</b>
Class 3 <b>classified drainage line</b>	40m	<b>Category 2 ESA</b>
Class 4 <b>classified drainage line</b>	60m	<b>Category 2 ESA</b>

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**

<b>Road or table drain grade (degrees)</b>	<b>Maximum distance (metres)</b>
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**

<b>Track grade (degrees)</b>	<b>Maximum distance (metres)</b>
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
Pomaderris queenslandica	Scant Pomaderris
Quassia sp. Moonee Creek	Moonee Guassia

[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**].