INTRODUCTION

The below provides a response to the submission from OEH, dated 22 March 2018.

RESPONSE

Terrain Solar accepts the modified wording recommended for the unexpected finds protocol.

> *If any Aboriginal object is discovered and/or harmed in, or under the land, while undertaking the proposed development activities, the proponent must:*
>
> 1. *Not further harm the object.*
> 2. *Immediately cease all work at the particular location.*
> 3. *Secure the area so as to avoid further harm to the Aboriginal object.*
> 4. *Notify OEH as soon as practical on 131555, providing any details of the Aboriginal object and its location.*
> 5. *Not recommence any work at the particular location unless authorised in writing by OEH.*
>
> *In the event that skeletal remains are unexpectedly encountered during the activity, work must stop immediately, the area secured to prevent unauthorised access and NSW Police and OEH contacted.*

As detailed in **Section 17.5.4** the Construction Environmental Management Plan will incorporate a process for the management of unexpected finds prior to the works commencing.

INTRODUCTION

The below provides a response to the DPI submission dated 21 March 2018. Nomenclature used by DPI has been retained for ease of cross referencing.

POINT 1

Under the provisions of the Junee LEP (and the State wide *Standard Instrument—Principal Local Environmental Plan*):

> *industrial activity means the manufacturing, production, assembling, altering, formulating, repairing, renovating, ornamenting, finishing, cleaning, washing, dismantling, transforming, processing, recycling, adapting or servicing of, or the research and development of, any goods, substances, food, products or articles for commercial purposes, and includes any storage or transportation associated with any such activity.*

The proposed Junee Solar Farm is not an industrial activity and by definition would not result in the 'industrialisation' of the land.

The long-term if not permanent removal of land for agricultural production can not be the sole criteria for concluding the development is not consistent with the LEP Objectives.

The assumption that a development needs to be consistent with all the zone objectives is incorrect. Objectives often seek to achieve different things, and this reflected in the fact that a range of differing land uses are permissible in a zone – including a solar farm. Some objectives compete directly with one another. For example, a development cannot 'encourage sustainable primary industry production by maintaining and enhancing the natural resource base' whilst at the same time 'allow for the development of non-agricultural land uses that are compatible with the character of the zone'.

A general presumption exists that permissible uses can be approved subject to adequate consideration of impacts and adequate control of these impacts. This position is supported by caselaw, including BGP Properties Pty Limited v Lake Macquarie City Council [2004] NSWLEC 399, which states at paragraph 118: In most cases it can be expected that the Court will approve an application to use a site for a purpose for which it is zoned, provided of course the design of the project results in acceptable environmental impacts.

The specific reasons why the proposed JSF is assessed as not being inconsistent with the LEP objectives is provided in the SEE, and reproduced below.

> *A solar farm is not inconsistent with these objectives. It will not diminish or degrade the natural resource base. To the contrary, as a passive land use harvesting sunlight a solar farm provides a capacity to reduce impacts on soil and water resources compared to farming and grazing, and have no off-site impact that would compromise the continued use of neighbouring lands for primary production purposes. It will not fragment or alienate resource lands, nor create conflicts within this Primary Production zone. The prospect of residential encroachment and future diminution of buffers to dwellings is remote.*

Stating the above is not misleading.

Further, the determination that solar farms are not inconsistent with the objectives of RU1 zoning is well established. A review of 12 different determinations in the last 12 months by the Department of Planning and Environment in Assessment Reports for larger scale State Significant Development (SSD) solar farms confirms this. These include: SSD 8540 (29 January 2018); SSD 8113 (20 December 2017); SSD 8183 (19 October 2017); SSD 7931 (23 October 2017); SSD 8208 (10 October 2017); SSD 8025 (30 August 2017); SSD 7955 (14 July 2017); SSD 7931 (14 July 2017); SSD 8095 (13 July 2017); SSD 6785 (12 July 2017); SSD 8072 (30 June 2017) and SSD 7680 (15 June 2017). Copies of these reports are publicly available at http://majorprojects.planning.nsw.gov.au/

POINT 2

Section 17.6.3 provides a description of the approach to vegetation management.

> *The long term performance measure is to establish a healthy, self-sustaining, noxious weed free groundcover over the solar farm that does not create a fuel hazard and minimises the potential for the potential for weed invasion into retained White Box Yellow Box Blakely's Red Gum Woodland and Derived Native Grasslands on the roadside verge of Old Sydney Road.*
>
> *Apart from the initial selection of a native or non-invasive cover crop, how this can best be achieved, and maintained, through a combination of mechanical slashing and/or periodic crash grazing will require monitoring and implementation of adaptive management principles.*
>
> *Specifically, this will entail adapting the frequency, duration and intensity of crash grazing, and the timing of any mechanical slashing to suit and accommodate the prevailing seasonal conditions. It will also require regular inspection across the site following intense rainfall events to check that drainage is stable and localised scouring hot-spots are not appearing.*

With respect to prevention of herbicide resistance the following is noted. Two key contributing factors to the proliferation of weeds are soils devoid of a vegetative groundcover providing competition, and soil disturbance. Subject to appropriate controls and revegetation as part of the construction program there is the ability to establish and retain a healthy groundcover under a solar farm.

Provided below are photos illustrating the presence of groundcover under the panels of solar farms in Australia.

Plate 1: Mount Majura Solar Farm, near Canberra, operational since October 2016.

Plate 2: Mount Majura Solar Farm.

Plate 3: Mount Majura Solar Farm: note provision of stock trough (foreground left) to enable grazing for groundcover management.

Plate 4: Clare Solar Farm, immediately post construction.

Plate 5: University of Queensland's Gatton Solar Farm. Sheep graze full time. Operational since March 2015.

A healthy groundcover provides competition for weeds. With the financial return on the land linked to passive solar generation rather than grazing or cropping, there will be an enhanced capacity to retain groundcover at all times. Similarly, in comparative terms, a solar farm has less recurring soil disturbance than cropping.

Based on the above it is reasonable to assume that, in a relative sense, compared to continued cropping over the next 30 – 50 years, there would be a diminution of two contributing factors to weed proliferation. Less weed proliferation would lead to less herbicide application.

It has not been possible to source any evidence that as a land use in New South Wales a solar farm, comparted to cropping, leads to an increase in herbicide use or exacerbated herbicide resistance.

The owner of the JSF, like any other occupant of rural lands undertaking weed control using herbicides, will be legally obligated to do so in a manner that complies with the manufacturer's product labels, and applied by an applicator who has the appropriate ChemCert accreditation. Practice elsewhere, and to be adopted for the JSF, is for herbicide application records to be retained that document dates of application, actives used and the rates applied. This information is retained and professional advice from consulting agronomists sought to proactively manage weeds and, amongst other things, adopt control strategies that minimise the potential for herbicide resistance.

POINT 3

Section 17.8 identifies the rehabilitation objective which is to restore the land capability to its current agricultural use.

A change to the timing of when the Decommissioning Management Plan (DMP) will be submitted to JSC for approval is now proposed.

At present, the SEE states that the DMP would be submitted no later than 12 months before the intent to decommission the JSF. It is now proposed that the DMP be submitted as part of the Operations Environmental Management Plan – which is required before the JSF becomes operational. This effectively brings forward the DMP by 30 years and will provide more certainty and detail on how rehabilitation objectives will be realised before the farm can start operations.

The SEE identifies that cables shallower than 500 mm would be removed on decommissioning. This is considered adequate. No historic or future agricultural land use at the solar farm site warrants 800 mm depth to allow agricultural activities to be undertaken.

The provision of a full soil survey now is not required or appropriate. Detailed design of the solar farm needs to be finalised to target specific soil investigations to inform any construction limitations, and the requirement to submit a Soil and Water Management Plan prepared in accordance with *Managing Urban Stormwater: Soils and Construction* series (refer **Section 17.4**) for approval, before construction activities can commence, provides an adequate mitigation measure for ensuring soil conditions are considered in the construction methodology.

Similarly, a soil survey to provide a baseline to measure soil characteristics post closure should be undertaken immediately prior to construction. A suite of factors will determine project scheduling and when construction will commence. Undertaking a survey now, when the land is likely to be subject to intervening use before construction commences, will not provide an accurate baseline.

POINT 4

The purpose of this Primefact is to help consent authorities to maintain sustainable primary production and development opportunities and minimise land use conflict when assessing infrastructure proposals affecting rural resource lands.

Directly related to the above, in terms of land use compatibility, Section 5.2.2 of the SEE states:

> *The proposed JSF would not compromise the capacity for neighbours to continue existing or future primary production land uses. Infrastructure is low to the ground and would not compromise aerial agricultural spraying: noting that two overhead electricity lines currently traverse the site.*
>
> *Terrain Solar do not envisage any unacceptable risk to the solar panels from activities on adjacent farm land such as aerial spraying or dust generation.*
>
> *The existing surrounding agricultural land uses are known and the JSF is not an incompatible land use with a potential to create land use conflicts. The JSF is not a threat to continued primary production activities by neighbours.*
>
> *As an owner of land in a rural environment, the owners of the JSF will, like their neighbours, have responsibilities to manage the land appropriately. In particular this will include obligations to manage any noxious weeds and to control fuel loads. Standard and proven management techniques for ensuring these outcomes can be implemented include slashing and/or crash grazing, and treatment (spot spraying) of any noxious weeds.*

POINT 5

The SEE does not suggest the extent of similar land elsewhere in the LGA has any bearing on the development site's mapped Class 3 classification.

The fact the development site occupies 93 ha of land zoned RU 1 Primary Production, and there is 198,372.8 ha of land zoned RU1 Primary Production in the Junee LGA, is directly relevant information for the consent authority.

POINT 6

The Statement of Environmental Effects as submitted provides adequate information to inform decision making, including visual impact, and it is inappropriate for impact assessment documentation that will be publicly exhibited to state whether neighbouring residents support the proposed development or not.

The consultation undertaken involved the landowner and Terrain Solar discussing the project with neighbours prior to lodgement and the exhibition and notification process, undertaken in accordance with Council's *Development Control Plan 2015*, provides the mechanism for appropriate landowner notification and public submissions.

NSW GOVERNMENT Department of Primary Industries

primefact

Infrastructure proposals on rural land

June 2013, Primefact 1063, second edition

Mary Kovac and Glenda Briggs
Resource Planning and Development Unit

Introduction

The purpose of this Primefact is to help consent authorities to maintain sustainable primary production and development opportunities and minimise land use conflict when assessing infrastructure proposals affecting rural resource lands.

This guideline relates to infrastructure facilities for: electricity and gas transmission and distribution, telecommunication facilities, railways, sewage systems, air transport facilities, wind farm proposals and other small scale renewable energy developments. Secondary minor local government work on roads, road realignments and associated facilities such as bridges) are also included.

This guideline does not address classified road and road traffic facilities or waste or resource management facilities[1].

Specific guidance should be sought for facilities which will increase the numbers of people living or working in rural lands such as housing, group homes and educational facilities due to the high risk of land use conflict.

This document is part of a guidelines series that helps streamline the Development Application (DA) process, by setting out the key agricultural issues, impacts and recommendations for consent authorities to consider.

The guideline may also help applicants, developers, consultants and the general public identify issues to be addressed.

The guidelines focus on agricultural issues rather than the full range of issues that consent authorities must address.

Integrated development proposals that trigger provisions of the *Fisheries Management Act 1994*, the *Mining Act 1992*, or the *Plantations and Reafforestation (Code) Regulation 2001* should still be routinely referred to the relevant section of Department of Primary Industries (DPI).

Development assessment guidelines

Well planned infrastructure developments, such as electricity transmission lines or communication towers can be compatible with ongoing agricultural land use. Lease fees or access agreements may also provide a supplementary income source.

Landholder consultation, good design and effective planning controls are critical for such outcomes.

To minimise impacts on agricultural resources and enterprises from infrastructure development proposals, DPI recommends that:

- ❑ Proposals are clearly justified in a regional context and identify the merits and community benefit of the proposal.
- ❑ Agricultural resource lands are identified and avoided. New infrastructure is located within existing infrastructure corridors wherever possible.
- ❑ Land use conflicts are minimised.
- ❑ Landholders are effectively consulted during planning, construction and rehabilitation works and the expectations of local communities are managed.
- ❑ Development proposals identify suitable mitigatory / remediation responses for all likely agricultural impacts.

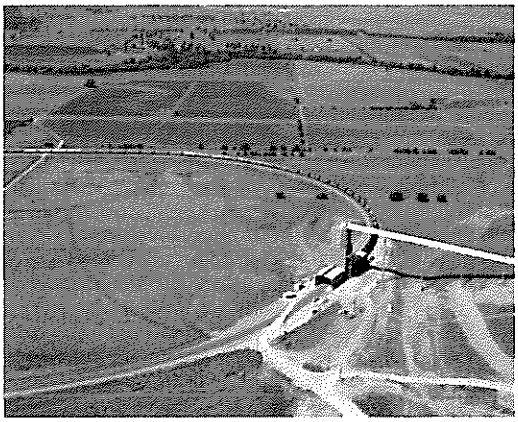
[1] issues related to landfills in rural areas are outlined in the Primefact *Agricultural Issues for Landfill Developments available on the Department's web site (see further information).*

Infrastructure impacts that are of particular significance for sustainable agriculture are:

- Resource loss and fragmentation
- Impacts on farming operations and livestock
- Increased weed, biosecurity and bushfire risks
- Site rehabilitation

Recommended considerations and possible consent conditions for the above specific issues are set out in the following sections.

A rail loop for coal loading designed to avoid productive alluvial farm lands. Photo: D Barnes.



Resource loss and fragmentation

Infrastructure that fragments rural resource lands can permanently reduce the economic and environmental sustainability of the farming enterprise and constrain future development options. Ideally infrastructure developments should be directed away from rural resource lands and critical farming infrastructure (eg buried irrigation pipes, pumps, livestock yards).

To minimise resource losses and impacts on farm productivity consent authorities are advised to verify that infrastructure developments:

- ❑ Consider agricultural land use and holding patterns in the locality, existing infrastructure and primary industry resources.
- ❑ Identifies important agricultural resources and farm infrastructure, including surface and groundwater resources on which agriculture depends.
- ❑ Minimises the footprint of proposed works and easements.
- ❑ Minimises further resource fragmentation and does not create lots smaller than the current minimum lot size for that zone.
- ❑ Where possible facilitates the consolidation of existing lots and any isolated farm lands.
- ❑ Co-locates infrastructure within existing corridors (e.g. road or rail reserves or existing easements) where ever possible.
- ❑ Buries pipelines and cables where feasible, subject to appropriate land rehabilitation considerations.

Impacts on farming operations and livestock

Infrastructure proposals can result in interruptions to internal or external farm access and to farm services that may affect the efficient operation and sustainability of agricultural businesses.

Farm businesses rely on access to road networks for supplies, employees, specialist support services and selling products. Access to infrastructure such as power, communication and water can also be critical for animal welfare and business survival.

Reliable, effective access to the road network and services is particularly critical at peak selling or harvesting times and for intensive livestock operations (eg dairies, poultry), horticultural and vegetable enterprises.

Internal access to water, pastures, feed storage and farm infrastructure (eg irrigation equipment) can also be vital for animal welfare and sustainable farming. Operating farms often comprise more than one allotment and need to access resources, livestock and crops spread across the holding.

Facilities such as proposed overhead electricity lines may also create concerns about air safety for agricultural operations such as crop spraying or the safe movement of agricultural machinery movement where ground clearance may be limited.

Infrastructure proposals should:

- ❑ Assess potential impacts on the safe use of farm machinery and routine farm activities.
- ❑ Assess the potential impacts on the ability to undertake aerial agricultural activities such as the aerial application of seed, fertilisers or chemicals. Surrounding land owners may also be impacted.

- ❑ Avoid, or promptly mitigate significant changes to access to the road network, internal farm tracks and critical farm infrastructure (eg buried irrigation systems or phone lines).
- ❑ Locate infrastructure developments in consultation with landholders. Siting facilities parallel to or immediately adjoining to existing farm infrastructure (e.g. fence lines or irrigation lines) is usually preferred.
- ❑ Plan the timing of construction operations and the location / design of temporary fencing and temporary access routes to minimise impacts on farm operations and livestock.
- ❑ Where the proposal will divide existing farm operations or properties the proposal should include measures to ensure ongoing access between each section.
- ❑ Access must be of an appropriate design standard to support ongoing agricultural use and should be developed in consultation with the landholder.

Develop site access protocols that lists the relevant landholder contact details and includes measures to minimise adverse impacts such as:

- Leaving gates open or shut as found.
- Driving carefully to minimise disturbance to livestock, crops and pastures, and
- Minimising disturbance to the environment e.g. land clearing.

Increased biosecurity, pest and weed risks and impacts on livestock

Biosecurity for agriculture, including genetically modified crops, relies on limiting vehicle and people movements on rural properties and being able to trace vehicle, people and stock movements if any disease outbreaks arise.

Infrastructure developments typically result in temporary, but significant increases in vehicle movements on and off rural properties. This risk is increased if new access points are created and if machinery moves across multiple rural properties.

Pest animals may also be encouraged by food sources from construction works and new access tracks. The additional vehicle movements and development activities may also increase the risk of bushfires.

Construction activities may also increase the risk of straying livestock, especially if gates are left open or if fences need to be cut or replaced.

Livestock can also be panicked or stressed by rapid vehicle movements or sudden noises which may result in injury or escape.

Consent authorities are advised to verify that development proposals appropriately identify:

- ❑ Potential biosecurity risks such any increased vehicle movement onto and off farms that could spread animal or plant material or diseases. This is particularly critical if genetically modified (GM) crops or organic crops occur within or adjoining the proposed development route.
- ❑ Significant weed species within the proposed development footprint and risks of spread.
- ❑ The location, status and management of current and former livestock dip sites and other potentially contaminated sites within the infrastructure corridor or area.
- ❑ Bushfire or other emergency management risks.
- ❑ Impacts on livestock including the pollution of waterways and noise risks that may result in injury or escape.

Where infrastructure proposals transect more than one property DPI recommends that consent conditions require the development of a Weed management plan in consultation with relevant Weed Authorities.

A Weed Management Plan should identify:

- ❑ Notifiable and problematic environmental weeds that could affect farm productivity.
- ❑ The additional risks resulting from the proposed development and their assessment. Advice is available from the local council weeds officer or on the website listed at the end of this guideline.
- ❑ State, regional or local plan or strategies for relevant to specific weeds that occur on the property area or that may be transported to the proposed works from surrounding areas.
- ❑ Weed suppression, management and containment strategies for all disturbed areas. For instance soil stockpiles, roadsides leading to the landfill site and disturbed areas.
- ❑ Measures to limit the spread of existing weeds include cleaning vehicle tyres before moving from property to property,

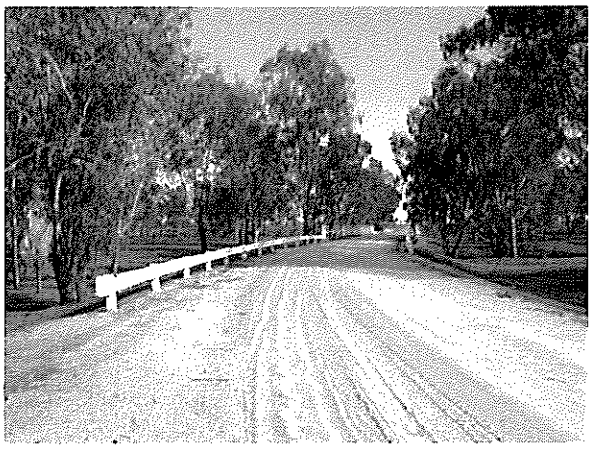
footwear checks, minimising and monitoring soil movement between properties.

- ❑ Monitoring programs for noxious and problematic weeds on site and in the surrounding areas and proposed follow up controls if weed problems occur.

I&I NSW also recommends that consent authorities require infrastructure proponents on rural lands to develop protocols to:

- ❑ Ensure effective consultation with landholders regarding the timing of operations, site access needs and any special measures to minimise impacts on livestock and crops. For instance the project design should seek to avoid or minimising the need to cut farm fences or traverse crops.
- ❑ Manage vehicle movements onto and across farms. This might include separating work sites from farm areas, restricting the number of vehicles accessing farm properties and monitoring vehicle movements on farms.
- ❑ Avoid biosecurity risks and ensure appropriate decontamination of vehicles moving between properties if necessary.
- ❑ Manage wastes and pollution risks.
- ❑ Manage, mitigate and monitor emergency risks as part of emergency management planning for the proposed development.

Well rehabilitated rural road bridge at Kywong. Photo: M Dingham.



Site rehabilitation

Rehabilitation is important to prevent erosion and the sedimentation of waterway or dams, limit weed germination and restore productive land use options.

Consent authorities are advised to ensure that proponents:

- ❑ Develop appropriate rehabilitation objectives and strategies in consultation with landholders and relevant agencies (eg the local government weed authorities and catchment management authorities).

DPI additionally recommends that proponents are required to develop a comprehensive Environmental Management Plan that documents:

- ❑ Environmental policies, rehabilitation objectives and strategies.
- ❑ Specific measures to protect catchment values and productive capacity including soil and erosion mitigation proposals.
- ❑ Any residual (i.e. permanent) impacts on agricultural or other primary industries.
- ❑ Project staging and the timeframes for site rehabilitation. Progressive site rehabilitation is encouraged.
- ❑ Topsoil management proposals to make best use of this resource and maximise rehabilitation and revegetation success. Recommended practices include:
  - the removal of topsoil before disturbing sub-soils or erecting permanent structures.
  - The immediate reuse of topsoil. If this is not feasible, topsoils should be temporarily stored in accord with best practices.
- ❑ Critical Best Practice actions focus on maintaining soil health and the vigour of native seed, limiting weed germination, and avoiding soil loss and catchment impacts.
- ❑ Proposals to reform the landscape to blend with surrounding landforms and avoid land use conflicts.
- ❑ Vegetation re-establishment strategies and actions. Recommended practices include:
  - De-compaction of areas traversed by heavy machinery to encourage plant growth and minimise run off.

- Consideration of seasonal conditions and timing revegetation efforts to maximise success.
- Sowing of cover crops or pastures to stabilise disturbed sites and reduce weed growth.
- Using species suitable for the proposed end use and locality. A particular priority should be the use of clean seed and species with a low risk of contributing to weed problems.
- Rehabilitating unwanted tracks to reduce pest animal problems.
- Allowing for soil settling and provisions to refill disturbed sites.

- ❑ Monitoring proposals to asses the effectiveness of rehabilitation efforts and repair as required.
- ❑ The responsible person and organisation for site management and remediation during and post construction.

Additional issues

DPI recommends that consent authorities ensure that proponents:

- ❑ Consult with relevant agencies such as the local government weed authorities and catchment management authorities on the design, construction and operation of the proposed infrastructure.
- ❑ Consult with the owners and managers of affected and adjoining agricultural operations in a timely and appropriate manner about the proposal, the likely impacts and suitable mitigation measures or compensation.
- ❑ Provide sufficient documentation to demonstrate that all significant impacts on current and future agricultural developments and resources have been identified and can be reasonably avoided or adequately mitigated.
- ❑ Minimise land use conflict. The publication 'Living and Working in Rural Areas: A handbook for managing land use conflict issues on the NSW North Coast' outlines conflict issues and suggestions on dealing with land use conflict. It also provides a guide for conflict risk assessment and mitigation that may be useful.

Strategic planning for infrastructure in agricultural areas

Councils are encouraged to strategically review desired planning outcomes for rural lands; and identify important resources and sustainable development opportunities for agricultural enterprises.

Strategic studies should identify infrastructure needs and preferred infrastructure corridors or locations to minimise the risk of land use conflict.

Further information

NSW DPI has additional web based information and publications on pasture and weed management and minimising conflict risks with adjoining agricultural land uses.

This includes information on:

- Weeds
- Land Use Conflict Risk Assessment (Living and Working in Rural Areas)
- Agricultural Issues for Landfill Developments - a guideline for Assessing agricultural impacts related to Waste Management (landfill) facilities in rural areas.

Additional information on animal diseases and pests can be sourced from local Livestock Pest and Health Authorities.

Other information in relation to these developments are available at the register for development guidelines.

Some relevant guidelines found at this site include:

Department of Water and Energy 2008 *Guidelines for controlled activities: Instream Works and Guidelines for controlled activities: Laying pipes and cables in water courses.*

Department of Infrastructure, Planning and Natural Resources 2004 *Guideline for the Preparation of Environmental Management Plans.*

State of NSW and Department of Environment and Climate Change 2009 *Interim Construction Noise Guide.*

NSW Rural Fire Service 2006 *Planning for Bushfire Protection.*

Acknowledgements

The authors would like to acknowledge the following people for their contribution to this Primefact:

Andrew Docking, Rik Whitehead, Wendy Goodburn, DPI, and Mark Parker, NSW Department of Planning and Infrastructure.

Published by the NSW Department of Primary Industries.

ISSN 1832-6668

Check for updates of this Primefact at:
www.dpi.nsw.gov.au/factsheets

Job number 10346 PUB 13/68

INTRODUCTION

The below provides a response to the two submissions from landowners, both dated 21 March 2018 and both raising the same issue of weed control and land stewardship.

RESPONSE

Section 5.2.2 of the Statement of Environmental Effects notes that, as an occupier of land in a rural environment, the owners of the JSF will have responsibilities to manage the land appropriately. In particular this will include obligations to manage any noxious weeds and to control fuel loads. Standard and proven management techniques for ensuring these outcomes can be implemented include slashing and/or crash grazing, and the treatment of noxious weeds.

The long term performance measure for operating the solar farm will be to establish a healthy, self-sustaining, noxious weed free groundcover over the solar farm that does not create a fuel hazard, or result in runoff from the JSF depositing a seed bed of noxious weeds for any adjoining landowner.

The management practices for preventing the spread of noxious weeds will be specified in both the Construction Environmental Management Plan (CEMP) and the Operations Environmental Management Plan (OEMP).

Council approval of the CEMP will be a precursor to any construction activity commencing. Similarly, Council approval of the OEMP will be a precursor to the solar farm commencing operations. Both are hold points requiring detail of the weed management practices to be employed before the solar farm can be built or operated. Both landowners will be consulted in the preparation of these two plans.

The owner of the JSF, like any other occupant of rural lands undertaking weed control using herbicides, will be legally obligated to do so in a manner that complies with the manufacturer's product labels and is applied by an applicator who has the appropriate ChemCert accreditation. Practice elsewhere, and to be adopted for the JSF, is for herbicide application records to be retained that document dates of application, actives used and the rates applied. This information is retained and professional advice from consulting agronomists sought to proactively manage weeds.

It is acknowledged that with the erection of infrastructure over the site conventional broad acre spraying will not be able to be carried out. However, with internal spacings of 5-6 m between arrays there will still be capacity to manoeuvre spray rigs (albeit with less boom width) around the site.

There is also the prospect that the use of the land for solar farming will, subject to ongoing monitoring and management, reduce those contributing factors that lead to the proliferation of weeds: that is, soils devoid of a vegetative groundcover providing competition and ground disturbance. Subject to appropriate controls and revegetation as part of the construction program there is the ability to establish and retain a healthy groundcover under a solar farm.

It is acknowledged that seasonal conditions will impact on the health and longevity of a sown groundcover and that there may well be a need for the groundcover to be renewed over the life of the farm. Again it is acknowledged that with the erection of infrastructure over the site sowing a groundcover will be problematic. It will not, however, be impossible.

Provided below are photos illustrating the presence of groundcover under the panels of solar farms in Australia.

Plate 1: Mount Majura Solar Farm, near Canberra, operational since October 2016.

Plate 2: University of Queensland's Gatton Solar Farm. Sheep graze full time. Operational since March 2015.

A healthy groundcover provides competition for weeds. With the financial return on the land linked to passive solar generation rather than grazing or cropping, there will be an enhanced capacity to retain groundcover at all times. Similarly, in comparative terms, a solar farm has less recurring soil disturbance than cropping. Based on the above it is reasonable to assume that, in a relative sense, compared to continued cropping, there would be a diminution of two contributing factors to weed proliferation.

The requirement to prepare and secure Council approval on the Operational Environmental Management Plan, before the solar farm commences operations, is identified as a Mitigation Measure in the Statement of Environmental Effects and is therefore part of the proposed development.

This obligates the owner/operator of the solar farm to establish a healthy, self-sustaining, noxious weed free groundcover over the solar farm that does not create a fuel hazard, or result in runoff from the JSF depositing a seed bed of noxious weeds for any adjoining landowner. The specific management measures to be applied to meet these objectives, need to be documented in the CEMP and OEMP before the farm can be built/operated, and constitute enforceable consent conditions.

The development proponent commits to consultation with both landowners in the preparation of these plans to prevent the proliferation of noxious weeds off-site as a consequence of the solar farm.

Claire Golder

From: Toni Hambilton <toni.hambilton@junee.nsw.gov.au>
Sent: Thursday, 29 March 2018 3:59 PM
To: Grant Johnson; Claire Golder
Cc: David Carter (david.carter@juneeshire.org.au)
Subject: FW: Solar Farm

Please see response below from Simon Ingram.

Regards

Toni Hambilton

Executive Assistant, Community and Business

29 Belmore Street, Junee NSW 2663
P +61 2 6924 8100
D +61 2 6924 8121
F +61 2 6924 2497
E *toni.hambilton@junee.nsw.gov.au* W www.junee.nsw.gov.au

From: Simon Ingram [mailto:simon@terrainsolar.com]
Sent: Thursday, 29 March 2018 3:02 PM
To: Toni Hambilton; Tom Allen
Subject: Re: FW: Solar Farm

Thanks Toni.

I agree with you that this is well covered in the other two submissions. However, for David Carter's benefit, I've jotted down a few points relating to his fire question:

Fire management, with regard to the design of the site, currently includes an Asset Protection Zone (fire break) of 10m around the site and tanker access. This is covered in **section 12.2.1 and 12.2.2** of the SEE in some detail.

Section 12.3 of the SEE deals with fire management during construction. The Construction Environmental Management Plan will include specific procedures and responsibilities for minimising bushfire risk through work practices (including David's request on detailing restrictions on high fire & fire ban days etc).

Section 12.4 discusses fire management during the operations phase and the Operations Environmental Management Plan that will ensure that the site is maintained in a such a manner that no grass fire originates from within the solar farm site, and/or any approaching bushfire does not intensify as a consequence of entering the solar farm site because of excessive fuel loads.

Please contact me anytime if you need to discuss anything.

Cheers
Simon

Simon Ingram
Director - Terrain Solar Pty Ltd
M: +61 (0) 434 088 388
E: simon@terrainsolar.com

On Thu, Mar 29, 2018 at 2:09 PM, Toni Hambilton <toni.hambilton@junee.nsw.gov.au> wrote:

Hi Simon,

Another submission for the solar farm, although it is past the notification period, it is from one of our Councillors and I believe it has been addressed in another submission. FYI.

Regards

Toni Hambilton

Executive Assistant, Community and Business

29 Belmore Street, Junee NSW 2663
P +61 2 6924 8100
D +61 2 6924 8121
F +61 2 6924 2497

E *toni.hambilton@junee.nsw.gov.au* W www.junee.nsw.gov.au

From: David Carter [mailto:david.carter@juneeshire.org.au]
Sent: Sunday, 25 March 2018 7:42 PM
To: Grant Johnson
Subject: Solar Farm

Morning Grant

My two (2) concerns with the solar farm are

1. Weed Control, especially with the new weeds act and the occupier being responsible for weed control on their own ground.
2. Fire Control, that at all times especially during the summer months that an adequate fire break (cleared of flammable material) of at least 3 meters be around the peroimenter of the site. That access is easily obtainable for all emergency vehicles. That work be restricted on high fire and fire ban days.

Regards

David Carter

NSW GOVERNMENT | Department of Primary Industries

OUT18/5793

9 April 2018

Claire Golder
Town Planner/Strategic Projects Officer
Temora Shire Council

C/O Email: cgolder@temora.nsw.gov.au

Dear Ms Golder

Response to proponent comments: SEE for Solar Farm Development, 346 Old Sydney Road Marinna. DA2018/11

Thank you for the opportunity to provide a response to the proponent's comments on the DPI Agriculture submission dated 21 March 2018.

1. Regardless of the semantics as to what constitutes an industrialised landscape, the manufacturing of electricity for sale via a commercial scale solar farm appears to fall well within the definition of industrial activity as outlined in the standard instrument. If the proponents or others chose to interpret it differently, that is a matter for them. The key point being (and it may not be the case with this particular development) that a significant change to a rural landscape often results in some form of land use conflict, which is something parties wish to avoid.

   Government agencies and courts routinely make decisions that appear at face value, to be at odds with particular policies or legislative objectives, simply because there are always competing objectives. As the proponent also points out, it is well known through case law and the scores of previous solar farm approvals on land Zoned RU1, that legally and practically, this occurs all the time as it does for other forms of development such as gaols, transport infrastructure etc. However, the fact that other forms of land use are approved by consent authorities does not mean that they are necessarily consistent with the zoning objectives of the LEP. All DPI Agriculture does is to remind consent authorities that as a point of first principle, the objectives of land zoned RU1 are to facilitate primary production. If consent authorities decide to approve some other form of land use that is not consistent with this, then that is their prerogative.

2. It is clear from the response that the proponents have a sound vegetation management plan. The text on herbicide resistance is a standard, precautionary inclusion in such a submission, given the extended time frame of the project and the fact it often takes decades for herbicide resistance to appear. DPI staff have also received anecdotal reports that some proponents have stated an intention to rely almost solely on herbicide for vegetation management, which clearly is not the case here.

NSW Department of Primary Industries - Agriculture
Locked Bag 21, Orange NSW 2800 | 161 Kite St, Orange NSW 2800
Tel: 02 6391 3391 | Email: landuse.ag@dpi.nsw.gov.au | www.dpi.nsw.gov.au | ABN: 72 189 919 072

3. The new timeline for the Decommissioning Management Plan (DMP) is noted. As a guide, an effective outline of a DMP for the purposes of an SEE or EIS can be found in the EIS for the Sandigo Solar Project. It is located here for ease of reference.

   http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=8872

   The comment that the soil survey should occur immediately before construction is noted. We will revise our wording to make the suggested soil survey timing, clearer. With respect to the depth of any infrastructure to remain buried, the main focus of DPI Agriculture is on the long-term conservation of the biophysical asset that is the agricultural land.

   In 30-50 years, it is not known what type of agriculture may occur, who will own the land or what form of technologies will exist to allow that land to be farmed. Part of the DMP may also involve the deep ripping of any areas that are compacted. Together with the potential for on-going cropping post decommissioning and possible erosion in future years, it is not hard to see why some solar farm proposals intend to remove all infrastructure as part of their DMP, not just to 500mm or 800mm (refer to the Sandigo EIS). As a result, 800mm is suggested by DPI Agriculture even though it too, may prove insufficient over the longer term.

4. This is standard text to alert proponents or consent authorities that this tool is available.

5. The aim of this comment was to alert the consent authority that the land is deemed 'High Capability Land' and that even though one LGA or region may contain significant amounts of such land, the same cannot be said on a state-wide basis.

6. It is common with EIS's and SEE's of this type that the reader is left with an uncertain picture as to exactly what the results of the consultation process were. From the perspective of avoiding land use conflict, which is always the focus of our analysis of any consultations, this particular SEE was not sufficient. We do not accept that is inappropriate to provide the results of consultations as this is exactly the type of information consent authorities and others should have access to. Again, a useful example of how a consultation process is managed and reported on is covered in the Sandigo EIS.

Should you require clarification on any of the information contained in this response, please contact Agricultural Land Use Planner, Dr Alex Wells on (02) 6640 1673.

Yours sincerely

Alex Wells
Agricultural Land Use Planner

Claire Golder

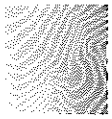
From: Claire Golder
Sent: Thursday, 12 April 2018 10:49 AM
To: Claire Golder
Subject: Junee Solar Farm

From: Simon Ingram [mailto:simon@terrainsolar.com]
Sent: Thursday, 12 April 2018 10:42 AM
To: Claire Golder
Cc: Chris Wilson; Andrew Brownlow; Tom Allen
Subject: Re: Junee Solar Farm

Hi Claire,

Terrain Solar are happy to accept the DPI Agriculture request of having the solar farm infrastructure removed up to a depth of 800mm during decommissioning.

Regards
Simon



Simon Ingram
Director - Terrain Solar Pty Ltd
M: +61 (0) 434 088 388
E: simon@terrainsolar.com