

**DON'T FENCE
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**THE EXTENSION AND UPGRADE OF THE WA STATE BARRIER FENCE
A BARRIER TO COMMON SENSE**



THE EXTENSION AND UPGRADE OF THE WA STATE BARRIER FENCE

A BARRIER TO COMMON SENSE

The WA Government is beginning a massive infrastructure project which will harm wildlife in and adjoining the Great Western Woodlands. The project was announced in April 2010, without any public consultation or independent environmental or economic assessment or review of alternatives. The existing 1,170 km State Barrier Fence is being substantially modified, and a 160 km extension is already being constructed. A further extension, of up to 730kms, is planned to cross woodlands and wildlife habitats from east of Ravensthorpe to Cape Arid, east of Esperance (see map on page 3). A small number of farmers have lobbied for the construction of the fence to stop emus, dingoes, other native wildlife and feral dogs from entering their properties. The WA Minister for Agriculture, Terry Redman, has already committed over \$5 million to support construction of this Extension. The full cost of the proposed fence is unclear, but would likely run to tens of millions of dollars for construction, with significant ongoing maintenance costs.



The State Barrier Fence causes significant deaths amongst migrating emus

The program of State Barrier Fence upgrades and extensions should not continue. The program is cruel, unscientific and uneconomic. Instead, funding already allocated should be redirected to developing alternative solutions which equitably support both the environment and agriculture.



This document has been published by Gondwana Link, Pew Environment Group Australia, The Wilderness Society, The Conservation Council of Western Australia, BirdLife Australia, and the Wildflower Society of Western Australia to raise awareness of the ecological impacts of the proposed upgrades and extensions to the State Barrier Fence. Published December 2012, Perth Western Australia.

THE STATE BARRIER FENCE EXTENSION: CRUEL, UNSCIENTIFIC AND UNECONOMIC

This document presents the case for an open and independent examination of the proposal to extend, upgrade and maintain WA's State Barrier Fence, particularly the proposed Esperance extension. It also exposes severe failings in the processes within the WA government that have enabled this proposal to reach an advanced stage.

The core issue is whether 21st century agriculture is prepared to coexist with Australia's native wildlife or whether it sees a future where agriculture is somehow barricaded against the natural flows and rhythms of the continent, with native wildlife dealt with cruelly through industry-led but taxpayer-funded "invasive species" programs.

The government proposal to significantly upgrade and extend the current Barrier Fence shows that much agricultural thinking in WA remains trapped in its 19th century origins. It also highlights how important policy can be hijacked by vote-winning exercises that have little or no public policy merit.

As a result of these failings, the WA Government has committed to an extended and upgraded fence without a thorough evaluation of options, impacts or even costs. An initial review by The Wilderness Society, Gondwana Link and Pew Environment Group has highlighted the following points of concern.

Existing and proposed sections of the State Barrier Fence would significantly restrict wildlife movement across the south west of Australia

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1. THE FENCE CAUSES THE AGONISING DEATHS OF TENS OF THOUSANDS OF NATIVE ANIMALS

It is well documented that the existing State Barrier Fence cuts off and concentrates the flow of tens of thousands of emus during migration years, leading to agonising deaths from starvation, poisoning or shooting. It has been reported that:

*“since the completion of the upgraded emu barrier fence across the northern and north-eastern extremities of the wheatbelt in the mid-1960s, significant movements of emus onto the fence have occurred in the following years: 1969, 1971, 1976 (at least 90 000 starving birds destroyed), 1989 (50 000 birds congregated), 1994, 1998, 2002 (50 000 birds)”.*¹

A website commemorating the centenary of the State Barrier Fence (1901 - 2001) contains this first-hand account of the 1976 emu migration:

*“One Sunday morning there were 4000 emus reported to be congregated at the Ajana spur fence. By the time I arrived there in the late afternoon there were approximately 10,000 emus there and by Monday morning there were about 20,000 in the mob. That is the type of numbers we had to deal with. Shooting was the only answer, so we shot emus eight days a week. They were so thick that we often shot 20 to 30 per shotgun shot. It was slaughter.”*²

Other native animals, including kangaroos and wallabies also suffer and die when caught in the fence. While no records appear to exist, it is estimated (based on initial counts of bones in wires of the existing fence) that 1-2 native animals per km are entangled each year in the existing State Barrier Fence. If this estimate is correct, then about 1,755 native animals are killed per year.³ Animals caught by the legs often hang upside down and survive for some weeks before they die. Despite this, the manager of the fence, WA's Department of Agriculture and Food (DAFWA), appears to have no policy or guidelines on preventing animal cruelty along the fence, either in regard to the occasional mass death of migrating emu flocks or the ongoing wildlife “bycatch” through entanglement. This suggests government disregards community expectations on animal cruelty.⁴



East of Lake Varley this kangaroo was trapped in agony for weeks.

2. THE FENCE TARGETS NATIVE WILDLIFE

Limited information is publicly available, but it appears that four native and one invasive species are targeted by the State Barrier Fence and its proposed extensions: the dingo, emu, Western Grey kangaroo, Red kangaroo and feral dog. “Wild dogs” is the catch-all term used by Government to describe both dingoes and feral dogs, to bolster its case for the fence.

Wildlife species are protected in Western Australia, yet no research appears to have been undertaken to quantify the impact of the proposed fence on vulnerable native species, including small mammals whose habitat will be fragmented and compromised. The one scoping study recently made available (GHD 2012) makes only general and largely unsubstantiated statements about wildlife impacts. If valid research has been undertaken it needs to be made publicly available, preferably through peer-reviewed science journals.

3. THE PROPOSAL FOR EXTENSION IGNORES THE IMPORTANT ECOLOGICAL ROLES OF TARGET SPECIES

With the exception of feral dogs, the species being targeted are native wildlife, and each plays a distinct and important ecological role in the wider region, as summarised below.

Emus are key dispersers of seed. Emus may exert a “powerful influence” over the diversity of vegetation by carrying large amounts of seed while moving long distances (Noble 1975:983). The germination of seeds of some species is also helped by passage through the digestive system of an emu and deposition in droppings (Noble 1975; Noble and Whalley 1978). Chalwell and Ladd (2005: 446) comment that “*With the restriction of the range of emus as a result of agricultural development, a key seed disperser has been lost*”. By restricting emu movement, it is likely the fence extension will adversely affect the health, resilience and diversity of the region’s native vegetation communities (see also climate change discussion below).



Male emu separated from his chicks on the State Barrier Fence (Photo by Andrew Hobbs).

Dingoes help maintain balanced population levels. While maintaining movement and migratory patterns is ecologically important, the imbalance of large native herbivores – kangaroos and emus – due to increased availability of water and feed can be both ecologically and agriculturally damaging. Dingoes, as top order predators, have an important role in restoring and maintaining balanced populations, and have been shown to play a part in controlling populations of native herbivores (Terborgh et al 1999; Letnic et al 2011a). Studies on both sides of the Eastern Australian Dingo Fence have shown that numbers of kangaroos and emus are greatly reduced in the presence of dingoes (Caughley et al 1980; Letnic et al 2009). Any ecological assessment of the fence proposal needs to consider how it would affect the balance between predators, such as dingoes, and grazers such as kangaroos and emus.



Dingoes reduce predation by cats and foxes. Dingoes are the top predator in the landscape (excluding humans), and intact and functioning packs of dingoes can play an important role in reducing cat and fox predation on wildlife (Ritchie and Johnson 2007; Letnic et al 2011a; Letnic et al 2011b). By preying on cats and foxes and excluding them from hunting sites dingoes are likely to protect small- to medium-sized mammals (Letnic 2009, 2011a), such as Woylies, which persist precariously in the Great Western Woodlands. Mammals of this size have been disproportionately threatened since European colonisation, and so are now of great conservation importance (Burbidge and McKenzie, 1989). Many details of these ecological interactions are not yet well understood, so opportunities for investigating them at various scales and in different ecological regions are important. The interface of the WA agricultural zone and the Great Western Woodlands presents an opportunity for large-scale scientific investigations into the role of top-order predators, native and invasive, in the landscape.⁵

These scientific findings about dingoes counter the WA Environment Minister's extraordinary statement, issued in support of the proposed fence, that "*wild dogs caused considerable damage to the environment, preyed on native wildlife and destroyed habitats*" (see joint media release, WA Ministers for Agriculture and Environment, 5 April 2010).

4. THE EXTENSION WILL CAUSE UNACCEPTABLY HIGH IMMEDIATE AND LONG-TERM ECOLOGICAL DAMAGE

The existing and proposed State Barrier Fence slices through an area of biologically rich bushland and has many ecological impacts. Some of these are listed below.

The extension will fragment natural ecosystems. While the final route for the Esperance fence extension is yet to be determined, one proposed route would slice through thousands of hectares of intact habitat in the Great Western Woodlands, with up to 300 000 ha of natural woodland left as isolated "remnant bush" in an agricultural zone. This would create significant ecological and management problems in the many smaller bushland areas that would be created. Clearing and scrub-rolling of vegetation along the fence would further degrade and fragment habitat for the smaller species to which the fence itself is not a barrier (Brooker, Brooker and Cale 1999). Even if the Esperance fence extension is placed on farm boundaries to the greatest extent possible, it will slice through a number of river valleys and areas of vegetation on public land, inevitably causing significant fragmentation.

The degrading impacts of fragmentation include:

- an increase in weed infestations, plant disease and fire risk associated with the creation of new access routes to habitats previously relatively undisturbed;
- a reduction of core habitats of high quality and an increase in disturbed habitat of lower environmental value and ecological viability;
- a decline in species-rich communities of habitat specialists in favour of simplified vegetation communities, usually composed of more common "generalist" coloniser species which tolerate disturbed habitats (Radford, Williams and Park 2007); and
- isolation of populations, reducing their genetic vigour over time and their ability to access food and water and survive events such as fire: a well-recognised cause of local extinctions (McArthur and Wilson, 1967).

The likely long term effects of large-scale fences on biological populations in other locations have been noted, with Hayward and Kerley (2009) stating that, "*It is clear that fencing has an inherent risk of leading to a collapse of evolutionary level processes*".⁶



The proposal for extension ignores the importance of connectivity. The principles of connectivity of habitats, populations and processes are now part of best scientific practice in conservation biology and restoration ecology, yet the State Barrier Fence aims to reduce ecological connectivity. For example, the southward movement of tens of thousands of emus in certain seasons is one of Australia's greatest examples of wildlife migration, yet the fence is specifically designed to cut off these migrations.

While the Australian Government is a signatory to and has supported the Convention on the Conservation of Migratory Species of Wild Animals, the Convention is largely focused on migrations that cross international boundaries. There has been little parallel action in Australia to legally protect our own migratory species and processes.

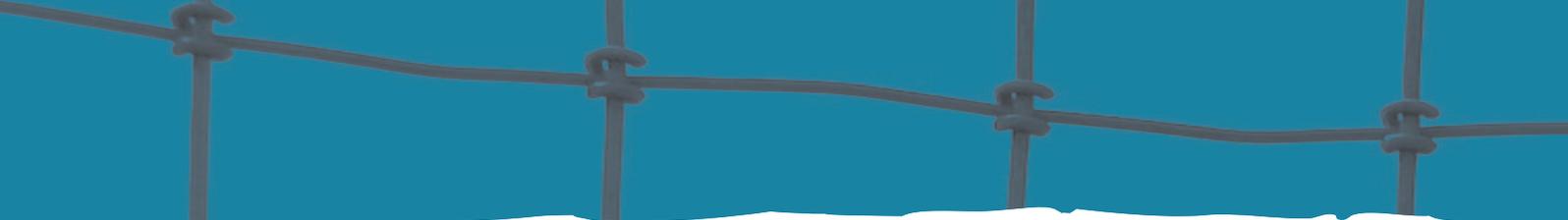
The fence counters major regional and national efforts to re-establish landscape connectivity,⁷ and conflicts with objectives of the Federal Government's National Wildlife Corridors Plan.

The extension undermines adaptation to climate change. With intense international focus on restoring ecological connectivity to enable species and genetic material to move in response to climate change, there can be no justification for deliberately preventing the movement of species across their original range. It is particularly unwise to do so for a key species like the emu, with its seed dispersal functions.

Nineteen leading scientists have worked with climate change data for the Great Western Woodlands to develop a conceptual framework for assessing the risk and effectiveness of various management options (Prober et al 2011). They identified relative intactness as one of the attributes that will enable the Great Western Woodlands to survive climate change better than more fragmented areas. Their predictions clearly identify the small 'jagged edge' habitat areas immediately north of the Esperance agricultural area as critical for maintaining the habitats of the Great Western Woodlands in the face of climate change (Prober et al 2011: see Fig 3, p 232, which gives high, medium and low range scenarios for 2030, 2050 and 2070). Alarmingly, the proposed Esperance fence extension dissects this crucial part of the Great Western Woodlands.

The extension will damage the values and integrity of the Great Western Woodlands, a key part of an internationally-recognised biodiversity hotspot. The Great Western Woodlands are now recognised as the largest remaining temperate woodland on earth. They have gained this status due to the loss or degradation of other major woodlands, such as Africa's Sahel and the box woodlands of eastern Australia. However, the Great Western Woodlands themselves have suffered, and will continue to suffer, some loss of habitat through development of high-value mining projects. The rate of cumulative impacts has increased in the past decade, and the proposed fence will significantly add to this, for little if any economic benefit.

The location of the proposed fence, and the southern extent of the Great Western Woodlands, are within the internationally recognised south-west biodiversity hotspot. One of the definitive works on botanical richness and species turnover in the hotspot (Burgman 1988) involved survey and sampling of areas just north of the Esperance fence extension. It found extremely high levels of species richness and turnover, and that *"rare plants in this region exist in small geographic patches"*. It was recommended that *"reserves must include replicates of habitats at intervals no greater than 15 km simply to accommodate the more common mallee species"* (Burgman 1988, pages 426-7). This systematic, science-based approach to providing basic levels of protection to the species of the area has not been implemented. Regardless of the route chosen for the proposed fence, it will damage plant species and communities worthy of high levels of protection.



The extension will cause further vegetation loss. Earlier proposals for the Esperance fence extension favoured a route largely inland from the farm boundaries, across the intact habitat of the Great Western Woodlands. If this was to proceed, we estimate that up to 8 000 hectares of natural vegetation would be permanently cleared or modified, making it one of the largest single land clearing proposals in WA in the past decade. Government was recently presented with a preferred route that would more closely follow farm boundaries, but given the fence would still need to cross river valleys and other natural areas it is still likely some 1 000 - 2 000 ha of clearing could occur (GHD 2012). This remains unacceptably high.

The proposal for extension ignores the presence of significant species. The woodland affected by the Esperance fence extension currently provides vital, relatively intact habitat for threatened wildlife; any new disturbance would diminish their survival prospects. From current knowledge it appears that at least four mammal species declared endangered or vulnerable - the Chuditch, Numbat, Dibbler and Dayang - are present or likely to be present along the proposed routes of the fence, along with bird species such as western whipbird, carnaby's cockatoo and western ground parrot.⁸ Other species of endangered and vulnerable fauna probably hold on in small pockets. Botanically, all that is known about this part of WA is that it is exceptionally rich, supports many species listed nationally as endangered and is characterised by fine-scale endemism. Botanical surveys in the region have been minimal, with the few surveys undertaken invariably uncovering new or poorly recorded species. This localised occurrence of both plants and animals makes the fence an inherently high-risk development, even if it largely uses existing cleared lines around the farm boundaries. For example, the few remaining populations of a Priority One species, *Eucalyptus misella*, have already been damaged by agricultural clearing followed by bulldozing and chaining by the Department of Environment and Conservation (DEC) of habitat adjoining farmland in the North Cascades area, north-east of Esperance (see map on page 3).  To avoid further serious damage to this and other species, comprehensive survey work over a number of different seasons is needed along any proposed fence line.

5. NO EVALUATION OF THE EXISTING STATE BARRIER FENCE HAS BEEN UNDERTAKEN

The proposed extension of the State Barrier Fence (the “Esperance fence extension”) would run from east of Ravensthorpe to Cape Arid, east of Esperance, along the southern interface between farmland and the Great Western Woodlands. The State Barrier Fence, historically known as the Rabbit-proof Fence, currently stretches about 1, 170 km, between the Pilbara and Ravensthorpe. The WA Government is already constructing a 160km extension in the Yilgarn area, south of Southern Cross (see map on page 3),  and is now proposing the Esperance fence extension. The existing fence is 110 year old infrastructure which failed its original purpose, to exclude rabbits from agricultural land. Its benefits have never been objectively evaluated and its ecological impacts have never been assessed, yet the WA Government is planning to lengthen it by around 40 per cent.

6. THERE HAS BEEN INADEQUATE ECONOMIC ANALYSIS OF THE EXTENSION

The WA Government is implementing a policy that assumes the unquestioned right to use public funds, and damage community assets, for private benefit. Serious flaws in the claimed economic benefits of the fence are summarised below.

No evidence-based economic analysis or justification is available. Virtually all the information relating to the “problems” to be solved by the fence appears to be anecdotal and largely sourced from potential beneficiaries. Furthermore, a brief consultant’s report commissioned by DAFWA (URS 2007) outlining the economic argument from an agricultural perspective used this anecdotal information as the basis for a cost-benefit analysis that appears sub-standard and without objectivity.



Nonetheless, in July 2012 the Esperance Shire Council circulated material to its farm ratepayers in support of a referendum on the fence, claiming a favourable cost-benefit ratio of 1:2, apparently based on the 2007 URS report (see end of section 6, 'Poor government process', for further details).

It is understood that in early 2012 DAFWA staff conducted an internal analysis which suggested a cost-benefit ratio barely above break-even (J. Ruprecht, pers. comm. May 2012). The assumed costs and geographic extent across which benefits were estimated are not known. As estimated construction costs have increased greatly since 2007, and probably again since May 2012, it is assumed the ratio is now negative even from a purely agricultural perspective.

However, these estimates are inadequate for a matter of significant public importance, which involves a substantial transfer of public funds to the private sector. Independent cost-benefit analysis, which also assesses other options, needs to be undertaken and published.

There are likely to be few beneficiaries of the extension – but how few? It is uncertain how far any agricultural benefit from the fence will extend into the agricultural area. The area of farmland and number of farmers the Esperance fence extension will benefit may have been grossly overstated in farmer workshops and meetings, and in material supplied to Esperance ratepayers. Agricultural damage from dingoes and emus in the Esperance area is not well documented and appears to be almost totally anecdotal. Any data which may exist has certainly not been made publicly available.

In the Ravensthorpe area the existing State Barrier Fence channels wildlife into farmland, but the damage appears restricted to a very small number of farms. Farmer experience over many years from a 120 km gap in the existing State Barrier Fence south of Southern Cross is that any benefit arising from the extension may well be limited to the width of 1-2 farms.

The alleged wider community benefit needs to be documented and discussed publicly. Additionally, significant equity issues exist in relation to farmers elsewhere in WA who also adjoin public lands and who have already financed the construction of their own boundary fences.

Other options were not reviewed openly, if at all. If the public are to fund the building of the Esperance fence extension, they deserve to see hard evidence that a range of options have been considered and/or tried.

The use of Livestock Guardian Dogs (LGDs) may be one such option. A recent survey of 150 livestock producers across Australia found that 65.7% reported that predation ceased after obtaining LGDs, and a further 30.2% reported a decrease of predation (van Bommel and Johnson 2012). The survey suggested *“The cost of obtaining a LGD is returned within 1–3 years after the dog starts working”*. The authors of the survey concluded that *“Provided a sufficient number of LGDs are used, they can be as effective in protecting livestock from predators in Australia when ranging freely on large properties with large numbers of livestock as they are in small-scale farming systems. LGDs can provide a cost-effective alternative to conventional predator control methods in Australia’s extensive grazing enterprises, potentially reducing or eliminating the need for other forms of control.”*

Given this impressive and very positive result, perhaps the farmer advocates for extending the State Barrier Fence need to show some persistence in their use of LGDs, before any decision to spend tens of millions of dollars of taxpayer funds building and maintaining the extension.



An independent analysis of the value of marginal agricultural lands is needed. The jagged southern boundary between cleared agricultural land and the Great Western Woodlands reflects the collapse of an earlier poorly planned government program, in which large areas of uncleared public land were allocated to agriculture with minimal regard to agricultural viability or environmental impacts (Bradby et al 1984).

Various soil and agricultural studies in these areas have subsequently documented serious concerns with the long-term viability of particular areas (see, for example, Scholz and Smolinski 1996). In the Cascades area, north-west of Esperance, a number of farmers holding more recently allocated lands (up to 1982) adjoining the proposed Fence received *ex gratia* payments from the State Government because the soil types originally allocated to them were not suitable for agriculture. Indeed, within five years of the land being allocated to agriculture, the Commissioner for Soil and Land Conservation was refusing farmers permission to clear large areas of the newly allocated blocks.

Given this, there would seem to be a case for a government-funded restructure of activities on marginal areas to rationalise the agricultural boundary southwards. In the process of the restructure, a range of other techniques could be employed to help manage the interaction between agriculture and wildlife, including changed crop and livestock regimes.

7. POOR GOVERNMENT PROCESS INCREASES CONCERNS

Poor government process has led to many of the failings of the Esperance fence extension proposal, as summarised below.

Public policy formulation has been distorted by political pressure. Current State Government support for the Esperance fence extension is a recent response to campaigning by a small number of farmers. Despite all the issues raised by the proposal, the government has committed public funds to the fence construction and upgrade, including approximately \$5 million from the Royalties for Regions program (see joint media release, WA Ministers for Agriculture and Environment, 5 April 2010).

Political pressure is distorting public policy formulation in other ways:

- The proposal is not supported by long-standing government policy on the management of wild dogs. DAFWA's policy on Wild Dog Management in WA's Rangelands (DAFWA, undated) makes no mention of the State Barrier Fence, or any improvements or extensions to the fence to control wild dogs. The last public evaluation of the effectiveness and efficiency of the Wild Dog Program in WA was published in 2003 and made no reference or recommendations in relation to the State Barrier Fence (Wild Dog Evaluation Panel, 2003).
- On a number of occasions DAFWA staff have clearly stated that they are under political direction to ensure construction of the fence extensions, not provide advice on its efficacy or cost-benefit. It is clear that they see the extensions as having little scientific or economic rationale. Similarly, we understand DEC staff have been instructed that construction of the fence is government policy and they are not to publicly discuss views or information that question the decision to construct the fence, thereby making the government's wildlife protection department complicit in construction of a fence designed specifically to harm wildlife.

The situation in WA mirrors that recently discussed nationally by Jennifer Westacott from the Business Council of Australia: *"We now have major policies unravelling before our eyes because the process was poor, the architecture was wrong . . . , the assumptions flawed, the consultation disingenuous, and the communication, at best, opaque"* (Westacott, 2012).



Westacott has called for “a mandatory code that prohibits them [Ministerial staff] from directing public servants”, on the basis that the current approach “cultivates and rewards ... reticence and timidity – not the tough thinking we need to deal with complex challenges.”

Recognition of Traditional Owners has been late and limited. The Esperance fence extension cuts across the land of the Ngadju and Esperance Nyungar peoples. Their native title claims are subject to lengthy and ongoing legal challenge by the WA government, whose consultation process over the fence is only now, belatedly, commencing with the legal representative bodies of the native title claimants. This is 5-6 years after government officers started providing assistance to local farmers to get political support for fence construction.

It is likely that the WA Government will try to limit its consultation process to the avoidance of the small number of specific heritage sites across the area, rather than proper consideration of the impact of this development on the integrity of an entire cultural landscape and associated native title rights.

The WA Minister for Agriculture has failed to refer the proposal for environmental assessment. It is disturbing that, some years after the WA Government committed funds to the project, there has been no similar commitment to ensure the proposal is subject to independent assessment under the WA Environmental Protection Act and the federal Environmental Protection and Biodiversity Conservation Act (the “EPBC Act”). Referrals are expected of all other major industries, such as mining, and infrastructure developments in WA. Moreover, the Minister’s failure to refer the proposal further undermines the government’s claim to legitimate use of public funds.

Biased information was provided to local ratepayers to garner their support. In seeking ratepayer support for a Shire loan of \$1.76 million as a contribution to the Esperance fence extension, the Shire of Esperance conducted a referendum of rural ratepayers in August 2011. Only information supporting the fence proposal was provided to ratepayers. The information provided by Council (letter to rural ratepayers, 27 July 2011) included statements that:

- “once established the fence would provide a non-lethal barrier”;
- “The WA Department of Environment and Conservation suggests there is little adverse impact on non-target native species. None of the larger terrestrial species in the region are migratory”;
- “total project cost is estimated at \$10.5 million”; and
- “a cost benefit analysis ... indicated that \$2 would be gained by the community for every \$1 spent on construction and maintenance of the fence”.

As this document has shown, there is no validity to the first two statements, we estimate the cost estimate as closer to \$20 million and there has been no independent, comprehensive cost-benefit analysis.

Of the 1350 ballot papers distributed, only 54% were returned, with 67% of those that were returned supporting the fence (Council Minutes, 23 August 2011). That is, only 36% of rural ratepayers have confirmed their support for the fence.

CONCLUSION

There are challenges to managing landscapes that have both agricultural and conservation values - this is common world-wide. Farmers and other landholders need assistance in dealing with these challenges in humane, science-based and cost-effective ways. The construction of large fences to exclude wildlife, as occurred in the 19th and early 20th centuries, is not a best practice approach to landscape and wildlife management. Instead, current scientific knowledge and practice needs to be applied to equitably manage the interface between agricultural land and natural areas in south-western Australia.

The WA Government is failing to do this.

Ministers have committed funds to a huge project and the purchase of construction materials before options and issues were considered in open processes. The government is now attempting to force all viewpoints into a politically charged and polarizing “consultation” process, restricted to just a few limited options of fence design and alignment, and underpinned by a lethal disregard for the wellbeing of iconic Australian wildlife. It has wrongly constrained the advice of its conservation agency to within the boundaries of its misconceived agricultural objectives.

The proposed expansion of the existing Barrier Fence would be a tragic imposition on one of Australia's most biologically rich and intact landscapes. Instead of proceeding lockstep with the approaches used unsuccessfully in WA in 1902, it is time to explore better options.

RECOMMENDATION

The program of State Barrier Fence upgrades and extensions should not continue. The program is cruel, unscientific and uneconomic. Instead, all funding allocated should be redirected to developing alternative solutions which equitably support both the environment and agriculture.



Lapwire installed at the base of the fence can further restrict movement of wildlife such as Echidnas

ACKNOWLEDGMENTS

Gondwana Link, Pew Environment Group Australia, The Wilderness Society, The Conservation Council of Western Australia, BirdLife Australia, and the Wildflower Society of Western Australia thank the following for their work in preparing this document: Keith Bradby, Margaret Robertson, Peter Robertson, Barry Traill, Peter Price, Wayne O'Sullivan, Zoe Davies, Cheryl Gole and Andrew Del Marco.

IMAGES: Frank Rijavec, Andrew Del Marco, Graeme Chapman, Andrew Hobbs, Department of Agriculture and Food Western Australia



ENDNOTES

¹ The URS report on the proposed Esperance fence extension (2007) correctly identifies the nomadic nature of emus. Like many birds inhabiting the arid and semi-arid zones of Australia, emus need to track resources as resource availability varies substantially across space and with time. When the path of this movement is intercepted by a barrier, such as the proposed fence, the result can be the accumulation in small areas of many thousands of animals. This leads to local degradation and regularly to the starvation of large numbers of birds. URS report that *“since the completion of the upgraded emu barrier fence across the northern and north-eastern extremities of the wheatbelt in the mid 1960s, significant movements of emus onto the fence have occurred in the following years: 1979, 1971, 1976 (at least 90 000 starving birds destroyed), 1989 (50 000 birds congregated), 1994, 1998, 2002 (50,000 birds)”*. For the Esperance fence extension to fulfil its stated function then these numbers will be drastically increased. The death and distress caused to these many hundreds of thousands of animals due to the restriction of their movement is a significant animal welfare issue.

² http://pandora.nla.gov.au/pan/43156/20040709-0000/agspsrv34.agric.wa.gov.au/programs/app/barrier/pests/emu_migration.htm [accessed 14 March 2012]

³ Calculation based on an average of 1.5 native animals for every kilometre of the existing 1,170 km State Barrier Fence.

⁴ In a web search the only relevant guidelines found were developed by the NSW Department of Agriculture for the Commonwealth. These have subsequently been removed from their website (see <http://www.environment.gov.au/biodiversity/invasive/publications/humane-control.html>, accessed May 15, 2012)

⁵ Studies such as that of Letnic (2009) on both sides of the eastern Australian Dingo Fence have shown small native mammals to be in greater abundance in the presence of dingoes. Currently, large amounts of money are required for feral animal control in the region, in particular, control of red foxes to protect native wildlife. In 2003, across Australia over \$5 000 000 was spent just in labour costs for fox control programs, with one of the most intensive regions of activity being south-west WA (Reddiex et al 2004). Further funds are spent on materials such as poison baits, for instance through the Red Card for Rabbits and Foxes program. We acknowledge that the crossing of dingoes with feral dogs is a problem in the region and has exacerbated difficulties in livestock management. Nevertheless, both lethal controls and excessive interference with dingo territories is likely to increase problems (Claridge et al, 2009).

⁶ Connectivity is important at a variety of spatial and temporal scales; it allows adequate space for individuals and populations to meet their daily ecological needs, allows movement of animals in accordance with seasonal change, allows long term shifts of populations of organisms with changing environments (e.g. climates), retreat from areas subject to disturbance, recolonisation following local extinction and exchange of genes within populations and between meta populations.

⁷ Gondwana Link in south-western Australia, and national initiatives such as The Great Eastern Ranges Initiative (NSW), Habitat 141 (Victoria) and Trans-Australia Eco-Link.

⁸ Species listed as endangered or vulnerable under the EPBC Act that occur along the route of the proposed Esperance fence extension are listed overleaf.

Species listed as endangered or vulnerable under the EPBC Act that occur along the route of the proposed Esperance Extension.

SPECIES	PRESENCE	EPBC STATUS
Carnaby's Black-Cockatoo <i>Calyptorhynchus latirostris</i>	Present	Endangered
Western Ground Parrot <i>Pezoporus wallicus subsp. flaviventris</i>	Eastern end	Critically Endangered
Woylie <i>Bettongia penicillata ogilbyi</i>	Sighted in Great Western Woodlands in recent years	Endangered
Dibbler <i>Parantechinus apicalis</i>	Likely on western end	Endangered
Red-tailed Phascogale <i>Phascogale calura</i>	Likely on western end	Endangered
Western Bristlebird <i>Dasyornis longirostris</i>	Likely on western end	Vulnerable
Malleefowl <i>Leipoa ocellata</i>	Common	Vulnerable
Western Whipbird (eastern) <i>Psophodes nigrogularis leucogaster</i>	Common on western end	Vulnerable
Chuditch, Western Quoll <i>Dasyurus geoffroii</i>	Present	Vulnerable
Numbat <i>Myrmecobius fasciatus</i>	Likely	Vulnerable
Dayang, Heath Rat <i>Pseudomys shortridgei</i>	Likely on western end	Vulnerable

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