

Dear Commissioners

Re: Objection to SSSA- Flyers Creek Wind Farm Mod 4.

I am committed to being overseas from 9/7 to 5/8 /2019 under long standing arrangements and unable to attend the Public Meeting on 23 July .

As the owner of Residence 12 “ Errowanbang” the centre piece of explorer William Lawson’s original holding on Flyer’s Creek , I have made submissions objecting to the original SSSA and each subsequent modification although my submission on-line to Mod 4 apparently went astray as I do not appear as an objector despite my email to Ms Homsey of 1 March 2019 referred to below and attached.

Errowanbang has a substantial brick turn of 19 th century (1898) residence , the third on the same site , set in 5 acres of matured gardens within a 650 acre Murray Grey cattle stud . The stud commenced in Grose Vale in the mid 1960s.

Errowanbang is an Heritage Item on the Blayney Council register and was visited by 640 National Trust members on the 30th March last , to great acclaim.

This property purchased by my parents in 1975 and owned by me since 2001 has been completely restored with selected sympathetic modern facilities . The property has tremendous amenity , sitting at an altitude of 650m AHD and surrounded by rural ridges of up to around 1000m AHD , which provide significant visual catchways and view corridors.

Infigen’s turbines will intrude into our heritage vistas and setting. Burra Charter ? .

Very few other residences can be seen from Errowanbang and then mainly under lights at night , however , virtually ALL of Infigen’s turbines will be visible from the Errowanbang residence with the northern section turbines overbearing Errowanbang’s predominant N/E aspect.

The massive increase in the bulk/mass/scale of the turbines in this Mod 4 Application (see below) will have a devastating affect on the general amenity of Errowanbang and permanently destroy its beautiful rural outlook and setting with the N/E turbines towering on the ridges up to 450 -500 metres above Errowanbang . Burra Charter ? .

Only time will tell whether Errowanbang will suffer turbine noise , infrasound or flicker with the sun rising at times directly behind the line of turbines of the northern sector of the proposed wind farm. .

During my vacation I have taken time to view windmill development in Burgundy , France. Unlike the get rich quick entrepreneurs , chasing wind on ridge tops for maximum effect but with consequential maximum environmental damage , in the reasonably fledgling Australian wind farm industry , French windmills , whilst smaller are located on elevated plateaus but NEVER located on ridges . Photograph attached.

In Europe many windmills are located at absolute sea level .

The visual impact of the French mills pales into insignificance to the devastating visual impact of Australian mills located on ridges that magnify their visual impact on the skyline and on all properties within their expansive view. As set out below , Mod 4 Turbines will produce massive impact on the natural and built environment and the community , especially Errowanbang.

Assessing the Mod 4 Application will give the Panel the opportunity to send a message to the Australian community at large that windmills more sensibly sited and scaled can achieve an outcome more acceptable to all. The Panel has this opportunity by conditioning Flyer’s Creek Wind Farm Mod 4 Approval , if it is instanta , as I have suggested at the end of this submission.

Being a member of the FCWTAG Group and having discussed that Group’s proposed submissions to IPC I fully endorse those submissions.

However, impacted as Errowanbang is by the wind farm as approved and now threatened with virtual annihilation of all amenity and thereby a substantial reduction in value by Mod 4, and having practiced law for approx fifty (50) years (now retired) principally in property law including planning and environment law feel it incumbent upon me to personally make the following submissions:-

A) IPC should find that SSSA MP 08 0252 lapsed on 14th March 2019.

Should the IPC not so find then I submit :-

B) IPC should not grant Mod 4 consent on lack of merit assessment:-

Should the IPC propose to grant Mod 4 consent then I submit :-

C) As a minimum any Consent should be conditioned by the IPC to reduce the size and output of Turbines to reflect the improvement in turbines and Infigen's original Application and Consent and thereby reduce their environmental impacts.

Regarding A)

A I . Lapsed consent - no physical commencement.

I refer to the Department's statement at page 2 para 4 of it's Mod 4 Assessment which states the " approval is not subject to the lapsing requirements in condition C5 of the project approval "

This statement is far from the truth , as an inspection of Blayney Council's rather meagre file with Construction Certificates (CC) dated 22 February 2019 for "access and site pad for a shed" and CC 6 March 2019 for a "site shed" and a site inspection will reveal.

I refer the Panel to Blayney Council's CC file .

The file contains, inter alia, a site and access plan and a plan of a single person office shed (rented from Kennards Hire together with a stand alone port a loo) with car parking. These are insignificant elements which as discussed below could not be considered as " Works " related to the Approval so as to satisfy the legal threshold of physical commencement .

The site shed is not fenced in/off , has no power connected nor provision for water .

Works the subject of the Approval are relevantly required . The mere placement of a minor transportable hire shed could be for any unrelated purpose and for reasons discussed below has not constituted lawful commencement so as to preserve the Approval , which has lapsed at law.

These plans do not have nor show , nor does the site have , any area for a "lay down yard" whether temporary or otherwise commensurate with a wind farm construction site. It is not even claimed by Infigen or the Department to be a "permanent office or site compound " as referred to in Approval C5 as " ancillary infrastructure" .

Councils' CC file contains correspondence between Council and the Applicant.

I would refer the Panel to emails, particularly between Mark Dicker (Director of Planning Blayney Council)(MD) and Andrew Davis (Infigen) (AD).

It can be seen from the Department's Assessment and Blayney Council's dealing with the CC's that the applications have hardly been dealt with impartially.

I do not agree with the legal advice referred to in the email AD to MD dated 18 January 2019 @ 12.04 pm, suggesting that whilst CC's for pre construction minor works do not trigger compliance with the SSSA conditions required "prior to commencement of works" but , as agreed by the Department , these pre-construction minor works satisfy the law applying to physical commencement of the Work.

The Commission should call for this legal advice upon which the Applicant , the Council and apparently the Department rely.

'Physically commenced'

S 4.53(4) provides that development consent for:

- a) the erection of a building, or
- b) the subdivision of land, or
- c) the carrying out of a work

does not lapse if building, engineering or construction work relating to the building, subdivision or work is **physically commenced** on the land to which the consent applies before the date on which the consent would otherwise lapse under this section.

Condition C5 of the Flyers Creek SSDA approval reflects this provision by stating that approval for the development application lapses 5 years after approval was granted unless "Works the subject of this approval have physically commenced before this time."

'Construction is defined in the Flyers Creek development approval as "the construction of the development, including but not limited to the construction of wind turbines, ancillary infrastructure and road upgrades (excludes pre-construction minor works) " .

'ancillary infrastructure' is defined as "all wind farm infrastructure with exception of wind turbines, including not limited to collector substations, switching stations, permanent offices and site compounds, underground and overhead electricity transmission lines and internal roads."

'Pre-construction minor works' is defined as "including the following activities:

- building/road dilapidation surveys;
- investigative drilling, excavation or salvage;
- establishing temporary site office (in locations meeting the criteria identified in the conditions of this consent);
- installation of environment impact mitigation measures, fencing, enabling works; and
- minor access roads and minor adjustments to service/utilities, etc."

Clearly "construction" of the development as defined is " Works" for the purposes of the Section , however , C5 specifically excludes "pre-construction works" from this definition .

The C5 definitions are mutually exclusive. They do not include geotechnical surveys.

"Pre-construction minor works " are not intended by C5 to be "Works" for the purposes of the Section.

Establishing a temporary site office is specifically included in the definition of "pre-construction minor works " but is specifically differentiated from " ancillary works" - "permanent offices and site compounds".

C5 clearly establishes that a temporary site shed is not construction/works as would meet the physical commencement test in S 4.53(4).

Taking the ratios of Hunter Development Brokerage P/L v Cessnock CC (2005) 140 LGERA 201 and of the Court of Appeal in Green v Kogarah MC (2001) 115 LGERA 231 the pre-construction minor works relied on by Infigen and the Department as physical commencement are not "Works" " relating to the work " and could not be properly described as commencing thework the subject of the development consent".

The same argument applies to any alleged geotechnical surveys which by reason of the C5 definitions would , in any event , be "pre-construction minor works" . There is not even any evidence of geotechnical surveys having been undertaken or when started or completed. There can be no reliance on these alleged geotechnical surveys providing physical commencement.

It is submitted that the Panel should find that SSDA MP 08 - 0252 lapsed on 14 March 2019.

A ii . Lapsed consent-no approved connectivity to Grid

In addition to the lack of physical commencement by 14 March 2019 , the Applicant did not at that date have any essential agreed connectivity to the Grid (it still does not) accordingly Infigen's development plans / consent were at that date incapable of being implemented.

After more than a decade by Infigen unsuccessfully trying or for an unexplained long period not trying (lack of financial feasibility - financing ?) to arrange access to the Grid I fail to see how the Department can state under Mod 4 Assessment at 5.4 Key Issues "that the issue (connectivity) will be dealt with by Essential Energy , Infigen and CVO during the the detailed design of connection."

There is absolutely no basis for this statement. It is grossly misleading .

Infigen does not even have the required easements nor decided the general details/specifications for the transmission lines and sub stations. Underground or not underground makes a huge difference.

It is submitted that the Consent lapsed on 14 March 2019 by reason of the fact that without a subsequent Mod 4 Consent for connectivity/ transmission line approvals the Works could not have proceeded at that date .

Regarding B Merit Arguments

B i. Public Interest Considerations

The Public Interest in a development consent is a mandatory consideration.

Infigen is , as mentioned in **Biii** below , consuming public services and funds essentially wasting the time of the Department, the Commission ,the hosts and the community by keeping it's options open while hedging it's bet on the Flyers Creek Wind Farm , which is by reason of its limited output financially marginal , particularly given the unresolved connectivity problems and costs .

The Panel will hear expert submission on the unresolved connectivity issues.

I do not accept the Department's Executive Summary of Mod 4 basing its Strategic Evaluation on increased electricity output to the grave detriment of the natural and built environment and of the community , rather than meeting the output parameters as originally sought by the Applicant and approved after detailed Environmental Impact Statements and Submissions in respect thereof.

As I see this Application , despite the Department's put , the private interest is that of Infigen and it's hosts. The public interest is not limited to electricity generation but also includes environmental impacts on the natural and built environment and the local community .

Under Section 4.15 (1) (e) the consent authority must consider the public benefit/interest of the Application. The Public interest must outweigh the private benefits for Infigen -Addenbrooke P/L. v Woollahra Council.

As referred to in **C** below the public benefit of this Application or for that matter Flyers Creek Wind Farm generally to the NEM or the 2020 RET Target is negligible and there is no public benefit to the environment's natural or built form nor to the local community including nearby residents (save perhaps for the hosts who seek the same private benefit as Infigen- financial gain).

The Mod 4 Application does not pass the public interest test - Section 4.15(1)(e).

B ii. Lack of Merit Assessment

The assessment of the merits of the proposal is flawed , incomplete and unreliable. The report fails to consider the reality of the proposed increase in scale and the significant adverse impacts which will result.

I refer the Panel to the Applicant's initial "Overview of Proposed Development" at Para 1.2 of the Environmental Impact Statement at Chapter 1 May 2011 page 1.1 (copy attached) which talks in terms of a generation capacity of between 88 and 132 MW from wind turbines each with a generation capacity of between two and three megawatts. Not 4.2 megawatts as Mod 4 "proposes" at this time. What will Infigen propose next to squeeze some financial feasibility ?

How does the Department justify its statement that the Assessment/Evaluation seeks to maximise efficiency yet minimise potential impacts ? There is no basis for this statement.

I refer the Panel to my letter of 1 March 2019 to Ms Homsey (Department) with attachments (copy attached). I refer particularly to Infigen's Newsletter of March 2017 referring the community to an approval for a 150m tip height and significant advancements in turbine technology allowing greater capacity wind turbines without increasing the tip height. " Infigen will ensure that the optimal wind turbine is selected". Mod 4 does not abide by these representations to the community , particularly the affected residences.

What it does show is Infigen's ever changing proposal- bigger turbines , more height and various arrangements for connectivity to the Grid .

Whilst I am overseas with limited time and resources I cannot verify that a 150m tip height has ever been approved. **I believe it has not ! The Department might clarify this situation .**

I take issue with the Chairman's reference , in the Commission's meeting with the Department on 8 July 2019 at page 9 , albeit in relation to noise issues , to " the slight increase in the turbines " . On reviewing the substantially flawed Assessment/Evaluation , particularly regarding Visual Impact Issues this reference is completely untenable given the quantitative and qualitative increases sought.

Perhaps the Chair was influenced , as intended by the Assessment , by the constant use by the Department of words such as " modest increase in turbine dimensions , slight increase in dimensions of the approved turbines , changes to the dimensions of the turbines are modest , the incremental change in impact as a result of the increased turbine dimensions ...would be negligible , modest increase in height and a decrease in the turbine hub heights , minor additional impacts , and incremental change in turbine heights " .

All these statements are fundamentally wrong and the Assessment/Evaluation seriously flawed !

There is nothing slight about the proposed changes in the dimensions of the turbines.

What is disclosed on the public record of the Panel's meetings could give rise to an apprehension in members of the public that the consent authority , before consideration of public submissions and relevant matters , is predisposed to approval of the proposal.

Predetermination and apprehended bias are antithetical to determination functions in accordance with administrative law principles. Particularly in circumstances where the impacts of the proposed modification will have devastating and irreversible impacts on the community and the built and natural environment .

Taking a simple analogy , would the Chairman or for that matter any reasonable person , consider that a 92m wind monitoring mast , although in itself impacting on the environment (see below) , would have the same visual impact that a 92m turbine tower with hub , nacelle and three massive 70 m blades have ? No the turbines BULK/MASS /SCALE makes its visual impact

massively greater than a relatively thin wind monitoring mast . The Assessment does not even canvass the issue of scale.

The Assessment refers to “ turbine dimensions “ but only addresses linear measurements such as the tip height or blade length . What about the other dimensions of the blades , the tower , the hub and the nacelle such as width , depth ,bulk , weight or in respect of cylindrical towers diameter or circumference. BULK/MASS /SCALE !!!!

At the meeting on 8 July 2019 the Departmental officers did not at any stage refer to the vast increases in bulk/mass /scale choosing essentially to merely repeat the linear arguments in the Assessment.

Table 1 has specific errors as referred to below but is fundamentally flawed in only addressing linear dimensions and not addressing BULK/MASS/SCALE.

Contrary to the Department’s misleading assertions of minor changes the Applicant proposes massive increases in the currently proposed turbines’ dimensions .

The Assessment at P 4 Turbine Dimensions - does not refer to BULK/MASS /SCALE but does disclose that “ the footings of each turbine would increase from 144m² to 361m² “ - a massive 250% increase or 2.5 times bigger. Such numerics in a quantitative and qualitative sense cannot be described as modest or minor. To erroneously seek to depict them as such is apt to be misleading.

The 250% increase in each turbine’s footings tells a lot about the massive increase in the BULK/MASS /SCALE of each of the proposed new turbine’s dimensions and weight .

The Department is at pains to point out that the tower / hub height has decreased from 100 m to 92m , a linear height reduction of -8%.

But what of the clearly massive increase in the bulk/mass/scale of the blades, the tower/hub and the nacelle ?

There is a stark contrast between a 92 m tower , hub , nacelle with three massive 70m blades to a 92m wind monitoring mast .

BULK / MASS /SCALE has not been assessed AT ALL !

One of the purposes of public exhibition of proposals is to enable public participation in the process. It is a fundamental object of the Act and a mandatory head of consideration.

Meaningful public participation is dependent upon accurate , transparent processes and project description. The use of inaccurate at best and misleading at worst turbine details and terms such as “ modest and minor increases “ has potentially deprived members of the public , not all of whom are in a position to deconstruct and interpret the advertised material , of a true understanding of the extent of modifications and impacts of the proposal.

Failures in public notification processes are open to challenge and liable to vitiate any approval granted as a consequence of a floored public participation process

The Assessment is fatally flawed as it does not satisfy the requirements of Section 4.15(1)(b) Section 4.55 (2) .

B iii. The Bulletin -Clause 3BA (6) Schedule 2 -EPA Stop Regulation

The Department at Assessment Page 15 6.1 Visual -Assessment - acknowledges that Infigen had not complied with the Bulletin although conceding that the Bulletin applies to this Application. The Department sought to get over this problem of assessing Visual Impacts by reference to “ incremental change between approvals”. This approach is flawed and contrary to the Act and Regulation . Two wrongs have never made a right !

According to the Department its Assessment/Evaluation was only dealing with a nominal 10 metre increase in maximum tip height . BUT the substantial increases in the dimensions of the blades, the nacelle and tower/hub will have a serious impact on the natural and built environment and many non associated neighbours. The huge blades , having a rotor diameter of 148m according to Megan Richardson's advice to the Panel on 8 July 2019 (cf Table 1 which states a lesser diameter of 140m as against the approved 112m diameter) is a 32% increase not 25% as stated in Table 1 ,must have a massive impact on the natural and built environment and the community, especially on nearby neighbours such as myself.

Dealing with Table 1 , in addition to it's fatal flaw of ignoring bulk/size/scale , the Department would have you believe that “increases in some of the Turbines specifications , ranging from 25% to 56% is modest , slight , minimal , negligible or incremental belies serious consideration and dare I say belief. To fit into such characterisation one would expect increases of around 5% up to a maximum of 10% . How does a 250% increase in the size of each turbine's footing fit into the Department's minimal characterisation?

The Assessment refers to vision of blade tips etc but it does not refer to the huge increase in the vision of the enlarged blades, towers , hubs and nacelles size of 4.2 MW turbines and the fact that the proposed 70m blades with a rotor diameter of 148m and swept area of 16,250 m² (not 15,386m² as per Table 1) , will be a huge increase in the negative impact on **all** persons within vision of the wind farm. Are the massive increases in blade length 25% , rotor diameter 32% and swept area 65% minimal???

The Assessment does not even consider these matters yet claims to have assessed the Application “ by reference to incremental change between the approved project and the proposed modified project **only** “.

The Assessment ignores the Bulletin and the Act and is therefore fatally flawed and the Application must be refused .

Vision mitigation proposals will not assist rural residences which sit on acreage , neither for the residence nor the farm itself. Vision mitigation suitable for urban properties (planting a few trees) provides no beneficial assistance to farmers who have in most instances grown up and/or resided in their rural landscapes for many years and are accustomed to landscape views from all over their properties. A few trees will not help , in fact , may hinder in some situations. The front and back yards of farm residences are their whole farms . How can minor tree planting alleviate devastating visual impacts for farms/farmers? Worst still Errowanbang is surrounded by proposed mills high up on ridges to the N/E , E and S/E .

Not only will the visual impact of the Turbines be greatly increased but the larger wind mills will mean much greater (2.5 times) earth and construction works with considerable increases in the thousands of truck and machinery movements supplying these works particularly concrete truck movements.

The massive increase in concrete 7+m³ truck movements will have a serious impact on our local roads and there is no satisfactory arrangement for Infigen to restore the recently reconstructed Errowanbang , Panuara and Cadia roads . One might be naive enough to think that these recent roadworks had nothing to do with the proposed wind farm. A site inspection will dispel any such naivety.

With Mod 4's potential 000s of additional concrete truck movements , a number of spillages will add permanent impromptu speed humps to what will become severely potholed roads with broken shoulders. Another impost the community will have to bear for such a minute outcome(see C below).

Depending on the depth of the footings being 3, 4 or 5 metres (the Assessment is silent !) there will be 155 , 206 or 260 concrete trucks for EACH turbine . Totalling 5890 to 9887 concrete trucks.

What about steel reinforcing deliveries ?

What damage will Infigen's huge demand for concrete and steel have on the local community and its infrastructure , people seeking to build homes , other structures or improvements , their builders and allied trades? Even Council works will be impacted.

Damage to local infrastructure and roads is a transfer of costs to the local community at the expense of their visual and general amenity.

How is a such a cost transfer in the public interest ?

In this regard I refer you to Infigen's letter to residents of 8 February 2019 Notification of Pre Construction Minor Works , previously attached.

This letter is relevant on two points :-

Infigen saw the works as Minor Works specifically excluded from the Approval's Clause 5 definition of "Construction " (refer A1 above) AND Infigen was not committed financially to the wind farm.

Infigen was and is still hedging its bets.

There is no assessment of social and economic impact (beyond putative employment and an existing VPA) of the broader cost and absorption of scarce resources in a rural community , a mandatory head of consideration. The Assessment is fatally flawed.

B iv. Wind Monitoring Masts

The Department blithely states " if approved ,Infigen is likely to decommission the two existing wind monitoring masts (80 m) and replace them with four new (92m) masts " .

160 metres of intrusion into the landscape replaced by 368 metres of intrusion. Incremental ?

The Assessment is silent as to the location of these four masts and does not assess their location/ size/bulk or environmental impact whatsoever. 92m wind masts located on tops of ridges will have a serious negative impact on the environment and properties with vision of them. These masts will be visible from over 30 km away.

Absent assessment any approval would be flawed and vulnerable to challenge.

In the absence of any real information or assessment no consent authority is in a proper position to exercise its functions and determine the application by approval. Any such determination would be liable to challenge.

The Assessment is fatally flawed as it does not satisfy the requirements of Section 4.15(1)(b) Section 4.55 (2) or Clause 3 BA (6) Schedule 2-

C What has Infigen proposed and what are the strategic outcomes ?

Infigen has never disclosed the exact or even reasonably general specifications of its proposed turbines and the Department has never required Infigen to do so. Why not? Agreed enhancement by stealth ?

I refer to my original SSDA Submission at Pages 17 - 20 particularly Item G (copy attached) and to Infigen's original SSDA at 1.2 " Overview of Proposed Development " (copy attached).

I refer also to Ms Richardson's (Infigen) vague comments in the meeting with the Panel on 8 July 2019 regarding the choice of Turbines at page 6 Pt 10-20. Infigen has never disclosed the specifications of proposed turbines and has not done so for this Mod 4 Application.

How can they be assessed?

As disclosed in Infigen's SSDA Overview the wind farm as originally proposed had 44 turbines producing between 88 and 132 MW - max 3MW per turbine.

Infigen's SSDA Overview numbers are the numbers upon which the SSDA was lodged and assessed. The number of turbines has been , for various involuntary reasons , reduced to 38. Accordingly the output overall should be reduced from the maximum 132MW to a 114MW maximum (38 x3) with an appropriate reduction in Turbine dimensions to achieve this output by using smaller more efficient, maximum 3MW turbines.

Infigen and its hosts will get what was budgeted and applied for and the community , particularly non-associated nearby residences but also including hosts , some relief from the negative impacts which the Departmental officers acknowledged at the meeting on 8 July 2019.

The Mod 4 Assessment/Evaluation which is founded solely on strategic increased electricity generation at whatever cost to the natural and built environment and the local community loses sight of the fact that the Flyers Creek Wind Farm will at best, according to the Department , supply a maximum 155 GW or .0028% of the NEM and only .007% of the 2020 RET target. The increases sought by this Mod 4 Application (23MW), whilst having massive negative impacts on the environment and local community , will provide minute changes to these original percentiles.

At the maximum output proposed by Infigen's SSDA (reduced to 114 MW by deletion of turbines) the percentiles are much lower , in fact insignificant .

Ms Richardson suggests a realistic annual generation of 58,000 GWH compared to the Department's overstated 75,500 GWH . Another misleading statement by the Department.

There is no real strategic electricity output benefit in Flyer's Creek Wind Farm nor Mod 4 thereof !

How can any Assessment be properly undertaken without the most critical details- turbine specifications and electricity output?

Given the aforesaid this appalling Assessment/Evaluation is an affront to the Department's administration of the EP&A Act 1979 and therefore the Application must be refused.

Would a 160m commercial or residential tower development in a sensitive environmental setting receive such scant or biased scrutiny ?

I repeat , absent assessment any approval would be flawed and vulnerable to challenge.

Generally

I will leave it to others to argue in detail traffic impacts generally and seismic vibrations from the massive footings usually cast into bedrock . But you can gauge my concerns.

The Department's Assessment provides a limited gloss in referring to community benefits in terms of employment and a VPA with Blayney Council both of which were in place before this Mod 4 Application . They are not public benefits of this Mod 4 Application .

I refer to and adopt FCWTAG's submission in relation to the various negative affects of larger windmills/ turbines on the environment and neighbours.

I strongly object to any increase in size/ height/ bulk of the Turbines and reiterate , should Infigen be found to have a current SSDA Approval , **the Panel should condition any Mod 4 Consent , seeking to approve grid connectivity , to require Infigen to use improvements in turbine output to reduce the size of the windmills/ turbines limited to its projected maximum 3MW per turbine output .**

Such a condition will greatly reduce the negative impacts on the local community including Errowanbang.

Notwithstanding the two preceding paragraphs I submit that the Application should be refused for the reasons referred to in A) , B) & C) above .

Approval of this flawed and incomplete application will invite judicial review and dare I say rebuke.

John Gerathy LLM





P10A.

General's requirements and provides a description of the currently proposed project, the existing environment and planning context, an assessment of the potential environmental impacts of the project, the measures proposed to mitigate those impacts, justification of the project and the consultation undertaken and proposed in the future for the project.

1.2 Overview of Proposed Development

A wind farm is a collection of wind turbines that harness the natural energy provided by the wind to drive electric generators. The electricity generated by the wind farm is supplied to the electricity supply grid for use by network customers.

The wind farm will have a generation capacity to produce between 88 and 132 MW (million watts) of electrical power from the combined output of up to 44 wind turbines, each with a generation capacity of between two and three megawatts. The final details of the number of turbines and turbine model to be used have not yet been confirmed and this assessment addresses all the sites that have potential for development. For the purpose of assessing the environmental impacts of the development a representative turbine model is used in this assessment. Where variants to the characteristics of the turbine or array are possible, allowance has been made in the assessment for worse case parameters in terms of environmental impacts.

Regardless of the model selected, the turbines will be three bladed horizontal axis turbines mounted on towers of between 80 metres and 100 metres in height. The general form of the wind turbines is shown in Figure 1.3. The diameter of the turbine rotor will be between 88 metres and 112 metres, giving a total height to the top of the blade sweep of between 124 metres and 150 metres. The turbines will have automatic controls that enable them to face into the wind and to generate when wind speeds are suitable.

The proposed layout of wind turbines in the project area is shown in Figure 1.4. This array is based on up to 44 turbine sites being developed. While up to 46 sites were considered for development, only 44 are included in the current proposal. This number represents the maximum number of sites for development and ultimately the proponent may select a lesser number of sites to be developed. The turbines will be located at or near ridge tops to maximise energy generation and spaced to minimise interference between neighbouring turbines. The design of the wind farm will also address a range of environmental considerations as described in the Environmental Assessment.

SCAN 3.2

From: Hilde [REDACTED]
Date: Friday, 1 March 2019 at 9:07 am
To: [REDACTED]
Cc: <
>, Jann harries [REDACTED]

Subject: FW: Flyers Creek Wind Farm - Modification 4

Dear Ms Homsey

If you refer to the attached/following emails you will note that I purported to lodge an objecting submission to Mod 4 on 31/8/2018.

I did use the On line Department site to lodge my objection which , although more expansive than my email of 29 August 2018 to Colleen ,Jann & Patina was consistent with that email.

I note my Objection is not noted on your web site ,despite me being one of the nearest most affected neighbours-House 12.

Andy Nixey of the Department can confirm that a submission I hand delivered to the Department and receipted regarding the Sydney Modern SSMA similarly went astray.

Would you kindly take this email as an Objection against Mod 4 especially increase in turbine size.

Attached are –

- a) Flyers Creek Wind Farm Newsletter March 2017—refer to heading Wind Turbines . Infigen said it could get greater capacity without increasing height of turbines.
- b) Infigen letter 8 February 2019 notifying start of works.

As far as I can tell Mod 4 is not approved

Infigens start notice seems presumptuous and I submit that with further significant advancements in turbine technology , since 2017 , the turbines should become smaller , still achieving the Projects original capacity BUT reducing the turbines negative affects on neighbours, including myself.

Yours faithfully

John Gerathy

[REDACTED]

[REDACTED]

CC Minister for Planning and Infrastructure.

From: Hilde [REDACTED]
Date: Friday, 31 August 2018 at 8:02 am
To: Jann Harries [REDACTED]
Cc: FCWTAG Flyer [REDACTED]
Subject: Re: Flyers Creek Wind Farm - Modification 4

SCAN 3.3



8 February 2019

FLYERS CREEK WIND FARM (MP 08_0252)

NOTIFICATION OF PRE-CONSTRUCTION MINOR WORKS

Flyers Creek Wind Farm Pty Ltd (FCWF), the proponent of the Flyers Creek Wind Farm project (**Project**), is scheduled to commence 'pre-construction minor works' under Project Approval MP 08_0252 at the Flyers Creek Wind Farm project site from 18 February 2019. We anticipate that the duration of these works will be approximately 3 weeks.

Flyers Creek
Wind Farm Pty Ltd
Level 17, 56 Pitt Street
Sydney NSW 2000
Australia
T +61 2 8031 9900
F +61 2 9247 6086
www.infigenenergy.com

These works will enable detailed design and construction of the Project to proceed once a final investment decision has been made.

The works will include:

- Investigative site survey works in relation to the approved 33kV power line on Errowanbang Road and the approved access tracks, laydown areas and substation;
- Preliminary geotechnical survey of the approved wind turbine locations; and
- Establishment of site access tracks, a temporary laydown area and a temporary site office, all of which are to be located off Errowanbang Road near the intersection with Halls Road.

FCWF and its contractors will endeavour to minimise disruption to the local community and road networks at this time.

Please contact Megan Richardson at Infigen Energy with questions, comments or if you would like to be added to the project mailing list:

Ph: 02 8031 9900 (weekdays 9am to 5pm)
1800 917 372 (24-hr helpline)
E: flyerscreek@infigenenergy.com
W: www.infigenenergy.com

Flyers Creek Wind Farm Newsletter

March 2017



Welcome to the latest project newsletter from Infigen Energy about the Flyers Creek Wind Farm located near Errowanbang Road, Blayney Shire Council.

Planning Modification

The Flyers Creek Wind Farm proposal was granted planning approval by the New South Wales (NSW) Government Planning Assessment Commission (PAC) in March 2014.

Infigen has been preparing a planning modification for the project which will enable three landowners to discontinue their participation in the project. The modification will include: removal of four wind turbines and associated infrastructure; an alternative alignment of the 33kV overhead power line along Errowanbang Road; and minor changes to the location of access tracks and underground cables. The updated project layout can be viewed on the next page of this newsletter.

The modification will be lodged with the Department of Planning and Environment in April 2017.

Project Facts

Number of Wind Turbines	38
Approximate capacity (with 3.6 MW wind turbine)	136.8 MW
Turbine tip height	150m
Annual generation	~350 GWh
Equivalent number of houses powered per annum	~50,000

Planning modifications and other updates can be viewed on the Department's website at:

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=2644

Community

The Flyers Creek Wind Farm Community Consultation Committee (CCC) continues to meet on a quarterly basis to discuss the project. The latest meeting was on 26 October 2016. Minutes of the meetings are available on the Infigen website.

<https://www.infigenenergy.com/flyers-creek/>



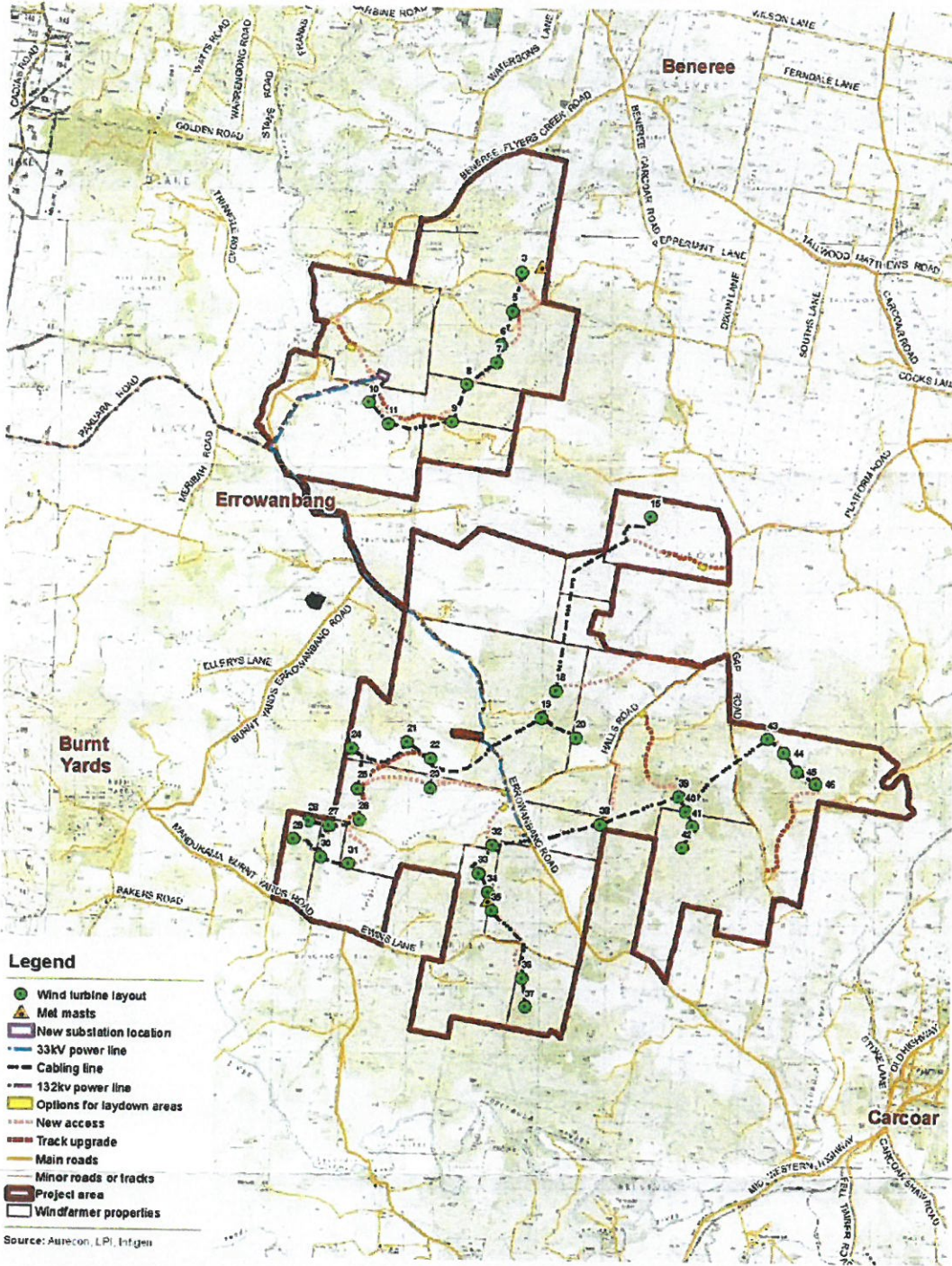
CENREC

Infigen is grateful for the support of the Central NSW Renewable Energy Co-operative (CENREC). This community-led co-operative was formed in October 2012 with a primary purpose to enable community investment in the local area, including the Flyers Creek Wind Farm project. CENREC is also looking at opportunities for investments in solar energy projects. More information is available at:

www.cenrec.com.au



Y14
Our generation, your future



Project Layout

The map shows the updated project layout which will be lodged with the Department of Planning and Environment as part the planning modification.

Wind Turbines

Infigen has Project Approval to install wind turbines up to 150 metres to tip height. Since the Project Approval in 2014 there have been significant advancements in turbine technology and we expect to install greater capacity wind turbines capable of producing more energy without increasing the tip height. Infigen will run a competitive process for wind turbine supply to ensure that the optimal wind turbine model is selected for the Flyers Creek Wind Farm project.

Mailing List

If you would like to be added to the Flyers Creek Wind Farm mailing list please contact:
 megan.richardson@infigenenergy.com

Next Steps

Infigen Energy is advancing its Central NSW renewable energy portfolio. Our Manildra 42.5 MW solar farm was awarded ARENA (Australian Renewable Energy Agency) funding in September 2016. Construction of the project is expected to commence in the coming months. A Power Purchase Agreement with Energy Australia for Infigen's Bodangora Wind Farm, located near Wellington, was signed in February 2017 and is progressing towards a final investment decision. Flyers Creek Wind Farm is an important part of our Central NSW portfolio and we look forward to advancing the project to a construction ready position this year.

Please contact us if you have any questions or would like to meet to discuss the project.

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It is recommended DPI obtain a definitive statement from the proponent regarding the exact specifications of the turbines to be constructed and confirmation that that exact specification has been modelled. This information needs to be specific to enable meaningful noise and visual impact assessments. If consent was to be granted it should clearly specify the technical and structural design and power specifications of the turbine and all its related parts, including tower height and diameter.

E. Visual impact assessment is based on uncertain 'indicative' turbine design, not committed design.

It is noted that the general visual impact was modelled with a turbine hub height of 100 m whereas the shadow flicker impacts were assessed with a hub turbine height of 85 m. Why weren't the shadow flicker risks assessed at 100m hub height? Surely they should have been, given the flicker is a visual impact matter.

To illustrate:

- On page 9-1 the EA states "The indicative wind turbine for this Environmental Assessment, the GE 2.5 MWxl, has a hub height of 85 metres and a blade length of 50 metres for a total height of 135 metres. However, for this visual assessment, the dimensions of the wind turbine were assumed to be a hub height of 100 metres and a blade length of 50 metres. Therefore, this assessment is a 'worst case' based on the maximum height of the wind turbine being 150 metres above ground level."
- The shadow flicker assessment used the GE 2.5xl wind turbines with a 100 meter blade diameter and 85 metre hub height. (see page 9-26)

It is unacceptable that shadow flicker impacts be based on an 85 m hub height. This is a visual impact matter and should be redone at 100 m hub height.

The assessment should be conducted on the exact turbine infrastructure to be built and there should be no 'wriggle room' for changing the infrastructure specifications after the assessment process is complete.

As outlined above regarding noise impact assessment, it is recommended DPI clarify:

- a) The actual measurements of the turbine design that was assessed (ie tower height and diameter, blade length and width and hub height – including colours, power output, etc);
- b) The actual measurements of the turbine design that is proposed to be built (ie tower height and diameter, blade length and width and hub height – including colours, power output, hub length and weight, etc); and
- c) The actual generation capacity of each of the 44 turbines.

We have commissioned an independent, professional photographer to portray the likely visual impact of the 150 m tall Flyers Creek turbines and compare them to the Blayney Wind Farm (Carcoar) turbines 68.5 m high (45m hub – 47.5 diameter blades).

Relevant

SCAN 4.2

Our results show that the photomontages contained in the EA and created by 'stitching' together a series of 50 mm fixed lens photographs, misrepresent and understate the likely visual presence and impact of the Flyers Creek wind turbines.

A picture is worth a thousand words and so it is when you see the independent, professional photomontages we have prepared. The images are as follows:

Attachment 6: (Image 1) - a view from Blayney Wind Farm Viewing Area. Note the profile differences between the Blayney and proposed Flyers Creek turbines;

Attachment 7: (Image 2) - a view from Wind Farm Road – 2,300 m from the nearest turbine. Note 2,300 m is the distance of Infigen's proposed turbine No 12 to the home of Mr John Gerathy (Residence No 12 in the EA);

Attachment 8: (Image 3) - shows our photomontage of the view from the front steps of Residence No 12 (home of Mr John Gerathy) showing proposed turbines numbered 3 to 12. It has been compiled using distance and size scales ascertained from the preparation of Image 2 data above to allow the 2,300 m distant view of the proposed 150 m high turbines as well as a 68.5m Blayney Wind Farm turbines; and

Attachment 9: (Image 4) - shows a proposed 150 m high turbine and a 68.5 m high turbine superimposed over Aurecon's panorama Plate C12 of the EA, allowing for the correct distances, taken from the same front steps of Residence No 12. We are of the view that Aurecon's panorama Plate C12 is both misleading and deceptive in the way several photos were 'stitched' together such that it misrepresents the true vista. What is presented shows the vegetation on the sides of the photo much more prominently that is in fact reality. See Attachment 10 for correspondence from expert photographer Mr Alf Manciangli of Gecko Photographics in Orange regarding how he prepared Image 4 and his comments on Aurecon's Plate C12.

We would be pleased to provide electronic copies of the images mentioned and copied in this Submission.

We believe the Aurecon's panoramas in the EA significantly understate the visual impacts of the turbine vista. Based on our assessments, the visual impacts are unacceptable and will be accentuated by the prominence of noise.

F. Visual Impact: shadowing, flicker and alignment of multiple turbines

An issue that has not been given appropriate attention in the EA is the matter of the casting of long shadows and blade flicker by the turbines, especially in the morning, over the School and other neighbours (for instance Residences 12, 13 and 17). The shadowing/flicker effect will exacerbate the movement and sound of the turbine blades. The turbines in this ENE quarter are up to 400 m higher than the School and the residence of John Gerathy. The dominant wind is from the NE so sound will travel to the School and the houses in question. In the early morning sun they will cast a long shadow.

SCAN 4-3

What impact will the shadow and flicker have on the School population and other neighbours? The numerous turbines nearby will be generating a kaleidoscope of movement and sound over the nearby population, including 40 young people at the School. What health effects will this have?

G. Inconsistencies in the stated design specifications of the turbines and major implications for overall impact assessment.

Turbine Physical Dimensions

The commentary in the EA relating to the description of the design components of the wind turbine is rather equivocal, giving the impression that the proponent is 'hedging its bets' on what type of turbine will be selected. Examples are outlined below.

Chapter 3, page 3-3 and Figure 1.3 describes the various component parts of the wind turbines. According to page 3-3 the towers will be "about" 80 to 100 m tall with a diameter of five m at the base and 2.5 m at the top. However, Figure 1.3 shows a 3.0 m diameter at the top of the tower. So which is correct, 2.5 m or 3 m? It is noted that for the visual impact assessment a tower diameter of 2.5 m at the top was used.

According to page 3-3 the turbines will be three-bladed with a "rotor diameter of between 88 to 112 m". This means each blade is 44 to 56 m long. However Figure 1.3 shows the blade length as 44 to 55 m. To make matters even more confusing, a turbine length of 50 m was used for the visual impact assessment (p 9-1).

So how long are the blades to be - 44 m, 50 m, 55 m, or 56 m or something in between?

Turbine Generation Capacity

The EA states the generation capacity of the turbines will be between 2 and 3 MW – see extracts below. Yet in other forums (for example, the turbine co-operative sales pitch meeting) the proponent suggests 3.3 MW might be the generation capacity of the turbines – also see below and Attachment 11.

This means that a number of different turbines are being considered for use, hence different physical dimensions and generation capacity, and noise and sound outputs. Yet the impact assessment studies are based on only a GE 2.5 MW turbine. The project should only be evaluated by DPI on a scope of 2.5 MW turbines.

- The EA Summary under 'Project Description' says:
"The project involves the construction and operation of up to 44 wind turbines each with a typical generation capacity of **between 2 and 3 MW** (million watts or megawatts). The installed capacity may vary from about **88 to 132 MW** depending on the turbine model selected and total number of turbines installed. The **GE 2.5x1 2.5MW turbine has been used as the indicative turbine** for this Environment Assessment; however, it is possible that another turbine model may be selected for construction." (writer's emphasis).
- Furthermore, in Chapter 1: Introduction it states:
"The wind farm will have a generation capacity to produce **between 88 and 132 MW** (million watts) of electrical power from the combined output of up to 44 wind turbines, **each with a generation capacity of between two and three megawatts**. The final details of the number of turbines and

SCAN 4.4

turbine model to be used have not yet been confirmed and this assessment addresses all the sites that have potential for development." (writer's emphasis).

Yet the proponent is on the public record (see Attachment 11 – Flyers Creek Wind Co-operative proposal) of having wind turbine generators with a generation capacity of "**between 2.5 and 3.3 megawatts (MW)**", and project capacity will be **between 110 – 145 MW**.

Clearly the proponent is purposely being vague about what the specific generation capacity of the actual turbines will be. It is unacceptable for the EA to hedge its bets so much about the power output and physical dimensions of the turbines as it has profound implications for the likely level of impacts.

DPI should obtain clarification on the turbine specifications and ensure the noise and visual impact assessment work has been as per the exact turbine design that will be constructed. If the construction specifications have changed then the EA should be rejected outright by DPI, with the proponent being advised to resubmit the impact assessment studies to properly match the project design and scope.

H. Planning decision should be deferred until the NSW Wind Farm Planning Guidelines are finalised and adopted.

In 2009 the General Purpose Standing Committee No. 5 in the Legislative Council of the New South Wales Parliament conducted an inquiry into rural wind farms. A key recommendation (number seven) of the Committee was that the Minister for Planning include a **minimum setback distance of two kilometres between wind turbines and residences on neighbouring properties** in the soon-to-be – drafted NSW Planning and Assessment Guidelines for Wind Farms. The recommendation also stated that the guidelines should identify that the minimum setback of two kilometres can be waived with the consent of the affected neighbouring property owner.

The NSW Government, in its response to the Committee's report in mid 2010, said it was preparing NSW Wind Farm Planning Guidelines and they would be released in late 2010. It is now the end of 2011 and the guidelines are not yet available.

However, given the NSW Guidelines are in the final throes of drafting, a planning decision on the project should be deferred until the guidelines are finalized and adopted. That would provide for a more robust and sound basis for Government decisions on wind farms.

Furthermore, it should be noted that on 19th October 2011 the South Australian Minister for Urban Development, Planning and the City of Adelaide introduced the Statewide Wind Farms Development Plan Amendment, effective immediately, which stipulates, inter alia:

"2 (i) a setback of at least 1 kilometre of a wind turbine from a dwelling that is not associated with the development".

We recommend that this initiative by the South Australian Government be matched by the NSW Government as it frames its planning guidelines. (Note the host farmer's leases for the Flyers Creek project only specify a setback of 500 m).

It is also noted that in Victoria, the Government has introduced Amendment VC78 to its policy on wind energy facilities. Amendment VC82, gazetted on 29 August 2011, amends the Victoria Planning