18/04/2011

To: THE SENATE ENQUIRY INTO THE EFFECTS OF RURAL WIND FARMS

Dear Senators,

We note that in the transcript of the Senate Enquiry into the effects of rural wind farms in Melbourne that the CFA representative, Mr Conway, did not know about the raised-bed terrain of the approved Berrybank wind farm.

We have enclosed an explanation from the DPI of Victoria and also our recent correspondence with the CFA expressing our concern for the inability to fight fires on this site. As yet, we have no resolution.

Sincerely

Anne & Allan Schafer

in the planning process. We believe that there are circumstances where it would be appropriate for us to be involved, even though a wildfire management overlay does not exist.

They are the key points that were made by the chief officer in his submission and they are the points that I wanted to reiterate for committee members today. I am certainly happy to take any questions that the senators may have.

CHAIR—Thank you. Senator Fielding?

Senator FIELDING—Thanks, Chair. Some of the questions that came up yesterday related to whether it impedes the fire authorities in some way in getting into the area or fighting a fire if there are turbines and maybe aerial requirements for getting into an area, Is it something you have considered? I do not think it was in your submission about getting in to fires; it was more about whether wind turbines have a risk of catching fire and then creating a fire. Some of the evidence we heard yesterday was about accessibility—getting into an area because wind turbines may limit the area for fighting fires.

Mr Conway—I will take that in two parts. The first point, as to what is the likelihood of a turbine generating a fire in the landscape, our view is that the likelihood is very low but it does exist. The issue in relation to access for firefighting personnel and equipment if there is a fire burning in the vicinity of a wind farm is the key point addressed in the existing guidelines. Our organisation makes observations in relation to access tracks, provision of water supplies for firefighting, and it also identifies issues in relation to aerial firefighting, which is probably the key point.

Pilots operating aerial firefighting equipment are acutely aware of hazards of their occupation. Whether it be wind turbines and rotors, whether it be high-voltage transmission lines, whether it be trees or any other issue in the landscape; they are well aware of it and they are well versed in it. The current guidelines, as we understand it, allow for about a 300-metre spacing between installations for firefighting aircraft, particularly rotary winged firefighting aircraft. That is fine and we do not have any concerns in relation to that. We are quite confident that the pilots and the people on the ground managing the aerial firefighting capacity have that awareness and are able to manage it.

CHAIR—Senator Adams?

Senator ADAMS—Just another issue to carry on from that, we had evidence yesterday about concerns with the raised bed areas—I think it was probably more down in the southern area of the state—and how to deal with that problem. Could you help us there?

Mr Conway—I am not sure that I am familiar with the raised bed issue that you are identifying.

Senator ADAMS—I gather it is something to do with the way that the lava flows have come and the terrain is quite difficult to get into. The firefighters have been told, 'If there's a fire in there, just don't go,' because of the proximity of how the fire can come across, and the access.

Mr Conway—I understand your point. The issue with firefighting in that country, particularly where there have been lava flows and what we generally refer to as the stony rises, has been an issue that firefighters in Victoria have been dealing with since European settlement. It is incredibly complex and we do have to develop unique firefighting tactics and strategies for that area. That would be regardless of any other pieces of equipment in the landscape. I would not suggest that wind farms would have any additional adverse impact on that. The complexities of firefighting in that environment are well understood by the people who work there and have been dealt with over many years. The strategic and tactical approaches we have are well established.

Senator ADAMS—Okay. Thank you.

Senator MOORE—Mr Conway, following on from Senator Adams, we had a number of statements yesterday from people raising issues around fire and issues about their terrain and so on. If we got that evidence and gave it to your organisation, would you be able to give us a comment back?

Mr Conway—Absolutely.

Senator MOORE—Certainly the lava bed one was raised quite passionately, and people did not seem to have the same information that you gave Senator Fielding about aerial firefighting either. As they were raised publicly, it would be very useful to have them specifically responded to. Would you be able to do that for us?

Mr Conway—Yes. If you could refer those to the chief officer in the first instance, we will address those.

Senator MOORE—Thank you very much.

CHAIR—Senator Boyce?

Senator BOYCE—You talked about wildfire management overlays and not being involved in planning for wind farms where this might be the case. Could you explain to us what would be different if you were?

Mr Conway—The wildfire management overlays are a tool used by CFA to identify where there is a heightened risk of bushfire—firstly if it is starting and also the consequence of a fire occurring in areas. It is driven predominantly by the vegetation cover on the land. The state of Victoria is not covered entirely by wildfire management overlays because of the variation in vegetation cover. Open grasslands are less likely to see wildfire management overlays in place.

Senator BOYCE—It is almost a risk assessment tool, basically, is it?

Mr Conway—Very much so. The wildfire management overlay is one of the triggers that engage CFA in the planning process for any new development, whether it be a subdivision or industrial development within the landscape. Where a number of wind farms are being developed, the vegetation cover does not warrant a wildfire management overlay. Consequently, there is not a trigger to involve CFA in the planning process for this particular type of

24th November 2010

To: **Mr. Euan Ferguson, Chief Officer CFA**

8 Lakeside drive

Burwood East 3151

We have deep concerns about serious fire risks on, and around, the future Berrybank wind facility, Western Plains of Victoria.

Any fire starting in, or travelling through, the wind farm area would be uncontrollable because of the "raised-bed" cropping nature of the majority of the site. The deep furrows of "raised-bed" terrain make it virtually impossible, and thus extremely dangerous, to traverse.

Aerial fire control is usually used to fight fires on raised –bed country, but it now cannot be used because of the height and dense placement of the turbines.

Mr Bob Smith, a senior CFA representative, in his submission to the Panel Hearing for the Berrybank wind farm, stated that the CFA is OPPOSED to any fire fighting vehicles and personnel on the site.

The Planning Permit for the Berrybank wind farm requires the width of access roads to be 4 metres. This width was considered inadequate by the Planning Panel as this would be an insufficient width for truck turn around considering the furrows adjacent to the roads. The Permit also requires consultation with the CFA at Headquarters level, regional office and local volunteer brigades on and surrounding the facility.

The recent turbine fire at Starfish Hill, South Australia, is alarming. Safe Work would not allow fire fighters (CFS) within 1kilometre of the burning turbine. This is the third turbine fire in four years for South Australia.

At Berrybank, and many other wind farms, turbines are placed 1 kilometre, and closer, to homes. The safety of properties and residents on, and surrounding, the Berrybank wind farm is severely at risk. It is imperative that this dangerous and totally unsatisfactory situation is addressed.

We sincerely hope that the CFA will investigate, thoroughly, the potentially dangerous and unacceptable circumstances that the residents of Berrybank will be in if this situation is ignored.

We would be grateful for a reply.

Sincerely

Anne & Allan Schafer

10th January 2011

To: Mr Craig Lapsley, Fire Services Commissioner

8 Lakeside Drive

Burwood East 3151

Dear Mr Lapsley,

We are deeply concerned about the potentially serious fire threat that will be imposed on some residents situated on, and surrounding, the future Berrybank wind facility. Most of the site is raised-bed cropping terrain. This deeply furrowed land cannot be safely accessed by CFA vehicles. Aerial fire control also cannot be employed because of the height and dense placement of the turbines, as well danger to pilots.

The dangerous weather conditions of Friday 31st January, illustrated to us the very hazardous position in which our property will be placed in the future. Our home will be almost surrounded by turbines, with 16 turbines closer than 2 kilometres from our home. Those to our north – west are of most concern.

It is to be noted that this situation was discussed in detail at the Panel Hearing for the Berrybank wind farm in February 2010. Mr Bob Smith, a former Senior Officer with region 6, in his submission to the Panel, stated that the CFA are opposed to any fire fighting vehicles and personnel on the site. The Panel presented this information to the Minister for Planning, who subsequently approved the development regardless. The wind company, Union Fenosa, have shown a lack of awareness, knowledge and planning in their submissions to the Government, and have seemingly no regard for our safety.

Enclosed is a copy of a letter we sent to Euan Ferguson, Chief Fire Officer CFA, and his reply. We have not yet received any correspondence from the Region. We would appreciate your advice on this matter.

Sincerely

Anne & Allan Schafer

Patron: Professor David de Kretser, AC, Governor of Victoria

Our Ref: EF:sas
Enquiries: Euan Ferguson
Telephone:(03) 9262 8311
Fax: (03) 9262 8397
Your Ref:

8 December 2010

Anne & Allan Schafer
425 Berrybank-Werneth Road
BERRYBANK VIC 3323

Dear Anne and Allan

I acknowledge the receipt of your letter regarding the Berrybank Wind farm facility and the issues regarding your concerns over the increased fire risk in the area. Further information is being sought from the Region concerned and a reply to your letter addressing these will be forthcoming.

May I take this opportunity to thank you for your initiative in raising this matter with the Country Fire Authority and to assure you that we value the communities input into fire safety.

Yours sincerely

Euan Ferguson AFSM
Chief Officer

DEPARTMENT OF PRIMARY INDUSTRIES

Victorian Resources Online
Statewide

Raised Bed Controlled Traffic Farming

Introduction | What are raised beds? | Benefits | Practical Guidelines | References | Bedtime Stories | Fact Sheets | Southern Farming Systems Soil Pits

Introduction

Permanent raised beds (PRB) and controlled traffic broad acre farming are a recent phenomenon in southern Australia, developed to overcome waterlogging and improve soil structure on cropping soils in the high rainfall zone [>550 mm] of southern Australia. During the long, cool growing seasons, perched watertables can develop following rainfall due to the high clay content and low permeability of the subsoils, often resulting in complete crop failure when grown on flat or gently sloping ground without drainage.

Raised Bed Farming is not a new idea. In Asia and other parts of the world, soil beds have been raised and furrows used for irrigation for centuries. In many countries including Australia, the technique has been used for many years by home gardeners and commercial vegetable and flower growers to assist with drainage. In the early 1980's, scientists from the Department of Primary Industries (DPI) Tatura, in Victoria developed a system of growing broad acre grain crops on raised beds and using the furrows for irrigation [Tisdall and Adem, 1986a, 1986b; Tisdall and Adem, 1988]. The system has been widely adopted for grain and horticultural crop production in the NSW Riverina districts, particularly around Griffith [Beecher et al., 2005].

To view the information PDF requires the use of a PDF reader. This can be installed for free from the Adobe website (external link).

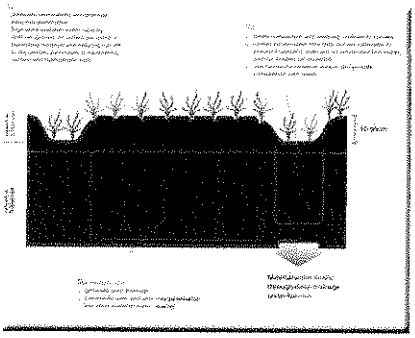

Figure 1. A profile of a typical raised bed.
(PDF 296KB)

What Are Raised Beds?

Permanent raised beds were developed for broad-scale dryland agriculture by the Southern Farming Systems (SFS) in the mid 1990's. The work was based in south west Victoria and led by Bruce Wightman from DPI.

Typically, the soil is cultivated to depths of up to 30 cm and then formed into narrow beds of between 1.7 to 2.0 m in width. Soil from the furrows positioned down each side of the beds is thrown onto the tops of the beds, resulting in an increase in the height of the soil of between 2 and 5 cm. The height of the bed above the furrow base is usually between 15-30 cm, depending on the depth of the prior cultivation. The furrows act as pathways for drainage, providing there is some slope in the paddock to allow water to run down them, and they also carry wheeled traffic to minimise compaction within the bed. In the system adopted in south-west Victoria, crop is generally sown in the furrows without fertiliser, to minimise erosion and reduce nutrient loss in runoff. If the beds are properly installed in the first instance, the beds should only require reforming every 3-5 years.

Benefits

The use of raised beds can have several benefits depending on the circumstances. In the context of farming in southern Australia, the main reasons are:

1. Better drainage: Raised beds are primarily a field drainage tool aimed at decreasing waterlogging and increasing crop yields. When soil becomes saturated with water, as is the case for many *'texture contrast' soils in Australia*, anaerobic conditions result in poor plant root growth, causing plants to become stressed and in some cases under prolonged waterlogging, plants will die. Where soils become saturated in winter due to high rainfall and/or poor drainage, then soil drainage needs to be considered.

2. Better soil structure: By their very nature, raised beds encourage implements to travel down the furrows, which reduces the amount of soil compaction occurring where the plants are growing. Soils that aren't compacted have a greater ability to hold plant available water, are less cloddy, allow for greater plant root growth and give higher plant yields. Raised beds offer a form of controlled traffic, the benefits of which have been proven in many areas and over many years [Blackwell et.al.,2003; Ellis et.al., 1992; Tullberg, 2001; Tullberg et.al., 2001)].

3. Risk management:: The incorporation of raised beds means that the complete failure of crops due to waterlogging is eliminated. Hence more accurate budgeting of crop yields can occur, with greater confidence in achieving good crop yields. Many paddocks that were once too risky to crop due to waterlogging problems can now be brought into production with confidence.

4. Higher profits: Due to more uniform and higher yielding crops under situations where waterlogging would normally be a problem, higher profits can be realised. Crop yields in many parts of South-west Victoria have doubled in recent years where raised beds have been used. A doubling of yields has meant considerably more profit for farmers using raised bed technology. It is important to note that many of the costs associated with the installation of the raised beds, such as surveying, grader work etc. are one off costs and should not need to be repeated.

The rapid research and development of raised beds and controlled traffic has been a combined team effort including farmers, machinery manufacturers, agronomists, and researchers with the Grains Research and Development Corporation (GRDC) (external link) and SFS helping to sponsor the project along the way. A range of practices and recommendations have been developed by the SFS group over the years for the establishment of raised bed systems in southern Australia. As a consequence of the SFS being a farmer partnership, a lot of the research underpinning these practices was carried out in an on-farm, participatory mode.

Practical guidelines for Raised Bed Cropping

The paper below describes the PRB systems developed for conditions prevailing in southern Australia.

Berrybank wind facility

* flat terrain
* dense turbine placement
* no flight corridors

- Accommodation
- Schools
- Child care
- Recreational facilities
- Retail stores
- Hospitality
- Entertainment venues

* turbine height negates the use of aerial fire control as surfactant must be dropped at lower elevation to be effective.

Based on current estimates for the total number of turbines, the wind farm will contribute substantially to Shire Councils as a result of annual electricity generation rate payments. Over the life of the project, the rates paid will assist in funding local services and infrastructure. The wind farm will also contribute to the economy through corporate taxes.

Additionally, the wind farm provides a new source of revenue to the region and helps to diversify the economic base of the local economy which will enable it to better withstand common rural problems such as drought and declines in commodity prices.

Further Reading

Union Fenosa encourages residents to fully inform themselves when forming a position on any wind farm project. Much information is available on the internet, and recently on TV, and some of this