Craiginmoddie Wind Farm Application Consultation Submission - Objection

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Submitted on: 28th February 2022

Submitted to: Scottish Government Energy Consents Unit

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1 Introduction

Background

This application has been made to the Scottish Government Energy Consents Unit by Energiekontor UK Ltd, a company incorporated under the Companies Acts with company number 04913493 and having its registered office at Beaufort Court Egg Farm Lane, Off Station Road, Kings Langley, Hertfordshire, WD4 8LR. This application is made under the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 in relation to the proposed Craiginmoddie Wind Farm. The proposed Site is located within South Ayrshire Council and consists predominantly of rough grassland ground cover and extensive areas of plantation forestry. It is proposed to erect 14 wind turbines on the site each up to a maximum of 200m in height to blade tip. The turbines would be of a design comprising a three bladed rotor hub mounted on a rotatable nacelle (containing a gearbox and a generator), tower and foundation subject to final design. The proposed Development will lie along an undulating ridge adjacent to the existing Hadyard Hill wind farm. The existing Hadyard Hill wind farm is an operational wind farm (commissioned in 2006) comprising 52 turbines.

Save Straiton for Scotland (SSfS) is a campaigning organisation constituted with an overwhelming mandate from the community of Straiton in order to protect and defend the Parish of Straiton, neighbouring communities and surrounding countryside. The remit of SSfS is to defend against any and all inappropriate development that would seek to undermine the uniquely special landscape, environment, heritage and ecosystem which define Straiton and its environs.

This Submission

SSfS and our supporters have carefully reviewed the planning application for Craiginmoddie wind farm submitted by Energiekontor and have noted numerous and significant concerns. Our concerns are as follows and refer to the relevant chapter of the Environmental Assessment.

2 Landscape and Visual

We have referred to South Ayrshire Local Development Plan 2014 and Supplementary Guidance 2015 as the Proposed South Ayrshire Local Development Plan (PLDP2) has not yet been formally adopted.

The Local Development Plan "*recognises that the area's high-quality natural environment and cultural heritage are some of its economies main assets*." It goes on to mention "*South Ayrshire is blessed with a rich natural and cultural heritage, boasting beautiful rural landscapes, an outstanding scenic coastline, historic towns and villages, important nature conservation sites and attractive, well laid-out parks and open spaces. The plan tries to strike a balance between growing South Ayrshire's economy and protecting those important environmental assets on which it is founded*."

Two of the four aims mentioned are "*encourage renewable energy developments without damaging the landscape and countryside*." and "*promote tourism while protecting the coastline and other assets on which tourism is based.*"

The Proposal includes 14 wind turbines up to a height of 200m to tip, foundations, hardstanding areas (approx 60m x 30m), turbine transformers, new access tracks, underground electrical cabling, water crossings, single story substation, borrow pits and a battery storage facility. It would be located in the Local Development Plan's designated Scenic Area.

The height of the turbines is out of scale with the existing turbines of nearby Halyard Hill which are between 100m and 110m and are mainly sited between 225m and 270m AOD. By contrast the turbines proposed at Craiginmoddie would be 200m high and are all sited on land well over 320m, several are over 350m AOD. This will result in views over a wide area of both the Girvan and Stinchar valleys as the visualisations show. The village of Dailly, particularly those living on Eglington Terrace, would suffer from dominating views. The conservation village of Crosshill would also be negatively impacted. Viewpoint 6 is taken from the bowling club, but similar views would be seen from Dalhowen Street where, like the properties on Eglington Terrace in Dailly, all face in the direction of the Proposal. The micro siting of turbines of up to 100m could result in the

turbines being sited even higher resulting in an increased impact on nearby villages and countryside.

Viewpoints from popular walking routes such as Col Hunter Blair's Monument on Craigengower Hill by Straiton, Cornish Hill, Shalloch on Minnoch and the Merrick would all experience views of the Proposal. Some wind farms are already visible from these viewpoints but not on the size and proximity of Craiginmoddie. It would, in our opinion, be a significant and negative change to the landscape. Viewpoint 12e clearly shows the proposed turbines alongside existing ones of Halyard Hill and they appear about 4 times larger.

The impact on the Merrick Area of Wild Land would be significant. It is the only area of wild land in mainland south-west Scotland and as such is a precious resource which requires protection. Serious walkers, and not so serious ramblers come to enjoy this wild and rugged area. Mountaineering Scotland undertook a survey of members in 2016 and found that "*over two thirds (67%) stated that they prefer not to see wind farms when in the mountains and 22% said that they avoided areas with wind farms when planning their activities.*" Walking and nature-based tourism is a growth area and is estimated to be worth 1.4 billion to the Scottish economy (NatureScot) with tourism spend on nature-based activities equating to nearly 40% of all tourism spend. During Covid lockdowns it was evident how much people appreciated the outdoors and connecting with nature and natural landscapes. This Proposal would detract from the natural landscape; it appears as an alien, incongruous feature and with the moving blades it catches the viewers attention. Even if the viewer is not looking directly at the Proposal it would visible in the corner of one's eye as an unwelcome distraction to an otherwise pleasant vista.

As the turbines are over 150m they would require lighting which further impacts the sense of remoteness when viewed from within Wild Land Area and also negatively impacts the Galloway Dark Sky Park. It is not located in the Wild Land Area but is approximately only 8km from the edge. It is located adjacent to the buffer zone of the Dark Sky Park.

The Proposal to construct a wind farm would be contrary to the Local Development Plan as it would certainly, in our view, damage the landscape and countryside and would deter a percentage of tourists.

The South Ayrshire Landscape Wind Capacity Study 2018 (SALWCS) states "*There may be some very limited scope to accommodate additional large turbines (70-130m high) within the Foothills with Forest and Wind Farms landscape character type although effects on the adjacent Stinchar and Girvan valleys, the Carrick Forest and cumulative effects with existing wind farms present key constraints likely to severely limit the extent of development that can be accommodated.*" The impacts on the Stinchar valley would be particularly pronounced with the turbines dominating the skyline of the hills which surround this narrow glen characterised as Intimate Pastoral Valley in the SALWC Study. The Middle Dale Landscape Character Type (LTC) includes the Girvan valley and again the Proposal would become a dominant feature on the southern hills.

The Proposal is also sited adjacent to the transition zone of the UNESCO Southern Ayrshire & Galloway Biosphere which "*has been recognised internationally as a world class environment for people and nature.*" A key goal of the Biosphere is "*to promote the preservation of wildlife, habitats and landscape.*" It has been well documented that turbines can be fatal to birds and bats. The Spanish Society for Ornithology in Madrid estimates that Spain's 18,000 wind turbines kill between 6 and 18 million birds annually. Habitats would inevitably be destroyed when constructing miles of tracks, creating crane and hardstanding areas and pouring large quantities of concrete into the land to form the turbine bases. As we have pointed out previously the landscape would be severely impacted. In our view the Proposal would be in direct contrast to the goal of the Biosphere.

The Applicant frequently mentions visibility would be limited by trees and vegetation. Most of the Zone of Theoretical Visibility maps they present show the areas which would be visible minus the area with trees (Figures 6.5, 6.9, 6.8, 6.10). Trees can be felled, succumb to disease (Larch disease, Ash Die Back etc) or get blown down as recent storms have shown. Deciduous trees shed their leaves and when walking or driving on roads through forests there are gaps allowing views of distant countryside. Trees and vegetation should not be relied upon to limit visibility. Using this methodology is not helpful in understanding the predicted impact of the Proposal. The text on these Figures states: "*The model does not take into account some localised features such as small*

copses, hedgerows or individual trees and therefore still gives an exaggerated impression of the extent of visibility. The actual extent of visibility on the ground will be less than suggested by this plan." We would take issue with this statement and assert that the Proposal would be visible over a much wider area than the plan shows. It is worth noting that on Figure 6.9, according to this methodology, the area beneath the turbines would not experience views of the Proposal. Clearly this would not be the case.

3 Chapter 5 Renewable Energy and Planning Policy

1. This section assesses the 'need' for additional onshore wind provision which would be provided by the proposed windfarm development at Craiginmoddie and demonstrates that such additional onshore wind provision is not required.

2. The most obvious reason why additional provision is not required, was set out in South Ayrshire Council's supplementary submission on energy and planning policy in relation to the recent Clauchrie Wind Farm application, which stated that:

"While the Scottish Ministers are setting an ambition for an additional 8-12GW of onshore wind capacity by 2030 it is clear that this can be met by the existing pipeline of consented developments (5GW), with extensions to current consented sites (1.3GW) and by repowering older end of life developments (5GW). Kilgallioch and Arecleoch extensions have been approved since this statement was made. There is therefore no need for additional consents on new virgin site to meet the ambition."

3. The Scottish Government's Onshore Wind Policy Statement Refresh 2021: Consultative Draft (October 2021) sets out that the UK currently has 14.1GW of installed onshore wind, with 8.4GW of this in Scotland. Scotland additionally has around 9.7GW of onshore wind currently in the pipeline, spread over 202 different projects comprising;

· 4.69 GW In Planning/Consenting Process

· 4.64GW Awaiting Construction, and

· 0.43 GW Under Construction

4. It is quite obvious from this statement that there is no requirement for the proposed Craiginmoddie wind farm. Furthermore, with interconnectors full, the grid unable to cope and major wind farms such as Kilgallioch constrained for up to 25% of the time, the question as to where the electricity generated by Craiginmoddie will go, must be asked.

5. Prior to wind farms Scotland had clean, reliable, safe nuclear energy providing a constant base load which gave complete energy security. Scotland was a pioneer in this and this clean source should have been expanded, not abandoned. With an estimated lifespan of 25 years, Hunterston B Power Station has been reliably providing electricity for 46 years without problems. Hunterston station director Paul Forrest said:

"The contribution Hunterston B power station has made to this country cannot be underestimated. As well as providing stable, well paid employment for thousands of people in the North Ayrshire

area, it has produced almost 300TWh of zero carbon electricity, enough to power every home in Scotland for 31 years".

6. By contrast, wind power is fickle, unreliable and frequently undeliverable and yet, by virtue of political decisions, Scotland is now almost totally dependent upon it, with its shortcomings covered by imports.

7. After 20 years now of pro-onshore-wind-farm propaganda, it might be encapsulated in the statement made by Ms McKenzie on behalf of Indeed Scottish Power Renewables during the Clauchrie inquiry stated that it was their…

"…mission is to provide cheap, green electricity for Scottish homes."

8. It is worth noting that in 2002, the price of a unit of electricity to a domestic consumer was 6.873p. By 2012, the price of a unit of electricity to a domestic consumer had risen to 13.07p, and by the start of 2022, the price of a unit of electricity to a domestic consumer had risen to around 25.00p. With the announced 'price cap' increase in February 2022 of 53% the price of a unit of electricity to a domestic consumer will reach around 40p, which represents an increase of 590% over 20 years. By contrast the retail price index has approximately doubled (100% increase) over the same timeframe. It is noted that during this timeframe there has been considerable uncertainty over supplies and aged fossil fuel burning generation has had to be switched on at short notice to cover shortfalls. With regard the unit cost of electricity, references are made to the relationship with gas prices, presumably because some electricity is made with gas, but for a renewable tariff such as offshore wind, it is questioned how such a relationship can exist.

9. Other points to note are that:

· currently 25% of the domestic electricity bill comprises green levies and taxes, without which wind farms wouldn't be built, and that the Scottish Government, and,

· in 2001 the Scottish Executive published the Housing (Scotland) Act 2001, Section 8 of which (Scottish Fuel Poverty Statement) committed the Scottish Executive's successors to ensuring that, as far as reasonably practicable, people were not living in fuel poverty in Scotland by November 2016. The reality is that by 2020, fuel poverty had doubled to 35% of Scottish households and will likely affect more people in the future.

10. The 2020 Westminster government white paper entitled Powering Our Net Zero Future issued 14 December 2020, listed a ten-point plan for the direction of energy supply to 2050, this included: Nuclear power, Green public transport, walking and cycling, Offshore wind, Hydrogen, Jet zero and green ships, Greener buildings, Protecting the natural environment, Zero emission vehicles, Carbon capture, usage and storage, Green finance and innovation. It did not refer to Onshore wind or Grid expansion as principal influences or pathways, indeed onshore wind is

referred to only in passing for the first time some 100+ pages in. One of the principal tenets of the white paper was generation close to where demand lay thus obviating significant grid expansion. The proposed Craiginmoddie wind farm does not comply with this vision.

11. By contrast draft versions the Scottish Government's Onshore Wind Policy Statement Refresh 2021, and National Planning Framework 4 have been cited by promoters of onshore wind proposals in their applications, seeking to suggest that these documents change the parameters by which wind farm applications should be considered.

12. In the Clauchrie inquiry, Mountaineering Scotland made the following comments;

Scottish Ministers have themselves provided indirect guidance on the weight to be attached to Draft NPF4. In five S.36 wind farm consents issued between 16 and 24 November, after the publication of both draft documents considered here, reference is made in the Decision Letter

to the Draft NPF4. The wording varies slightly but all express the same view. Stranoch 2 Wind Farm is typical:

"Draft NPF4 was laid in Parliament on 10 November 2021. It does not reduce the current policy support for the proposed Development and given the Draft NPF4 is at the consultative draft stage, Scottish Ministers have given it limited weight."

The Decision Letters make brief reference to the original Onshore Wind Policy Statement of December 2017 but none refer to the October 2021 consultative draft refresh. Taking our lead from the limited weight Ministers have attached to the much more coherent and polished Draft NPF4, it is our view that very limited weight should be attached to the Onshore Wind Policy Statement Consultative Draft.

13. In order to provide useful power, Craiginmoddie will require (along with other wind farm developments) massive alteration and improvement to the national grid. This is not envisaged by the UK Government's Powering Net Zero white paper, and it is difficult to see how, without significant changes to devolved powers and a major change of heart in Westminster, how the Scottish Government can deliver it unilaterally. Currently the grid is unable to cope with existing wind farms, and other infrastructure is inadequate also.

14. Another key issue to notes relates to the recent ScotWind auction of offshore production capacity. If all the schemes applied for in the recent round of offshore leases auction are built, they will together generate 25 gigawatts of renewable electricity – more than double the Scottish Government's ambitions for 11 gigawatts by 2030 and equivalent to the most ambitious aspirations of the Onshore wind refresh document. That is enough to power more than 18 million homes, with Scotland only currently having around 2.5 million homes. Again, this demonstrates that there is no need for new on-shore wind farms.

15. Related to the issue of need, is the issue of payments to wind power generators. Constraint Payments to wind power generators, paid when the national grid is at capacity, totalled £274 million in 2020, up from £13m in 2011, with costs added to domestic electricity bills. Over the past decade electricity customers have paid windfarms £1bn to switch off turbines. This waste of energy and the extra costs for consumers arise almost entirely from over-provision of capacity in Scotland.

16. Dr John Constable, of the Renewable Energy Foundation, said:

"It was the choice of windfarm developers to build in remote areas where there's low demand and very little grid. So, the fact that they're constrained off is an entirely foreseeable commercial risk and they really shouldn't be receiving any compensation at all.

As it is, the extraordinary thing is that they're actually making more money when they're not generating than when they're generating and selling normally to consumers."

17. The Balancing Mechanism, which ensures that supply and demand are in balance hour by hour, was forced to pay up to £4000/MWh to get the coal-fired Drax 5 unit to switch on, at the same time as paying wind farms to switch off. The daily cost of balancing the electricity grid rocketed to £63 million on 24/11/21, surpassing the record of £45 million that had been

set at the beginning of November 2021. Wind farms were performing poorly yet again, delivering only 20% of their theoretical capacity.

18. Net Zero Watch's Dr Benny Peiser said:

The tens of millions that the grid is having to throw at the growing problem of unreliable renewables on days like yesterday are astonishing. £1 million to wind farms to switch off. £5 million to get a single coal-fired unit at Drax to switch on. This is unsustainable."

19. The annual cost of the so-called Balancing Mechanism has quintupled in just three years, reaching £1.8 billion in 2020/21 driven primarily by the vagaries of wind speed. But Dr Peiser warns that figure that is likely to be comfortably surpassed in the current year. The Government has done nothing to address the energy crisis, with huge shale gas resources remain untapped while consumers are burdened with £ billions of additional costs in absurd transfers for bailing out inept wind farms.

20. In summary, it has been demonstrated above that additional onshore wind provision as would be provided by the proposed windfarm development at Craiginmoddie is not required. In addition, failings of the current windfarm economic case demonstrate that additional onshore wind provision will lead to further, unsustainable costs for consumers.

4 Chapter 10 Noise

The applicant has used the noise data for the Hadyard Hill Extension and has apparently not carried out any further survey work to qualify this data. Using this data the application has concluded that the impact from noise is not significant.

Currently there is an array of turbines at Hadyard Hill which are switched off at times due to problems with noise at several properties. The turbines for this application are both closer and larger will only exacerbate the impact from noise on these properties. People living in these properties will be condemned to living in an industrialised environment which is unacceptable.

With Dailly in close proximity to the proposal in the valley bottom and downwind of the turbines Dailly could experience a continuous background noise which will be unacceptable. The consented Kirkhill wind farm could only exacerbate the impact from noise.

5 Chapter 12 Hydrology, Hydrogeology and Geology

The Environmental Statement (ES) considers private water supplies in Chapter 12 Hydrology, Hydrogeology and Geology.

We understand that it is a legal requirement that a private water supply (PWS) is not adversely affected by the development to ensure that the residents of a property depending on a PWS continue to enjoy a quality supply. In this case if is vital that PWS are not adversely affected as there is not an alternative water supply, the mains water supply being some miles away.

The ES recognises that PWS are susceptible to damage in 12.74 'PWS can be impacted by chemical pollution, damage to PWS infrastructure (e.g. water transfer pipes, intakes) and reduced recharge volumes through disruption of natural flow pathways. The risk posed to a PWS will principally depend on the degree of hydrogeological/hydrological connectivity between PWS source and infrastructure associated with the Site.'

The ES had surveyed PWS's that could be impacted by the development and identified 7 that could be vulnerable in the construction of the development. It identified 2 in particular where there is concern, Delamford and Dobbingstone, where there is hydrological connectivity. Reference Table 12-13 'Delamford Farm (PWS38) Medium Consultation response not received. Source location unconfirmed. Topographic relationship between Proposed Development and property indicates hydrological/hydrogeological connectivity.

Dobbingstone Farm (PWS39) Medium Consultation response not received. Source location unconfirmed. Topographic relationship between Proposed Development and property indicates hydrological/hydrogeological connectivity'.

The ES states that the applicant mailed PWS users requesting information on the source of the PWS but that those for Delamford and Dobbingstone were not returned. We understand that in the case of Dobbingstone the return was made to the applicant. As the applicant was aware that there is hydrological connectivity with the PWS to Dobbingstone it is reprehensible that the applicant did not seek to ensure that the ES included this PWS. The potential impact of damaging this PWS could have implications for the planning of the development and calls into question the accuracy of the plans.

The ES assesses the sensitivity of the Dobbingstone PWS as medium. Any impact on the PWS which affects water quality and flow rate must rate as high as there is no alternative supply available. We understand that SSE when considering the PWS to Dobbingstone assessed the sensitivity as high 'due to rarity of receptor, and the limited potential for substitution replacement

for the drinking water supply in a remote location'. The applicant using the same contractor, Natural Power, now reduces the sensitivity of the PWS to Dobbingstone. This calls into question the validity of the assessment.

Both SAC and SEPA have warned against any impact on PWS's which will affect water quality and requested a detailed report involving site investigations and monitoring. SEPA in a supplementary submission of December 2021 requested that consent should be conditional on 'the preparation and implementation of a Private Water Supply Monitoring Plan and Method Statement (PWSMP) prior to construction as recommended within the PWS Risk Assessment. This must implement the mitigation measures outlined in the PWS Risk Assessment including the proposed water quality and quantity monitoring for the Dobbingstone Farm PWS and Delamford Cottage & Delamford Farm PWS'

SEPA qualified the report as 'the undertaking of intrusive site investigation and risk assessment of a potential hydrogeological connection (pathway) between the proposed turbines 2 and 3 and the Dobbingstone Farm PWS source prior to construction. The outcome of this should inform the PWSMP; and

that no micrositing of wind turbines 2 or 3 shall take place towards the PWS abstraction location of the Dobbingstone Farm PWS'.

SEPA's requirement for the report seems to contrast with the applicant's intention in the ES 12.181 'site-specific mitigation will be undertaken at all PWS identified within the study area owing to their proximity to the Site' which is less specific. Our understanding is that SEPA will require bore holes to determine flow rates and origin, and water quality monitoring. Any consent should be conditional on an exhaustive assessment of the PWS's that may be impacted by the development prior to any construction of the development.

The applicant in the ES is seeming to delegate the responsibility to the construction contractor 'the exact details of the mitigation to be used will be responsibility of the appointed construction contractor. A programme of water quality and quantity monitoring will be developed to monitor this supply'. The responsibility should remain with the applicant as the party responsible to maintain the private water supplies without detriment to quality and flow rate.

We are of the opinion that the applicant has not considered the private water supplies in enough detail and needs to give this aspect of the ES more attention. If the PWS's have not been sufficiently investigated it throws into doubt the accuracy of the design proposals of the development and could impact detrimentally on water quality. Those with a private supply need to know without doubt that their supply will not be impacted in any way whatsoever.

6 Chapter 11 Traffic & Transport

Audit of EIAR Traffic & Transportation

1. This section presents an audit of Chapter 11 of the Environment Impact Assessment Report EIAR), Traffic and Transportation, prepared by EnergieKontor in December 2020 and submitted in support of the proposed windfarm development at Craiginmoddie.

2. Para 11.5 and Table 11.1 of the EIAR chapter sets out the planning policy against which the assessment is to be assessed. It is noted that since the report was prepared additional relevant policy has been published, some in draft form, but which is considered of material importance to the proposal. This includes the 2020 Westminster government white paper entitled Powering Our Net Zero Future issued 14 December 2020, the Scottish Government's Onshore Wind Policy Statement Refresh 2021, and National Planning Framework 4.

3. Para 11.7 of the EIAR chapter sets out that Timber Transport Forum maps have been used to inform the construction route options for HGV traffic. As discussed later in this audit, just because certain routes are identified as forestry routes, does not mean that they are automatically suitable for windfarm construction routes.

4. Table 11 of the EIAR chapter sets out consultation responses from Transport Scotland, summarised as;

· Transport Scotland will require to be satisfied that the size of turbines and blades proposed can negotiate the selected route and that their transportation will not have any detrimental effect on structures within the trunk road route path.

· Swept path analysis should be undertaken and details provided with regard to any required changes to street furniture or structures along the route.

· We would also state that any proposed changes to the trunk road network must be discussed and approved (via a technical approval process) by the appropriate Area Manager prior to the movement of any abnormal load.

5. The applicant's responses to these requirements are assessed in this audit.

6. The local road network to be used for construction is discussed from Para 11.39. Basic errors are included that demonstrate a lack of detail, such as stating that the A77 (M77) between Glasgow and Stranraer is subject to a 60pmh speed limit away from settlements and built up areas. In fact, for example, a 50mph speed limit is in place on the A77 between Bogend and the Dutch House Roundabout, while 70mph speed limits are in place on other sections of the M77 / A77.

7. The assessment of personal injury accidents set out from Para 11.46 is incomplete as it concludes by stating only that no fatal accidents were reported. Standard accident data analysis, known as 'K&SI' relates to killed and seriously injured. The data presented shows that there were 'serious injury' accidents but these are not discussed. These should have been detailed and assessments made as to whether the proposed development could exacerbate risks at these locations.

8. Baseline traffic data set out from Para 11.51 onwards presents 2019 AADT flows which are then converted to 12 flows. The assessment does not state which 12 hour period has been

assessed or whether the conversion factor used is specific to the local area or UK wide. Without this information it is difficult to assess if the correct flows are being assessed.

9. The Construction Programme section of the EIAR chapter details that a 12 month construction programme has been assumed. The worst case assessment suggests that over this period there could be a total of 14,402 vehicle trips routing on local roads through local communities. Table 11.12 presents no detail of how this figure is broken down by vehicle type, for example; the number of heavy goods vehicles or abnormal loads.

10. The assessment goes on to set out that two locations on the A77 would experience increases of more than 10% per day in the number of heavy goods vehicles, while three locations on the A714 and one on the B741 would experience increases of more than 30% per day in the number of heavy goods vehicles.

11. The assessment of predicted effects for the five of the six locations studied set out that they would be 'not significant' in terms of EIA guidelines. In reality, local residents would be subject to the effects of over 14,400 vehicle movements over a 12 month period in terms of noise, pollution, traffic congestion and disturbance. The fact that the applicant has 'ticked the correct boxes' in terms of EIA guidelines does not mean that the proposed development will not have significant impact on local residents.

12. The EIAR chapter goes on to discuss the cumulative impact of six consented windfarm applications, and 3 application stage windfarm schemes (as of December 2020) within 20km of the application site. Where the same route will be used by multiple windfarm schemes, no detail of expected impact is presented. For example, it is suggested that the proposed scheme at Clauchrie would, like the Craiginmoddie scheme, make use of the A714. No detail is presented for the Clauchrie scheme, but if it is of a similar scale to Craiginmoddie, the combined schemes could add almost 30,000 addition vehicle movements to the local road network.

13. With regards mitigation, the applicant sets out that a CTMP (Construction Traffic Management Plan) would be agreed with South Ayrshire Council. It is considered that the CTMP should not be deferred to the post-consent stage, as it would need to contain a range of measures to address the serous impacts of the construction phase to be agreed as part of consent.

14. In relation to access, Figure 11.2 of the EIAR chapter shows 3 HGV access routes via existing roads, an abnormal load route via existing roads, and a new abnormal load route.

15. It is notes that HGV Access Route 3 approaches the sire from Glen Trool / the south. The final section (U57) from Bell's Memorial to South Balloch is barely passable in a car, let alone an HGV and is in a poor state of repair, narrow and at points has sheer drops. The fact that this route has even been considered as a viable access route further demonstrates a lack of detail that the document presents.

16. The proposed new abnormal load access route is questioned when there is already an existing wind farm access route for Hadyard Hill which could be used. Any new route would destroy landscape and would have a range of significant environmental impacts.

17. The EIAR chapter also includes an Abnormal Loads Assessment (Systra November 2020) which presents a review of routes which would be used to transport turbine blades (76.5m in length) from the Port of Ayr to the proposed development site. As part of this, they have identified 23 pinch points where significant mitigation measures will be needed. Most of the major changes to existing junctions would be in Ayr and on the A77 south to Girvan

18. The Abnormal Loads Assessment details each pinch point, what street furniture would need to be removed and where temporary paving and third party land would be required. It is noted that the assessment does not consider where landscape / trees would need to be removed or the environmental impact of this. Where third party land is required, there is no detail of whether legal agreements have been discussed – without which the developer could be held to 'ransom' such that the scheme may be unviable.

19. A full Road Safety Audit process should have been undertaken by the applicant to show that the proposed changes are safe to all road users. There should have been Stage 1 Road Safety Audits submitted with the application, with all further required stages, secured by planning consent / legal agreement.

20. In summary, it is considered that the level of detail submitted in support of the application in terms of traffic and transportation is insufficient for a full assessment to be made. In addition, routing options to the site are inappropriate and have not been assessed to the required level of detail.

7 Tourism

Key tourist routes and assets would be impacted: in particular National Cycle Route 7 which runs right past the Proposal and the Ayrshire Alps Cycling Park, and Nick O' the Balloch. SALWCS states "All turbines should be sited to avoid intrusion on views from the minor public road/National Cycle Route 7 to the south to the Carrick Hills and the dramatic pass of the Nick of the Balloch." Turbines 7 and 8 are a mere 143m and 237m respectively from the narrow hill road which National Cycle Route 7 follows on this section. Micrositing up to 100m means they could be extremely close. Not only would this be an overbearing presence, but it would be a hugely distracting and moving element for drivers along this route.

It would also impact on the South West 300 route, core paths and the path network around Straiton and Barr, Turnberry Golf Course, Seasons Holiday Village at Dailly and the road between Straiton and Rowantree. The conservation villages of Crosshill, Straiton and, to a lesser extent, Kirkmichael would be impacted. These villages, particularly, Straiton, receive thousands of visitors each year. Blairquhan is an internationally renowned wedding venue and Dalduff by Crosshill is another popular wedding venue. The Applicant has not undertaken any research into tourist assets in the area and so is ignorant of what these are, how many there are and their economic value to the area.

The Proposal would have a detrimental impact on cultural assets as well. The designed landscapes of Bargany, Kilkerran and Blairquhan would all experience views of turbines. Robert Adam's Dalquharran Castle in Dailly faces south, there have been plans to develop this into a hotel and golf course. Any developer would be put off from investing in the building as all the principal rooms would face the Proposal. The ridge line to the south would be dominated by turbines towering above it. The setting of Old Dalquharran Castle in Dailly when viewed from the north would also be negatively impacted.

8 Shadow Flicker

We believe that several houses would be severely impacted by shadow flicker. The applicant has used the wind farm industries' usual guide and calculated the impact of shadow flicker within 10x rotor blade diameter. We understand that this originated from a single turbine on flat ground and that this suspect industry standard of 10x rotor diameter for assessing shadow flicker has been adopted and not reassessed. The usual situation for wind farm applications is that there are multiple turbines often at a higher altitude to the residences and that shadow flicker is exacerbated as a result and travels further. The Applicant can calculate this by not constraining the software to stop at 10x rotor blade.

At the Kiers Hill public enquiry SSfS presented a paper at the enquiry which questioned the validity of wind farm applications restricting the assessment to 10x turbine diameter. The paper demonstrated that the 10x rule underestimated the impact of shadow flicker and that the impact travels further than 10x.

In the ES section 14.16 the applicant quotes the 2011 Parsons Brinckerhoff study Update of UK Shadow Flicker Evidence Base which concludes that there is unlikely to be a significant effect at distances greater than 10 rotor diameters. The conclusion could therefore be drawn that there could be significant effects within 10 rotor diameter but the EA assesses the effect as not significant.

The applicant has assessed the shadow flicker effect from a desk exercise and has shown the results in table 14.3. There is little information as to how the effect has been calculated, whether one of more turbines etc.

There should be no acceptable limit on shadow flicker. The usual is to accept shadow flicker up to 30 minutes/day or 30 hours/year which are not any form of statutory or absolute limit. They are generic rules-of-thumb which are supposed to be used as a first approximation to discover areas where Shadow Flicker may have impact. Shadow flicker can have devastating impacts on residences as is the case for Hadyard Hill and Trallorg where people were forced to abandon their residence.

Shadow flicker impacts on residences and is not mitigated by curtains, being indoors or screening by trees. In some cases in these circumstances the effect can be intensified. Trees are an unreliable method of screening as they lose leaves during the winter in the case of deciduous trees and can be felled or succumb to disease.

Micro siting of the turbines could result in the preliminary assessment being incorrect.

No assessment has been made for shadow flicker during the night when clear moonlit nights may occur. On these occasions the impact of shadow flicker could be increased.

9 Conclusion

We conclude that this application should be rejected not least for the following:

- It fails to accord with planning policy
- It is unnecessary to achieve Scotland's ambition for renewable energy
- It does not satisfactorily address the potential impacts on adjacent properties and the local community
- It is incomplete in not addressing significant aspects of the proposal such as access

The ECU should reject this application.