

Stockyard Hill Wind Farm Pty Ltd  
321 Exhibition Street, Melbourne VIC 3000

Date: 2<sup>nd</sup> September 2016

Our reference: 4951

Dear Cara

**Re: Additional ecological information relating to the offsite impacts of the Stockyard Hill Wind Farm Quarry**

It is understood that as part of a request for further information the Department of Environment, Land, Water and Planning (DELWP) has requested that Stockyard Hill Wind Farm Pty Ltd provide additional information relating to the potential offsite impacts associated with construction and operation of the proposed Quarry. Ecology and Heritage Partners completed detailed ecological assessments for the Quarry site in 2012/2013, as well as for most of the surrounding areas as part of the wind energy facility and associated infrastructure. We have prepared this letter of advice providing further evidence supporting the assertion that there is a low/negligible risk that development of the Quarry will impact on surrounding ecological values.

The Quarry site is located within the Victorian Volcanic Plain Bioregion. The site and surrounding landscape contains features that are typical of this bioregion; native grassland and rocky outcrops interspersed amongst land primarily used for cropping and grazing. Ecology and Heritage Partners study of the wind energy facility surrounding the Quarry site identified numerous small patches of native grassland that were primarily restricted to roadsides, some of which contained nationally listed species including Matted Flax-lily *Dianella amoena*, Spiny Rice-flower *Pimelea spinescens* subsp. *spinescens* and White Sunray *Leucochrysum albicans* var. *tricolor*. Most of the paddocks were highly degraded and supported no ecological values, although some were identified to contain populations or suitable habitat for the nationally listed Golden Sun Moth *Synemon plana* and/or Striped Legless Lizard *Delma impar*. The other significant feature of the surrounding landscape is Lake Goldsmith and a series of small/ephemeral water bodies which provide habitat for waterfowl and some migratory bird species.

Habitat and native vegetation within the Quarry site is highly fragmented and disconnected from other areas of mapped habitat in the surrounding landscape. It is also noted that the type of fauna species recorded in the surrounding landscape do not have specialised habitat requirements and can persist in degraded agricultural landscapes. For these reasons it is unlikely that wildlife is dependent on the site as a critical habitat corridor. If wildlife does disperse through the site, species should be able to adjust to the development by using habitat directly adjoining the site. Furthermore, it is also unlikely that any part of the surrounding habitat landscape would be considered a critical habitat corridor. The landscape is characterised by degraded paddocks with small patches of native grassland habitat, which is ubiquitous in the local area.

Development of the Quarry site will not require or result in the loss or disturbance of any native vegetation or habitat offsite. The grassland-specialist species recorded in the surrounding landscape are susceptible to weed invasion, and there is a low potential for weed dispersal to occur as a result of the project without any mitigation measures. However, the surrounding landscape is already highly disturbed and dominated by a suite of highly competitive grassy weeds. Therefore any weed incursion from the Quarry site is unlikely to exacerbate the existing threat of weeds to native species and their habitat. Furthermore, the project will implement best practice weed control measures (see table below) which will adequately address any risk weed invasion may pose to the surrounding landscape.

Consideration has been given to the potential impact of noise disturbance during the construction and operation of the Quarry, on birds roosting on Lake Goldsmith. Lake Goldsmith is located approximately 3 km east of the Quarry site. This is considered to be a sufficient distance to buffer against any noise disturbance from the Quarry site. If; however, noise disturbance was occurring, birds on Lake Goldsmith are unlikely to be affected as they typically habituate to continuous and regular noises. This is opposed to infrequent or unpredictable noises, such as shooting (hunting is permitted on Lake Goldsmith).

Even though the risk of weed invasion and noise impacting on surrounding biodiversity values has been assessed as low, mitigation and control measures have been included in the Environmental Management Plan (EMP) for the project to further reduce any potential impact. The EMP also addresses other low-level risks to surrounding biodiversity including dust pollution and chemical spills, even though dust pollution and chemical spills are not listed as key threatening processes to the listed species described above. Further details about how the EMP will mitigate against any potential impact to surrounding biodiversity values, are provided in the table below.

Aspect	EMP Section	Actions
Weeds	5.5	<p>Vehicles entering and exiting the site will be visually inspected for weeds, and where required vehicles will be cleaned prior to exiting the site.</p> <p>All vehicles exiting the site will pass through a wheel wash to remove soils and weeds prior to leaving the site.</p> <p>Site personnel will be made aware of potential risks associated with removing soil and weeds from the site.</p> <p>Weeds will be controlled using chemical products with herbicidal actions registered by the Australian Pesticides and Veterinary Medicines Authority.</p>
Noise	9.0	<p>Drilling and blasting methodology will occur in accordance with recommendations given in Terrock Consulting Engineers' document Effects of Blasting, Stockyard Hill Wind Farm Quarry (WA 1518) (22 August 2013)</p> <p>All equipment, machines and vehicles on site are to maintain the quietest reasonable standard consistent with operational requirements, and are to be routinely maintained to ensure effectiveness of noise suppression systems and equipment</p>

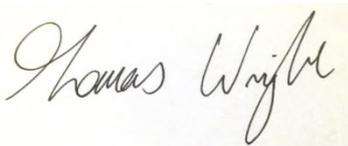
		<p>Operational hours (unless otherwise agreed by the Responsible Authority) to be restricted to: 7am to 6pm on Mondays to Fridays, 7am to 1pm on Saturdays</p> <p>Minimise the reversing of vehicles to reduce reverse signal noise</p> <p>The use of 'quackers' broadband frequency type reversing alarms on any mobile equipment</p> <p>Vehicles not to use horns as signalling devices where it does not affect the safety of the workforce</p> <p>Service or replace equipment exhibiting noisy operation</p> <p>Maximum two trucks on loading crushed rock at any time</p> <p>Avoid dropping materials from excavator bucket from a height when loading into trucks</p> <p>Plant generating unidirectional noise emission should be orientated such that the noise is directed away from sensitive receivers</p> <p>Machines used intermittently to be shut down or throttled down to a minimum when not in use</p> <p>Mufflers to be fitted on all vehicles and equipment</p> <p>Through site induction programmes, all personnel and contractors are to be informed of the importance of managing noise levels and their responsibilities during the extractive phase of the project.</p>
Dust	8	<p>All equipment and vehicles are to be maintained and serviced to minimise potential odorous emissions</p> <p>Water sprays are to be used to minimise dust emissions in and around the excavation</p> <p>A water cart is to be used around the stockpiles, overburden dump, internal roads, stripping areas and ground bins during dry conditions to minimise dust generation</p> <p>Stockpiles are to be pre-wet before loading onto trucks</p> <p>Stockpile slopes and heights are to be minimised where possible</p> <p>Weather conditions are to be monitored and communicated at the inception of each day to guide water cart use and restriction of dust generating activities</p> <p>Dust suppression activities using the water cart and water sprayers to be conducted in the following manner:</p> <p>A toolbox meeting to be held each morning to discuss weather conditions expected for the day and whether dust suppression is recommended</p> <p>An assessment of ground conditions to be conducted each day to determine need for the water cart to operate. Reporting of changes in ground conditions will occur through operational reporting processes</p>
Chemicals	7	<p>A spill kit is to be available at all times for use</p> <p>Any major servicing and/or repairs are to be undertaken within the workshop or designated area.</p> <p>When onsite refuelling of plant and equipment is required, refuelling is to occur on impervious areas, away from drainage points, water course and stormwater drains, and will be undertaken in a temporary banded area (e.g. over a drip tray, or within sediment sock bund)</p>

	<p>Chemicals must be stored and spills cleaned up in accordance with the Material Safety Data Sheets (MSDS)</p> <p>Oils, fuels, chemicals and wastes will be stored in designated storage areas within hard-stand surfaces, with appropriate bunding around the perimeter</p> <p>Limited volumes of fuels, greases, oils and chemicals will be stored onsite.</p> <p>Stored fuels, fluids, and chemicals are to be in clearly labelled, sealed containers</p> <p>Chemicals and fuels will not be stored in close proximity to stormwater drains</p> <p>Any waste oil from machinery or maintenance workshop to be stored in suitable containers and removed from the site by an EPA-accredited contractor</p> <p>Vehicle wash down and/or equipment wash out is to occur in a designated areas positioned away from drainage points, water dam and stormwater drains</p>
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I trust that the information provided adequately addresses the Departments request. If there is any additional assistance you require, please don't hesitate to ask.

Kind regards,

Dr Thomas Wright



Senior Botanist

Ecology and Heritage Partners Pty Ltd

