

Crookwell 2 Wind Farm

Annual Report on the implementation of the Operational Flora and Fauna Management Plan

Prepared for Crookwell Development Pty Ltd

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1. Introduction

Development consent (DA 176-8-2004-i) was originally granted in June 2005 for the Crookwell 2 Wind Farm (C2WF), comprising up to 46 wind turbines and associated infrastructure. This development consent was modified in 2009 (Mod-1). A total of 28 turbines, of the 32 approved, were constructed.

C2WF is approximately 14 kilometres south-east of Crookwell and approximately 28 kilometres north-west of Goulburn in the Southern Tablelands of New South Wales. The site lies on a series of higher ridges that have been used for decades for sheep and cattle grazing. The area has been either completely or mostly cleared of its original native vegetation. As a consequence of the long grazing history, the vegetation present lacks an indigenous ground cover — introduced pasture grasses now dominate the ground cover.

Crookwell Development Pty Ltd engaged Nature Advisory to oversee implementation of the first year of the approved Operational Flora and Fauna Management Plan (OFFMP) for the C2WF. This first annual report reviews work undertaken in the first year of the plan and includes documentation of the following activities:

- Monitoring revegetation/rehabilitation areas and documenting their condition;
- Monitoring weed control and documenting progress; and
- Bird and Bat impact mitigation.

This report is divided into the following sections:

Section 3 provides the requirements of the OFFMP.

Section 4 summarises the results and outcomes from mitigation measures implemented from the OFFMP.

Section 5 outlines the reporting requirements of the OFFMP.

Section 6 outlines the management actions of the OFFMP and relative performance criteria.



2. Requirements of the OFFMP

The specific requirements of the OFFMP are presented below as extracted from the approval conditions.

Condition (83)

An Operation Flora and Fauna Management Sub Plan must be prepared as part of the OEMP. The Sub Plan must be prepared in consultation with the Department and OEH and include:

(a) plans showing:

- terrestrial vegetation communities; important flora and fauna habitat areas; areas to be protected; and areas to be planted;
- (b) methods to manage impacts on flora and fauna species (terrestrial and aquatic) and their habitats which may be directly or indirectly affected by the development. These must include:
- habitat management procedures including rehabilitation requirements and active replanting of windrows;
- operation stage measures to minimise bird and bat disturbance, in particular reducing the incidence of bird/bat strike. Management measures that must be considered for areas near the turbines include:
 - i. minimising the availability of raptor perches;
 - ii. modifying structures to prevent perching;
 - iii. management of lambing;
 - iv. swift carcass removal;
 - v. pest control, including rabbits;
 - vi. management of stock (grain) feeding;
 - vii. filling in of small dams that might attract insects and birds;
 - viii. use of deterrents (eg. flags, marker balls);
 - ix. minimising external lighting;
 - x. turbine management, that might include the turning off of turbines that are predicted to cause unacceptable bird/bat mortality at identified times:
 - xi. measures identified from research undertaken at other wind farms to reduce the incidence of bird/bat strike;

(c) performance criteria against which to measure the success of the methods; and a programme for reporting on the effectiveness of management measures against the identified performance criteria. Management methods must be reviewed where found to be ineffective.

2.1. Compliance Summary

Table 1 sets out which sections of the OFFMP addressed the specific requirements of Condition 83 of the 2017 Mod-2 approval.



Table 1: Sections within the OFFMP that respond to Condition of Consent 83

Condition number	Abbreviated condition details	OFFMP Section/s	
83 (a)	Plans showing: terrestrial vegetation communities; important flora and fauna habitat areas; areas to be protected; and areas to be planted	3.1.1	
83 (b)	Habitat management procedures including rehabilitation requirements and active replanting of windrows	3.1 & 3.2	
63 (b)	Operation stage measures to minimise bird and bat disturbance, in particular reducing the incidence of bird/bat strike		
83 (c)	Performance criteria against which to measure the success of the methods; and a programme for reporting on the effectiveness of management measures against the identified performance criteria. Management methods must be reviewed where found to be ineffective.		

2.2. OFFMP Objectives

The overall aim of the OFFMP is to provide methods to manage the impacts on flora and fauna species (terrestrial and aquatic) and their habitats which may be directly or indirectly affected by the development of the C2WF and provide performance criteria against which to measure the success of the methods.

The specific objectives of this OFFMP, derived from the conditions of approval, are set out below.

- Provide plans showing important areas of flora and fauna habitat areas to be protected or revegetated;
- Provide methods to for active management of habitat, including revegetation and rehabilitation;
- To detail and address specific and potential mitigation measures and related implementation strategies to reduce impacts on birds and bats;
- To document an agreed performance criterion that outlines the measures of success of the mitigation measures implemented and allows for review where these are found to be ineffective; and
- To identify matters to be addressed in periodic reports on the outcomes of the application of the mitigation measures against the performance criterion and their success.

The management plan adopts an adaptive management approach. Therefore, management measures can be amended to ensure more effective outcomes in response to monitored impacts on flora and fauna from the wind farm.



3. Reporting requirements

This annual report has been prepared within three months of the completion of the first year of operation of C2WF. It addresses:

- A brief description of the management prescriptions implemented and identification of any modifications made to the original management practices;
- Review of the management prescriptions against the performance criteria;
- Identification of any unacceptable impacts including whether identified indirect impacts on flora and fauna of the site are of significance at a regional, state or national level, or if species of concern have been affected;
- A discussion of any prescriptions found to be ineffective;
- An outline of proposed refinements or additional supplementary management prescriptions;
- A summary of livestock carcass removal for the purposes of predator reduction;
- Details of any landowner feral animal control programs and their timing;
- Details of the native vegetation protection measures implemented and their success;
 and
- A summary of how impacted areas have been rehabilitated.

After the second annual report, the need for additional annual reports on mitigation methods will be reviewed in consultation with BCD.



4. Year one plan outcomes

This section outlines the outcomes of measures and actions that were undertaken during the first year of operation C2WF to prevent/reduce the potential for an impact on indigenous flora and fauna.

Additionally, recommended adaptive mitigation measures in response to the recently detected impacts relating to both Black Falcon and Little Eagle (measures not previously outlined within the original OFFMP document), are also discussed within this section.

4.1. Habitat Management Procedures

4.1.1. Impacts on pasture, native vegetation, and planted wind breaks

Areas subject to disturbance from construction activities, most notably areas associated with roadside batters and underground cabling, exhibited signs of erosion and degradation during the first year of operation. To combat these impacts, areas subject to erosion have been treated as described in section 4.1.2.

Impacts to native vegetation from construction works were restricted to native grassland. To date, two specific actions have been implemented to address the disturbance or removal of native vegetation, with native grass rehabilitation and weed control occurring within four designated riparian zones (see Figure 1), and the supplementary planting of various native trees and shrubs within fenced re-planting areas on-site.

Similar measures were implemented in areas of pre-existing planted wind breaks that were impacted during construction. Directly affected areas that are part of the permanent wind farm development footprint, such as roads and cable routes have not been rehabilitated but other affected areas have been planted with both native and introduced tree species, depending on the previous species present. These plantings have been established in the form of fenced-off rows adjacent to roadsides, serving as visual screening and contributing to the overall replacement of impacted wind break habitat within the C2WF site.

The majority of vegetation identified to be retained on-site is intact. However, native vegetation appears to have been removed within Native Vegetation Zone 2, with the most northerly situated tree/shrub appearing to have been removed during road construction according to satellite imagery.

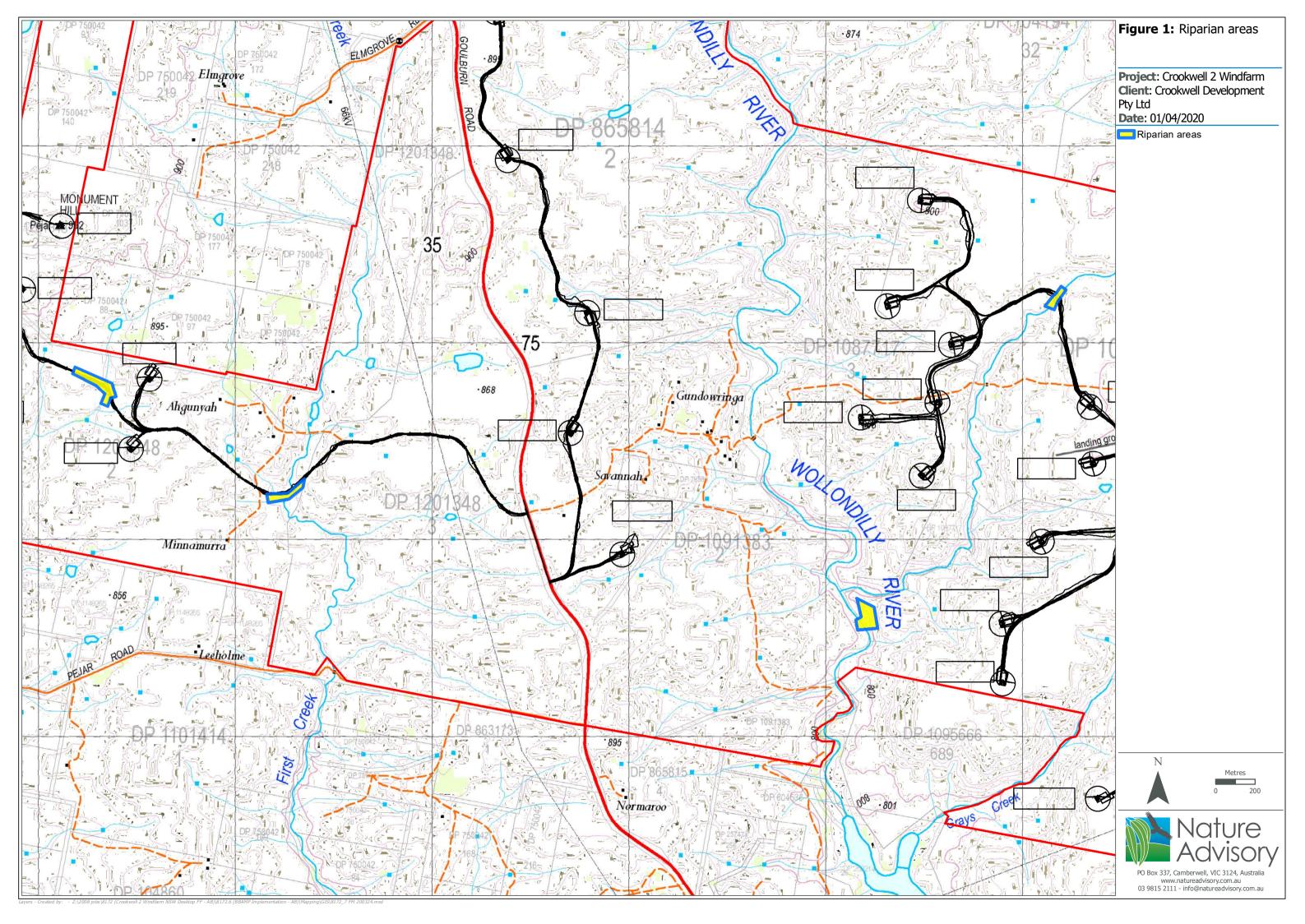
The apparent loss of this native vegetation will be confirmed by an independent ecologist whilst conducting scheduled weed and revegetation assessments later this year.

4.1.2. Rehabilitation of removed/disturbed vegetation

An initial baseline assessment of removed vegetation was conducted by Biosis Pty Ltd and reported within a Vegetation Management Plan (VMP) in November 2018. This informed the scope and extent of revegetation efforts in 2019.

Subsequent monitoring of these revegetation areas was conducted in spring 2019.





Pasture

Roadside batters and underground cabling site that exhibited signs of erosion and degradation were rehabilitated with a pasture revegetation method known as 'aquaseeding'. This has promoted the recruitment of pasture grasses and has limited the amount of soil lost during times of high winds and rainfall. Livestock were subsequently excluded from areas treated with aqua-seeding to remove grazing pressure and allow grasses to establish. In areas where aqua-seeding was deemed unsuccessful in establishing pasture grasses, a direct seeding method was adopted to maximise recruitment. Pasture rehabilitation has generally been concentrated within circuits 1 (Turbines 1 – 6) and 5 (Turbines 25 – 28) of C2WF.

Native vegetation

Four riparian zones were identified and subsequently revegetated by Greening Australia, a reputable habitat restoration organisation, in an effort to minimise the impacts of erosion and improve habitat structure these areas (see Figure 1). Specific tasks carried out at these locations have included weed management and the use of weed matting, installation of coir logs to slow water flow, and the planting of native grasses comprising Wallaby Grass *Rytidosperma sp.* and Kangaroo Grass *Themeda triandra*.

During the most recent assessment of these riparian zones conducted in November 2019, survivorship of planted native grass was approximately 90 percent. Recommendations following the assessment recommended that dead plants be replace by new plantings, and that further weed management was to be performed carefully to ensure that existing plants were not compromised.

Furthermore, planted rows of native trees and shrubs were established throughout the wind farm site as part of a greater effort to compensate for vegetation losses during construction. Approximately 1,104 tube-stock seedlings were distributed and planted within these areas, comprising species such as White Box, Yellow Box, Large-leaf Hickorywattle, Lightwood and Sweet Bursaria (Appendix 1 and Appendix 2). Monitoring of these planted areas in November 2019 confirmed that approximately 88% of planted native seedlings were alive and persisting at these locations, indicating that the plantings remain on track to meet the 75% survivorship target specified in the 'Crookwell 2 Wind Farm, Crookwell Road Landscape Management Plan' (see Table 2).

Monitoring of these areas will continue for another year to determine the on-going success of the revegetation effort, and evaluate the need for further plantings to ensure the required outcome.

Planted wind breaks

Planted rows, composed of both native and introduced tree species, were primarily established throughout the wind farm in an effort to replace and compensate for losses during construction. A secondary purpose of these plantings which was largely restricted to introduced species such as *Populus canadensis* and *Cupressus leylandii*, was to provide visual screening for local residents who wished to have the view of the wind farm obscured from along local roads for both aesthetic and safety reasons. In addition to more than



1104 native tube-stock distributed across the site, almost 1853 introduced trees were also planted concentrated along roadsides on the wind farm boundary for screening (Appendix 1 and Appendix 2). Survivorship was high amongst planted introduced trees (99%), with just nine trees found to be dead during the November assessment.

Similar to native revegetation efforts, newly-planted wind breaks complied with the requirements of the 'Crookwell 2 Wind Farm, Crookwell Road Landscape Management Plan', and will continue to be monitored and evaluated during the second year of operation

4.1.3. Monitoring and reporting

On-site inspections of revegetation areas (native and introduced plantings) were undertaken on the 5^{th} - 6^{th} , and 30^{th} of September 2019, as well as 13^{th} - 14^{th} November 2019. The assessment of the sites along the Crookwell Road side were undertaken on the 13^{th} - 14^{th} November 2019. All assessments were conducted by an independent experienced ecologist from Nature Advisory.

Each site was assessed in detail by walking the length of the planting area. The following was assessed at each site:

- Status of the fencing
- Count of the number of plants, with identification of species/genus planted
- Checks for damaged and missing plants
- Other general comments

All observations were subsequently documented by Nature Advisory within report No. 8172 (22.3) 'Report on inspection of landscaping works'.

4.1.4. Weed Control

To date, high-threat weeds have been controlled within several areas of disturbed ground across the wind farm, namely in close proximity to hardstands, roadside batters and cable trenches. High-threat weed species subject to spraying were predominantly thistles, with Saffron Thistle and Scotch Thistle found to be co-existing in high concentration within some areas of the site disturbed by wind farm construction. Areas that required weed control were in the far west, near turbines 1-6, in central areas, near turbines 7,8,9 and 10, and south of turbine 20 in the east (including the main access tracks from Woodhouselee Road).

Other high-threat weeds that have been identified on-site but have not yet been subject to control measures include Serrated Tussock, Willow sp. existing within drainage lines, and Blackberry. Most of these are not related to the wind farm and are a broader land management issue common to the region.

Weed assessments will occur during this year in areas affected by wind farm construction works. Further control may be required in response to the findings of these assessments.



Ongoing weed monitoring and reporting

Weed control work this year focussed on urgent control of obvious outbreaks. The baseline weed assessment specified within the OFFMP was not conducted at C2WF during the first year of operation in 2019.

To rectify this, a baseline weed assessment will be undertaken in mid-2020 to establish current conditions and weed monitoring will then be undertaken for the following two years as required in the approved OFFMP to evaluate weed control efforts and refine them to improve their effectiveness.

4.2. Operational stage measures to minimise bird and bat disturbance

4.2.1. Carcass removal

Aside from monthly carcass searches, no specific wind farm personnel have been formally assigned the role of actively searching turbines for carcass removal. Carcasses of dead livestock are commonly removed by landholders when discovered during routine tasks onsite, which aids efforts to prevent raptors from being 'lured' close to operating turbines. No dead stock or wildlife (excluding birds and bats collected during formal turbine searches) has been observed during more than 12 months of monitoring across the 16 turbines sampled.

Given the lack of stock and wildlife carcasses near wind turbines, the implementation of an intensive carcass removal program is not currently considered a high priority for on-site management.

4.2.2. Management of lambing

During lambing season (usually late autumn/winter) at C2WF, landholders have indicated that ewes and lambs are typically shifted to paddocks well beyond 200 metres from turbines close to farm houses so that landholders can monitor the health and condition of young lambs. This has occurred throughout the lambing season in 2019, and no lamb carcasses were found during monthly turbine searches. As a result, the known associated risk of raptors suffering from blade-strike when feeding on dead or injured lambs beneath turbines has been avoided. To date and in the foreseeable future, the presence of lamb carcasses is not considered a key issue of concern and no additional measures for lamb exclusion are currently being considered.

4.2.3. Pest control, including rabbits

No rabbits have been observed on the site in the last year. Hares are present in low numbers.

To date, an integrated rabbit control program has not been required. Rabbit presence will continue to be monitored throughout the second year of wind farm operations, and if deemed necessary, rabbit control will be implemented.

European Hare has been observed during formal monthly carcass searches. However, given that the species is predominantly solitary, and that observations of hares on-site



have been infrequent, it is expected that they occur in low densities and provide very infrequent feeding opportunities for raptors on-site. As such, the species is not currently considered a high priority for targeted pest control.

Though foxes have been observed to occur commonly throughout the site and they featured repeatedly on remote-camera images from scavenger trials. Targeted baiting and other control measures are not currently occurring on properties within the wind farm. Fox control has historically been conducted within portions of the site, though a combination of factors in the previous two years such as movement restrictions imposed by construction activities and regulations, and the increase in labour and financial costs caused by recent prolonged drought conditions, has led to landholders having to withdraw from continued fox control measures. Foxes generally do not attract birds to turbines and their control is not considered a specific risk warranting action by the wind farm opreator.

4.2.4. Management of stock (grain) feeding

During formal monthly carcass monitoring throughout 2019, stock feeding has not been evident within 200 metres of turbine locations. This indicates that previous recommendations for restricted stock feeding < 200 metres from turbines has been adhered to and upheld on-site.

4.2.5. Lighting on turbines and buildings

Aviation lights mounted on top of turbines have since been removed due to OH&S concerns, thereby removing any potential for them to change bird and bat behaviour in a manner that would increase turbine collision risk.

4.2.6. Supplementary Mitigation Measures

Twenty-eight bird and 19 bat remains were discovered beneath turbines on C2WF during the first year of formal monitoring in 2019. This figure includes two incidental records comprising one additional bird and one additional bat. Many of these species are common and widely distributed throughout farm landscapes. No listed bat species were found, only commonly occurring species. As a result, no further bat mitigation measures are currently being considered for implementation at C2WF.

By contrast, three cases of mortality have involved NSW threatened-listed bird species: two Black Falcons; and one Little Eagle, resulting in a number of mitigation measures being considered in order to reduce the risk of future impacts at C2WF, and/or compensate for losses. Responses are being explored currently with BCD.



5. Management actions and performance criteria

Table 2 summarises specific management objectives, activities, timing and performance criteria for the implementation of this OFFMP. It can be used for monitoring and reporting on the implementation of this plan.

Table 2: Specific management objectives, activities, timing and performance criteria

Management action	Management activities and controls	Timing	Performance criteria for measuring success of methods	Completed (yes/no)	
Implement native vegetation protection measures	Undertake native vegetation protection measures as per Section 3.1.3	Commencement of Post-construction phase	Native vegetation protection measures in place as prescribed in Section 3.1.3	Yes	
	Undertake revegetation works as per Section 3.1.4	Two years, beginning at commencement of Post-construction phase	Revegetation targets met as follows: Native vegetation - 75% survival in the first two years of the post construction of the wind farm Improved pasture and planted windrows – targets to be established through consultation with landowners	Yes	
Vegetation rehabilitation	Monitoring of progress of the revegetation program undertaken by an independent ecologist	Each mid-spring and late autumn for the first two years of the post construction phase of the wind farm		Yes	
	Undertake weed control program as per Section 3.1.4	T	Two years		Underway
	Monitoring of progress of the weed control program undertaken by an independent ecologist	Two years, beginning at commencement of Post-construction phase	High threat weed cover has been reduced to less than 1% for woody weeds or less than 5% for non-woody weeds	To be undertaken in mid- 2020	



Management action	Management activities and controls	Timing	Performance criteria for measuring success of methods	Completed (yes/no)
	kangaroo carcasses will be removed from within 200 metres of wind turbines on a book Increase frequency of stock an		Activity recorded in management log book Increase frequency of stock and kangaroo carcass removal and	Not required
	Subject to landowner agreement, restrict lambing to paddocks at least 200m from turbines.		No increase in raptor mortality during lambing season	Yes
	Stock will not be fed grain underneath turbines	During operation	No increase in bird mortality due to grain underneath turbines	Yes
Mitigation measures to reduce risk	Pest control program - Implement rabbit control on an ongoing basis		Monitor effectiveness of rabbit control and, where bird mortality is clearly related to rabbit numbers, increase the effectiveness of rabbit control	Not Required
	Habitat improvement or protection to encourage animals to use habitats away from turbines.		Protection of offset site located in woodland habitat.	Not required
	Minimising external lighting. If required. There are only low levels of lighting on the wind farm during operation.		If mortality at turbines near light sources significantly exceeds that of	Yes
	Remove permanent lights on buildings and sub-stations to avoid light spillage and visibility from above.		activity at unlit turbines, type and duration of lighting will need to be reviewed, subject to security and	Yes
	Baffle security lighting to avoid light spillage and visibility from above.		OH&S limitations.	Yes



Management action	Management activities and controls	Timing	Performance criteria for measuring success of methods	Completed (yes/no)
	Use of deterrents – Where required, overhead powerlines will have marker balls and/or flags where they cross waterways		No incidental records of bird mortality from power line collision around waterways.	Not required
Supplementary measures - measures to be used if investigation warrants	In the event that the C2WF BBAMP (BL&A 2016) monitoring program detects a significant impact, or an impact trigger occurs, or BCD deems it necessary, supplementary mitigation measures such as those explored in section 3.2.6, will be investigated and employed if required.	As required	To be agreed upon with BCD in the event that supplementary mitigation measures are applied.	Discussions with BCD underway
Annual Reports	Preparation of Annual Reports to be submitted to Secretary and OEH for the first two years of operation of the wind farm.	Operational phase– after years one and two.	Annual reports for the first two years delivered within three months of operation of the wind farm. Annual reports to include (but not be limited to); mitigation measures implemented, review against criteria and recommendations for the following year. Further annual reports upon agreement	Yes



Appendix 1: Plant numbers at the planting sites along Woodhouselee Road

Planting Area	Number of plants required to be planted (as per LMP)	On-site inspection findings
1	8 Eucalyptus dives 8 Eucalyptus blakelyi 16 Acacia falciformis 16 Bursaria spinosa Total 48 natives	Total of 124 plants counted – far more than required in LMP as planting area was extended to fit in with landholders own fencing plans. Given this, additional plants were planted. Various species, all intact Stock proof fencing installed (extends to Planting area 2)
2	24 Eucalyptus dives 24 Eucalyptus blakelyi 48 Acacia falciformis 48 Bursaria spinosa Total 144 natives	Total of 114 plants counted – slightly less than in LMP Various species, all intact Stock proof fencing installed
3	87 Populus x canadensis Total 87 poplars	Total of 90 plants – more than required All intact Stock proof fencing installed
4	7 Eucalyptus dives 7 Eucalyptus blakelyi 28 Acacia falciformis 28 Bursaria spinosa Total 70 natives	24 plants – less plants than required. Geography and transmission line easement prevented installing larger fenced area and so resulted in less plants being planted. Various species No damage, all intact Stock proof fencing installed
5	48 Populus x canadensis Total 48 poplars	Total of 50 plants – more than required All intact, Stock proof fencing installed
7	102 Populus x canadensis Total 102 poplars	Total of 102 plants as required All intact, Stock proof fencing installed
8	12 Eucalyptus dives 12 Eucalyptus blakelyi 12 Eucalyptus albens 12 Eucalyptus melliodora 32 Acacia falciformis 32 Acacia implexa 32 Bursaria spinosa Total 144 natives	158 plants counted – more than in LMP Various species All intact Stock proof fencing installed



Appendix 2: Plant numbers at the planting sites along Crookwell Road.

		Alive	Dead	Total
	Populus x canadensis	187	3	190
CR1	Eucalyptus sp.	36	10	46
ONE	Acacia sp.	65	13	78
	Bursaria spinosa	18	2	20
	Empty tree guard			3
		Alive	Dead	Total
	Danulus vi sanadansia			
	Populus x canadensis	214	3	217
CR2	Eucalyptus sp.	47	3	50
	Acacia sp.	50	24	74
	Bursaria spinosa	52	0	52
	Empty tree guard	-	-	2
CR3		Alive	Dead	Total
CR3	Populus x canadensis	44	0	44
CR4		Alive	Dead	Total
0111				
	Cupressus x leylandii	457	0	457
	Cupressus x leylandii			
		Alive	Dead	Total
	Populus x canadensis	Alive 213	Dead 3	Total 216
CR5	Populus x canadensis Eucalyptus sp.	Alive 213 67	Dead 3	Total 216 69
CR5	Populus x canadensis Eucalyptus sp. Acacia sp.	Alive 213 67 72	Dead 3 2 11	Total 216 69 83
CR5	Populus x canadensis Eucalyptus sp. Acacia sp. Bursaria spinosa	Alive 213 67	Dead 3	Total 216 69 83 52
CR5	Populus x canadensis Eucalyptus sp. Acacia sp.	Alive 213 67 72	Dead 3 2 11	Total 216 69 83
CR5	Populus x canadensis Eucalyptus sp. Acacia sp. Bursaria spinosa	Alive 213 67 72	Dead 3 2 11	Total 216 69 83 52
CR5	Populus x canadensis Eucalyptus sp. Acacia sp. Bursaria spinosa	Alive 213 67 72 49	Dead 3 2 11 3	Total 216 69 83 52 1
CR5	Populus x canadensis Eucalyptus sp. Acacia sp. Bursaria spinosa Empty tree guard	Alive 213 67 72 49 Alive	Dead	Total 216 69 83 52 1 Total
	Populus x canadensis Eucalyptus sp. Acacia sp. Bursaria spinosa Empty tree guard Populus x canadensis	Alive 213 67 72 49 Alive 41	Dead 3 2 11 3 Dead 0	Total 216 69 83 52 1 Total 41
	Populus x canadensis Eucalyptus sp. Acacia sp. Bursaria spinosa Empty tree guard Populus x canadensis Eucalyptus sp.	Alive 213 67 72 49 Alive 41 6	Dead 3 2 11 3 Dead 0 7	Total 216 69 83 52 1 Total 41 13
	Populus x canadensis Eucalyptus sp. Acacia sp. Bursaria spinosa Empty tree guard Populus x canadensis Eucalyptus sp. Acacia sp.	Alive 213 67 72 49 Alive 41 6	Dead 3 2 11 3 Dead 0 7	Total 216 69 83 52 1 Total 41 13 30
	Populus x canadensis Eucalyptus sp. Acacia sp. Bursaria spinosa Empty tree guard Populus x canadensis Eucalyptus sp. Acacia sp.	Alive 213 67 72 49 Alive 41 6 6	Dead 3 2 11 3 Dead 0 7 24	Total 216 69 83 52 1 Total 41 13 30 0
CR6	Populus x canadensis Eucalyptus sp. Acacia sp. Bursaria spinosa Empty tree guard Populus x canadensis Eucalyptus sp. Acacia sp. Empty tree guard	Alive 213 67 72 49 Alive 41 6 6 Alive	Dead 3 2 11 3 Dead 0 7 24 Dead	Total 216 69 83 52 1 Total 41 13 30 0 Total
	Populus x canadensis Eucalyptus sp. Acacia sp. Bursaria spinosa Empty tree guard Populus x canadensis Eucalyptus sp. Acacia sp. Empty tree guard Populus x canadensis	Alive 213 67 72 49 Alive 41 6 6 Alive 88	Dead 3 2 11 3 Dead 0 7 24 Dead 0	Total 216 69 83 52 1 Total 41 13 30 0 Total 88
CR6	Populus x canadensis Eucalyptus sp. Acacia sp. Bursaria spinosa Empty tree guard Populus x canadensis Eucalyptus sp. Acacia sp. Empty tree guard Populus x canadensis Eucalyptus sp. Empty tree guard	Alive 213 67 72 49 Alive 41 6 6 Alive 88 18	Dead 3 2 11 3 Dead 0 7 24 Dead 0 10	Total 216 69 83 52 1 Total 41 13 30 0 Total 88 28



		Alive	Dead	Total
	Populus x canadensis	45	0	Total 45 14 28 0 Total 96 Total 138
CR8	Eucalyptus sp.	13	1	14
	Acacia sp.	24	4	28
	Empty tree guard			0
CR9		Alive	Dead	Total
CR9	Populus x canadensis	96	0	0 Total 96
CR10		Alive	Dead	Total
CKIO	Populus x canadensis	138	0	45 14 28 0 Total 96 Total 138
CR11		Alive	Dead	Total
OIVII	Cupressus x leylandii	93	0	93

