PRESCRIBED BURNING — CONDITIONAL BURN AREAS AND FIRE EXCLUSION REFERENCE AREAS

1461. Hon Dr Brad Pettitt to the parliamentary secretary to the Minister for Environment:

I refer to the CALM Draft Prescribed Burning Manual states that: *"Conditional Burn Areas (CBAs) are areas that require specific fire regimes, to support some management or research activity. These are usually areas where fire is to be excluded, though other regimes may also be set (such as prescribing a fire regime to manage for specific species within an area). CBAs are identified in land management plans, species and community recovery plans, Science and Conservation databases and other planning instruments."* The Manual describes 8 types of Conditional burn Areas, including 'Fire Exclusion Reference Areas', which are described as: "*A FERA is an area from which fire has been deliberately excluded to provide a reference site for scientific studies of the effects of fire on the environment. Areas selected should be broadly representative of the landscape within which they are located. FERA are designated in perpetuity. A representative network of long unburnt areas (generally areas that are greater than 10 to 20 years since last fire) is desirable. These areas are fixed locations that are available for research activities, as points of reference for studies of fire-driven ecosystem change, and for education and training. Recently burnt areas (generally less than 10 years since last fire) are also important for these purposes. Unlike long unburnt areas, however, they are usually plentiful and can be readily created if needed. Once established, FERA will continue to be managed as fire exclusion areas, even if affected by bushfire. If a FERA is burnt by bushfire, an additional long unburnt area may be nominated to augment the FERA if such an area is available, meets the nomination criteria and is necessary to ongoing research."* I ask:

(a) is it current policy of Department of Biodiversity, Conservation and Attractions (DBCA) to maintain CBAs and FERAs;

(b) will the Minister table the relevant policy documents setting out how CBAs and FERAs are selected and managed:

  (i) if no to (b), why not;

(c) will the Minister table the current version of the Draft Prescribed Burning Manual:

  (i) if no to (c), why not;

(d) how Many FERAs are currently maintained and what are their locations, and fire ages;

(e) how many areas that have previously been managed as FERAs are no longer managed as FERAs;

(f) in each case in (e), why did the area cease to be managed as a FERA;

(g) what ecological assessments, biodiversity surveys or scientific studies have been undertaken in FERAs by DBCA during the last 10 years;

(h) will the Minister please table the relevant documents in (g):

  (i) if no to (h), why not; and

(i) is information on FERA's, including location and condition available to the public:

  (i) if no to (i), why not?

Hon Darren West replied:

(a) It is the intention of the Department of Biodiversity, Conservation and Attractions (DBCA) to maintain Conditional Burns Areas (CBAs) and Fire Exclusion Reference Areas (FERA).

(b) [See tabled paper 2316.] Prescribed Burn Planning Manual (Appendix 11).

  (i) Not applicable.

(c) [See tabled paper 2316.] Prescribed Burn Planning Manual.

  (i) Not applicable.

(d) There are currently 62 FERA. For FERA locations. [See tabled paper 2316.]

(e) Approximately 16 areas previously managed as FERA are no longer managed as FERA, others have been added.

(f) The FERA system exists to support DBCA's longitudinal research needs, The FERA system has changed following reviews at several points in time to ensure that FERA continue to meet the necessary criteria and can be effectively managed as FERA. When FERA have changed it is often because they have been impacted by bushfire and are no longer areas best representative of longer unburned vegetation in the landscape.

(g) DBCA supports the following projects which currently have sites that include FERA:

quantifying fuel dynamics in southwest WA forests;

fine-Scale Burn Mosaics in South West Forests;

optimising fire regimes for fire risk and conservation outcomes in Banksia woodlands in the Perth area; and

long-term response of jarrah forest understorey and tree health to fire regimes.

The following papers have been published from work in the past 10 years that include sites in FERA:

Burrows ND, Ward B, Wills A, Williams M, Cranfield R (2019) Fine-scale temporal turnover of jarrah forest understory vegetation assemblages is independent of fire regime. *Fire Ecology,* 15, 10.

Gold ZJ, Pellegrini AFA, Refsland TK, Andrioli RJ, Bowles ML, Brockway DG, Staver AC (2023) Herbaceous vegetation responses to experimental fire in savannas and forests depend on biome and climate. *Ecology Letters,* in press.

Robinson R, McCaw L, Wills A (2023) Biodiversity monitoring informs forest management in south-west Western Australia: Ten-year findings of Forestcheck. *Forest Ecology and Management*, 529, 120659.

Tangney R, Miller RG, Fontaine JB, Veber WP, Ruthrof KX and Miller BP. (2022) Vegetation structure and fuel dynamics in fire-prone, Mediterranean-type Banksia woodlands. *Forest Ecology and Management,* 505, 119891.

Ward B, Wills A, Tunsell V. (2020) Silviculture and fire effects on understorey flowering in jarrah forest. *Australian Forestry*, 83, 152–160.

Wayne AF, Maxwell MA, Ward CG, Vellios CV, Williams MR, Pollock KH (2016) The responses of a critically endangered mycophagous marsupial (*Bettongia penicillata*) to timber harvesting in a native eucalypt forest. *Forest Ecology and Management*, 363, 190–199.

Whitford KR, McCaw LM (2019) Coarse woody debris is affected by the frequency and intensity of historical harvesting and fire in an open eucalypt forest. Australian Forestry, 82:2, 56–69.

Wills AJ, Farr JD (2017) Gumleaf skeletoniser Uraba lugens (Lepidoptera: Nolidae) larval outbreaks occur in high rainfall Western Australian jarrah (Eucalyptus marginata) forest after drought. Austral Entomology, 56(4), 424–432.

Webala PW, Craig MD, Law BS, Armstrong KN, Wayne AF & Bradley JS (2011) Bat habitat use in logged jarrah eucalypt forests of south-western Australia. Journal of Applied Ecology, 48(2), 398–406.

The following papers have been published in the last 10 years from previous studies with sites located in FERA:

Burrows N, Stephens C, Wills A, Densmore V (2021) Fire mosaics in south-west Australian forest landscapes. *International Journal of Wildland Fire,* 30, 933–945.

Wills AJ, Cranfield RJ, Ward BG, Tunsell VL (2017) Influence of fire-age mosaics on macrolichens and bryophytes in southwestern Australia. *Journal of the Royal Society of Western Australia*, 100(2), 32–45.

Wills AJ, Cranfield RJ, Ward BG, Tunsell VL (2018) Cryptogam Recolonization after Wildfire: Leaders and Laggards in Assemblages? *Fire Ecology*, 14(1), 65–84.

Wills AJ, Liddelow G, Tunsell V (2020) Wildfire and fire mosaic effects on bird species richness and community composition in south-western Australia. *Fire Ecology*, 16,5.

(h) No. The large number of published papers listed in (g) are publicly available.

(i) Not applicable.

(i) No. FERA location information is not directly available to the public given their primary purpose being associated with research.

(i) The fire history covering FERA locations, together with all DBCA lands is publicly available at https://catalogue.data.wa.gov.au/dataset/dbca-fire-history.