
Report To:	Environment and Regeneration Committee	Date:	3 September 2015
Report By:	Corporate Director, Environment, Regeneration and Resources	Report No:	E+R/15/09/02/SJ/RG
Contact Officer:	Stuart W Jamieson	Contact No:	01475 712491
Subject:	Inverclyde Local Development Plan: Supplementary Guidance on Renewable Energy - Additional Consultation		

1.0 PURPOSE

- 1.1 The purpose of this report is to inform Committee of the outcome of the additional consultation on the Supplementary Guidance on Renewable Energy and to seek approval for the amended guidance to be forwarded to the Scottish Government for permission to adopt it as Supplementary Guidance to the Inverclyde Local Development Plan 2014.

2.0 SUMMARY

- 2.1 The Planning etc. (Scotland) Act 2006 allows planning authorities to adopt statutory supplementary guidance, which provides further information on policies or proposals set out in the Local Development Plan. Renewable Energy was one of five Supplementary Guidance documents which were adopted alongside the Local Development Plan (LDP) in 2014.
- 2.2 In June 2014 the Scottish Government published its updated Scottish Planning Policy (SPP) which included changes to the policy on wind energy. This led to changes being required to Inverclyde's Supplementary Guidance on Renewable Energy. Consultation was carried out on the amended Supplementary Guidance between January and February 2015 and an amended version presented to Committee in April 2015.
- 2.3 At this Committee it was decided that consideration of the matter be continued to allow the Head of Regeneration & Planning to undertake further consultations prior to the submission of a further report to the Committee. This consultation was carried out between 5 June and 17 July 2015 and nine representations were received. Annex 1 contains a summary of the representations received and the Council's proposed actions while Annex 2 contains a copy of the Supplementary Guidance amended, where appropriate, to take account of these additional representations.
- 2.4 It is now proposed that this latest version of the Supplementary Guidance is adopted by the Council to replace the one published alongside the LDP. This will augment Policy INF1 of the adopted Inverclyde Local Development Plan 2014.

3.0 RECOMMENDATION

- 3.1 That the Committee approve the amended version of the LDP Supplementary Guidance on Renewable Energy and agree that the Head of Regeneration and Planning should forward it to the Scottish Government for permission to adopt.

Aubrey Fawcett
Corporate Director, Environment, Regeneration and Resources

4.0 BACKGROUND

- 4.1 The Planning etc. (Scotland) Act 2006 allows planning authorities to adopt statutory supplementary guidance, which provides further information on policies or proposals set out in the Local Development Plan. Renewable Energy was one of five Supplementary Guidance documents which were adopted alongside the Local Development Plan (LDP) on 29 August 2014. A sixth Supplementary Guidance document, on Enabling Development, was adopted in May 2015.
- 4.2 In June 2014 the Scottish Government published its updated Scottish Planning Policy (SPP) which included changes to the policy on wind energy. Broad Areas of Search for wind energy developments were replaced by a Spatial Framework for identifying those areas that are likely to be most appropriate for onshore wind farms. This resulted in changes being required to Inverclyde's Supplementary Guidance. As the SPP changes came too late to be included in the Supplementary Guidance which had been through the LDP Examination, an assurance was given that amended guidance would be published and consulted upon following the adoption of the LDP.

5.0 PROPOSALS

- 5.1 The changes required to incorporate the Spatial Framework into the Supplementary Guidance also provided an opportunity to incorporate details of the Landscape Capacity report for Wind Turbine Developments in Glasgow and the Clyde Valley which was submitted to Committee in May 2014.
- 5.2 The first consultation on the amended guidance was carried out between 30 January and 27 February 2015 and eight representations were received. Proposed amendments to the Supplementary Guidance were reported to Environment and Regeneration Committee on 30 April 2015. At this meeting it was decided that consideration of the matter be continued to allow the Head of Regeneration & Planning to undertake further consultations and that an All Members' Briefing be arranged prior to the submission of a further report to the Committee.
- 5.3 This consultation was carried out between 5 June and 17 July 2015 and nine representations were received. One representation was received from the Scottish Government, four from other national organisations, one from a private consultancy and one each from Clyde Muirshiel Regional Park, Kilmacolm Community Council and Kilmacolm Civic Trust.
- 5.4 The comments mainly related to suggested changes to the layout and content to assist with clarity or provide additional information. Many of these were accepted and the Supplementary Guidance amended, including further clarification to the map identifying Spatial Framework Groups, and a new map showing Group 2 Areas of Significant Protection.
- 5.5 Annex 1 contains a summary of the representations received and the Council's proposed actions, some for noting with no further action and others accepted and amendments made to the final version of the guidance. Annex 2 contains the amended version of the Supplementary Guidance incorporating, where appropriate, the representations made through the additional consultation.
- 5.6 Once approved by Committee, the Supplementary Guidance will be submitted to the Scottish Government for 28 days approval after which it is proposed that this guidance is adopted by the Council to replace the version issued alongside the LDP. This will augment Policy INF1 of the adopted Inverclyde Local Development Plan 2014.

6.0 IMPLICATIONS

Finance

6.1 There are no direct financial implications arising from this report.

Financial implications

One off Costs

Cost Centre	Budget Heading	Budget Year	Proposed Spend this Report	Virement From	Other Comments
n/a	n/a	n/a	n/a	n/a	n/a

Annually Recurring Costs/Savings

Cost Centre	Budget Heading	With Effect from	Annual Net Impact	Virement From	Other Comments
n/a	n/a	n/a	n/a	n/a	n/a

Legal

6.2 There are no direct legal implications arising from this report.

Human Resources

6.3 There are no direct human resource implications arising from this report.

Equalities

6.4 There are no direct equalities implications arising from this report.

Repopulation

6.5 There are no direct repopulation implications arising from this report.

7.0 CONSULTATIONS

7.1 **Chief Financial Officer:** no requirement to comment.

7.2 **Head of Legal and Property Services:** no requirement to comment.

7.3 **Head of Organisational Development, HR and Communications:** no requirement to comment.

8.0 LIST OF BACKGROUND PAPERS

8.1 Inverclyde Local Development Plan 2014

Attachments

(1) Annex 1: Summary of Consultation Responses

(2) Annex 2: Supplementary Guidance on Renewable Energy (Revised September 2015)

ANNEX 1

SUMMARY OF CONSULTATION RESPONSES

SUPPLEMENTARY GUIDANCE ON RENEWABLE ENERGY – CONSULTATION 5 JUNE –17 JULY 2015

COMMENTS/ SUGGESTED CHANGES	ACTION PROPOSED
1. SCOTTISH GOVERNMENT	
Welcome inclusion of Woodland Removal Policy	Noted.
Reference to energy storage should be made in Renewable Energy Technology Section.	No change. Energy storage text currently included in Renewable Energy Technology section.
Clearer direction needs to be given on the Council's proposed approach to the uptake of district heating and combined heat and power (CHP) including any work or strategy development being worked on.	Include the following text: "Inverclyde Council is supportive of proposals for district heating and combined heat and power (CHP) systems. While the Council has no housing stock, having been transferred to River Clyde Homes in 2007, it is supportive of the district heating system proposed at Broomhill in Greenock, as part of the RSL's regeneration plans. Following the issue of planning permission in May 2015, the success of this project will be monitored and if clearer direction on the Council's approach to this matter is required, it will be dealt with through the preparation of non-statutory planning guidance or through the review of the LDP in early 2016."
Set out how opportunities should be identified using the Scotland Heat Map and provide link. Include guidance to developers as to where in Inverclyde the co-location of heat supply with heat demand could be viable.	Include the following text on page: "The Council is a signatory to the Scotland Heat Map Framework Agreement and will continue to provide information on gas and electricity consumption from its corporate estate to transpose to the heat map for Inverclyde. Any opportunities that arise from the heat map in the identification of the co-location of heat supply and heat demand will be given full consideration, and any further guidance required, will be addressed in the review of the LDP, beginning in early 2016." A link to the heat map will be provided.
Include link to the recently published Heat Policy Statement and to the Heat Network Partnership website.	Agreed.
Set out what infrastructure might be required to enable a heat network or connection to a heat network in future and explain how this will be considered at the development management stage.	No change. Following the recently issued planning permission for a district heating system as part of the River Clyde Homes refurbishment of the Broomhill estate in Greenock in May 2015, the

COMMENTS/ SUGGESTED CHANGES	ACTION PROPOSED
	success of this project will be monitored. Information on infrastructure requirements and other development management considerations will be dealt with through the preparation of non-statutory planning guidance or through the review of the LDP in early 2016, where appropriate.
Clarification is required on whether height of turbines is to hub or blade tip.	Agree. Although height to blade tip is stated, under Onshore Wind Energy appropriate wording can also be inserted in the Spatial Framework section.
Although the guidance complies with para 161 of SPP it is recommended the minimum threshold is reconsidered to take account of those developments that are considered to have potentially the most significant impact.	No change. As the guidance complies with SPP it is intended to keep the lower threshold to ensure significant impact of even single, smaller turbines is assessed. This minimum threshold is used in the Landscape Capacity Study for Wind Turbine Development prepared for all the authorities in the Glasgow and the Clyde Valley area.
Table 3 – The need for this non –exhaustive list is questioned when there are additional ‘other considerations’ listed on pages 13 -15.	It gives an indication of the wider considerations. Text will be inserted to relate this to the criteria of Policy INF1 and the other considerations cited.
Table 3 – SPP Spatial Framework Criteria needs to be renamed as they are a non-exhaustive list of development management considerations.	Agree. Change title to ‘Development Management Considerations’.
Table 3 – It should be made clear that this non-exhaustive list potentially applies to all types of energy infrastructure, not just wind.	Agree. Text will be amended accordingly.
Table 3 – Below the grey bar, it is implied that all of the criteria listed should be submitted with proposals.	Agree. This table will be restructured to provide clarity.
The section on other technologies does not provide particular assistance to developers.	Additional content will be included to provide details of what other technologies have been developed in Inverclyde and what the Council’s position is on future developments.
Landscape Capacity Study - There is a need to explain how the sensitivity of the landscape to certain types of wind turbines is expected to be considered in the decision making process.	The following wording will be inserted: “The Landscape Capacity Study will be used to direct turbine proposals to the most appropriate landscapes for their size and number (in terms of cumulative impact) and, where they are proposed in more sensitive locations, to identify where mitigation would be required to ensure the proposed development does not impact negatively on the important elements of

COMMENTS/ SUGGESTED CHANGES	ACTION PROPOSED
	the area such as landscape, views, tourism, recreation and natural heritage designations.”
Landscape Capacity Study – further clarification required on likely cumulative impacts to comply with paragraph 169 of SPP.	Include the following text: “The cumulative impact differs in each of the four landscape character typologies. Details can be found in paragraphs 5.10 - 5.11, 5.23, 5.35 and 5.49 – 5.50 of the Landscape Capacity Study.”
2. SPT	
No comments	Noted.
3. SEPA	
Update website link and change ‘micro hydro’ to ‘hydro’	Agree.
4. SNH	
Welcome references to SNH guidance but would like the inclusion of hyperlinks	Agree. Include hyperlinks to SNH Guidance.
Recommend additional details on decommissioning and restoration relating to information required at application stage, (SNH Guidance suggested)	Agree. Add detail and hyperlink to SNH Guidance.
5. Kilmacolm Community Council	
Too much focus on wind energy and not enough on hydro and biomass or other types of renewable energy.	The majority of the content of the SG was approved along with the LDP in August 2014. Only the wind energy element was rewritten, as agreed with Scottish Government to take account of the changes arising from the new SPP. However some additional information on other forms of renewable energy will be provided in the Supplementary Guidance.
No mention is made of the siting of solar panels or external cladding in conservation areas.	No change. Details of applications will be dealt with when planning applications are submitted. SPP Spatial Framework Criteria (to be renamed Development Management Considerations) addresses this under ‘ <i>impacts on communities and individual dwellings</i> ’.
Reference is made to a statement in SG by Scottish Government that the economic consequences of renewable energy are relevant to decision making. Explicit mention of economic impact, contribution to renewable energy development and effect on greenhouse gas emissions as criteria for	These criteria are still included in latest draft in the SPP Spatial Framework criteria (to be renamed Development Management Considerations).

COMMENTS/ SUGGESTED CHANGES	ACTION PROPOSED
decision making (page 8 of earlier draft) have been removed.	
<p>Little weight given to the Regional Park designation. Concern that the Regional Park designation has not been included as one of the factors underlying classification into one of the three groups identified by the Scottish Government. Higher priority should be given to the Regional Park designation.</p>	<p>Disagree. The SG requires to reflect the Scottish Government's SPP and the adopted LDP policy, and as the Regional Park is neither an international nor national designation, it is not referenced within this part of the SG. However both the LDP policy (INF1) and the SG recognise the importance of the factors for which the Regional Park has been designated, all of which will be taken into account in the consideration of planning applications for wind energy proposals. Furthermore the Regional Park is specifically identified in the SG under 'Other considerations' upon which planning applications will be determined.</p>
<p>A planning policy is quoted in the SG, but the Regional Park designation is not identified as one of the categories. Inverclyde should include the Park designation as one of its "identified policy criteria".</p>	<p>The SG is required to reflect the relevant policy (INF1) in the LDP. The LDP was adopted in August 2014, and amendments to the policy cannot be made.</p>
<p>A link to the study approved by the Park Authority is given in the SG, and the study's conclusion gives a much clearer statement of the Park Authority's views. The SG should reiterate that Inverclyde Council is a signed up member of the Regional Park.</p>	<p>No change. Specific reference to the Park Authority's framework document has been made in the SG under 'Other Considerations', within which it references landscape value and sensitivity. It also states that the Park Authority incorporates Inverclyde Council as one of three local authorities covering the area.</p>
<p>6. KILMACOLM CIVIC TRUST</p>	
<p>Concern that encouraging the renewable industry to a renewable energy hub at Inchgreen will lead to increasing attempts by wind energy companies to develop around Kilmacolm.</p>	<p>Disagree. The development of Inchgreen will not change the assessment of planning applications which will still have to comply with Policy INF1 and the criteria in SPP.</p>
<p>There are no Broad Areas of Search (BAS) identified in Inverclyde.</p>	<p>BAS have now been replaced by the Spatial Framework from SPP.</p>
<p>Noted that Policy INF1 supports renewable energy development provided that the adverse effects do not outweigh the benefits. Only the wind turbine development companies are receiving benefits from Feed in Tariffs.</p>	<p>As the policy states, the economic, environmental and social benefits of proposals will be considered against any adverse effects.</p>
<p>The statement that the 2km separation distance does not represent a ban on wind energy developments as demonstrated by the turbines already granted is extraordinary and specious.</p>	<p>It is a statement of fact that wind turbines have been granted within the 2km distance. It was deemed by Scottish Government on one occasion and the Local Review Body on another, that they were acceptable.</p>

COMMENTS/ SUGGESTED CHANGES	ACTION PROPOSED
Figure 1 is very confusing and the Group 3 'Area with potential for wind farm development' is extremely alarming. It will encourage developers to focus on the high ground within it.	An additional diagram will be inserted to assist with clarification of Figure 1. Group 3 refers to areas with potential wind farm development ' <i>subject to detailed consideration against identified policy criteria.</i> '
Welcome the criteria in Policy INF1 and the SPP Spatial Framework criteria on neighbouring settlements, communities and individual dwellings and on the cumulative effect of proposals and hope they are all given serious attention in the handling of applications.	Noted.
No mention made of high land in adjacent Renfrewshire, nor of any protocols between planning authorities in Paisley and Inverclyde to ensure consultation. There is a need for input from KCT.	Inverclyde Council will be consulted on planning applications on the adjacent land of neighbouring authorities or where proposals are likely to have an impact. Officers can recommend that other authorities contact interest groups. KCT can also make representation on any planning application in Renfrewshire.
The figures in brackets in Diagram 1 are confusing.	Agreed. They relate to the landscape character typology numbers from the Landscape Character Assessment where the names come from. The figures will be removed.
7. CLYDE MUIRSHIEL REGIONAL PARK	
Suggest indication of High Sensitivity to wind turbines above 30m in Rugged Upland and Rugged Moorland within CMRP.	No change. These sensitivity levels come from the Landscape Capacity Study and have been evaluated using a number of criteria detailed in the study. These are standard across Glasgow and the Clyde Valley and cannot be altered by individual authorities.
Higher resolution maps would help in defining borders of designations and inform responses on impact of wind turbines.	It is difficult to show an entire authority on one map within the document and at a detailed scale. The Supplementary Guidance map can be downloaded and the zoom function used. When requested, larger copies of the plan can be sent out.
8. JONES LANG LASALLE	
<i>NB. Only those matters that JLL consider unresolved from the first SG consultation are dealt with below.</i>	
Group 2 footnote 1 should refer to any 'unacceptable' adverse effect on SPA, Ramsar or Natura sites.	Footnote 1 specifically refers to SPA, Ramsar and Natura sites, which are international designations. Policy INF1(a) states that international designations should not be compromised. Any adverse impact upon these designations will not be permitted. No change proposed.
The SG should include a map showing the carbon rich soils, deep peat and priority peatland habitat identified by SNH so that their location within Group 2 can be identified.	Agreed. The designation map in the earlier SG was removed at the request of SNH and the Scottish Government. It is intended to include a map showing all the Areas of Significant Protection in Group 2

COMMENTS/ SUGGESTED CHANGES	ACTION PROPOSED
	alongside the revised map showing Group 2 and Group 3 areas and to reference this in the text. Details of carbon rich soil, deep peat and priority peatland habitat will be updated when the new maps are available from SNH.
Group 2 footnote 2 should state that location of a proposal in the SNH areas of carbon rich soil, deep peat and priority peatland habitat, does not mean that the proposal would be unacceptable.	As these areas have the same status as the other designations in Group 2, it is not intended to single them out.
A positive approach to wind farm developments within CMRP should be promoted give its status within a Group 3 area.	It is acknowledged by JLL that a prohibition on wind farms within the CMRP is not explicitly stated in the SG. In fact, the Spatial Framework indicates that within Group 3 areas which includes CMRP, ' <i>wind farms are likely to be acceptable, subject to detailed consideration against identified policy criteria</i> '. This is positive wording and CMRP will be treated the same as other locations in Group 3 to ensure developments are appropriately located.
The consistency between the SG and the SPP, in terms of the Development Management considerations, is welcomed.	Noted.
9. NATS SAFEGUARDING	
It should be noted that NATS En Route operates multiple radars beyond that at Glasgow Airport. Recommend that reference is made to the NATS website and specifically to the Self-Assessment maps.	Agree. Refer to NATS website.



INVERCLYDE LOCAL DEVELOPMENT PLAN
2014

SUPPLEMENTARY GUIDANCE on RENEWABLE ENERGY (Revised September 2015)

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1.0 INTRODUCTION

This document provides guidance to supplement the Local Development Plan policy for renewable energy. It has been prepared to allow for the assessment of a variety of types of renewable energy development proposals aiming for a balance between promoting renewable technologies and meeting national guidance on other areas such as those relating to the natural environment, which may appear to be in conflict at times.

The Guidance is aimed at:

- developers/professionals considering new projects;
- communities/interest groups considering the impact of a proposed renewable development; and
- local authority Councillors and Officers considering planning applications

Renewable energy is generated from natural resources such as sun, wind, and water which is inexhaustible but also includes energy from replenishable resources such as waste and biomass. Wind energy and hydro energy are currently the most well-developed of the renewable resources but it is considered that the others will increase their share over time.

It is the role of the planning system to reconcile the benefits of potential renewable energy developments with any detrimental impact on the environment.

There is support for the renewables industry in Inverclyde where Inchgreen on the Greenock Waterfront, which is promoted as an area to which renewable energy companies could locate, is in line to benefit from £9.4million from the Glasgow City Region Infrastructure Fund.

AIM: To locate renewable energy developments where the technology can operate efficiently and environmental and cumulative impacts can be addressed satisfactorily.

2.0 POLICY, GUIDANCE AND LEGISLATION

National Planning Policy

National Planning Framework 3 (NPF3) considers the means of attaining a low carbon Scotland by reducing emissions and recognises the importance of the planning system in delivering targets. It recognises the importance of promoting greater use of renewable sources of heat energy and recovery of waste heat and supports the further deployment of onshore wind farms whilst addressing concerns about the impact of some developments and reflecting the objective of greater community ownership of renewable energy.

The Scottish Government's target of 18% of electricity being generated from renewable sources by 2010 was met, as was the new target of 31% set for 2011. The 2020 Route-map for Renewable Energy in Scotland, 2011 identifies a target of 30% of overall energy demand to be met from renewables by 2020 which is broken down to 100% of electricity, 11% of heat and 10% of transport fuels.

The Government's publication Scottish Planning Policy (SPP), published in 2014, addresses the main-sources of renewable energy at present – wind and hydro – and those other technologies that may contribute in future such as biomass, solar, landfill gas, wave and tidal. SPP states that:

“Efficient energy resources are vital to reducing greenhouse gas emissions and can create significant opportunities for communities.”

“The planning system should support the development of a diverse range of electricity generation from renewable energy technologies” and “guide development to appropriate locations.”

“Development plans should seek to ensure an area's full potential for electricity and heat from renewable sources is achieved in line with national climate change targets, giving due regard to relevant environmental, community and cumulative impact considerations.”

It continues:

“Local development plans should support new build developments, infrastructure or retrofit projects which deliver energy efficiency and recovery of energy that would otherwise be wasted.”

The General Permitted Development Order (Scotland) (GPDO), 1992 has been amended to permit certain types of micro-generation equipment to be installed without the need for planning permission.

SPP requires planning authorities to set out a spatial framework identifying those areas that are likely to be most appropriate for wind energy development, as a guide to developers and communities.

Guidance

Planning Advice Note 45 (PAN45) Renewable Energy Technologies (2002) and Annex 2 Spatial Frameworks and Supplementary Planning Guidance for Wind Farms (2008) have been superseded by a series of online guidance relating to a variety of renewable technologies including:

Onshore wind turbines	Hydro schemes
Woody biomass	Landfill gas
Energy from waste	Anaerobic digestion
Deep geothermal	Large photovoltaic arrays
Energy storage	Microgeneration

PAN 51 Planning, Environmental Protection and Regulation (2006), the Water Framework Directive Scotland 2000, the River Basin Management Plan 2009 and the Clyde Area Management Plan 2010-2015 provide guidance on the issues related to the protection of the water environment in the Inverclyde area.

PAN 1/2013 Environmental Impact Assessment (EIA) provides advice on good practice and guidance for planners dealing with EIA screening and scoping where proposals are assessed to determine whether an EIA is required and, if so, assessed against the criteria in the EIA checklist to determine whether it will have a significant effect on the environment.

SNH has provided a number of documents relevant to the development process for onshore wind farms, including:

- Visual Representation of Wind Farms (2014)
<http://www.snh.org.uk/pdfs/publications/heritagemanagement/Visual%20representation%20of%20wind%20farms%20-%20version%202.1%20-%20December%202014.pdf>
- Siting and Designing Wind Farms in the Landscape (2014)
http://www.snh.org.uk/pdfs/strategy/renewables/Guidance_Siting_Designing_wind_farms.pdf
- Visual Assessment of Wind Farms - best practice (2002)
<http://www.snh.gov.uk/docs/A305437.pdf>
- Siting and Design of Small Scale Wind Turbines of Between 15 and 50 Metres in Height (2014)
<http://www.snh.gov.uk/docs/A675507.pdf>
- General Advice and Information on Onshore Wind (2015)
<http://www.snh.gov.uk/docs/A1150291.pdf>
- Assessing the Cumulative Impact of Onshore Wind Energy Developments (2012)
<http://www.snh.gov.uk/docs/A675503.pdf>
- Assessing the Impact of Small Scale Wind Energy Proposals on the Natural Heritage (2014)
<http://www.snh.gov.uk/docs/A1323094.pdf>

- Spatial Planning for Onshore Wind Turbines - Natural Heritage Considerations (2014)
<http://www.snh.gov.uk/docs/A1663759.pdf>
- Decommissioning and Repowering Plans for Onshore Wind Farms (2014)
<http://www.snh.gov.uk/docs/A1434319.pdf>

Managing Change Guidance – Micro-renewables (2010) from Historic Scotland provides guidance on applications for renewable energy developments affecting historic buildings, monuments and places.

Legislation

This Supplementary Guidance is prepared in accordance with the following legislation.

Town and Country Planning (Scotland) Act 1997

Town and Country Planning (Development Management Procedure) (Scotland) Regulations 2008

Town and Country Planning (General Permitted Development Order) (Domestic Micro-generation) (Scotland) Amendment Order 2010

Climate Change (Scotland) Act, 2009

Circular 1/2012 Householder Permitted Development

Development Plan Policy

The development plan for Inverclyde comprises two parts. Strategic policy is set out in the approved Glasgow and the Clyde Valley Strategic Development Plan (2012) while detailed policy criteria are laid out in the Inverclyde Local Development Plan 2014.

Strategic Development Plan

The Strategic Development Plan (SDP) outlines broad areas of search for biomass wood fuel production and wind energy for the Local Development Plans (LDP) of the eight authorities to take forward and refine through their policies. Preferred urban fringe areas for biomass fuel are identified around the edges of the settlements in Inverclyde while no Broad Areas of Search

(BAS) for strategic wind energy developments are identified within the authority. SPP has now superseded the SDP and no longer refers to BAS which will be taken account of in the preparation of the next SDP.

Local Development Plan

All renewable energy applications will be assessed against LDP policies, including **Policy INF1** in the LDP which supports renewable energy development provided the adverse effects do not outweigh the benefits. For wind energy applications **Policy INF1** is used together with the SPP Spatial Framework and criteria, detailed below.

Woodland Removal Policy

The Scottish Government has developed a policy on the control of woodland removal in Scotland. The Policy presents the criteria for determining the acceptability of woodland removal, information and implementation. All wind energy developments should be designed in accordance with the Policy. The guiding principle of the Policy can be examined in detail at <http://scotland.forestry.gov.uk/supporting/strategy-policy-guidance/woodland-expansion/control-of-woodland-removal> .

3.0 RENEWABLE ENERGY TECHNOLOGY

Hydro

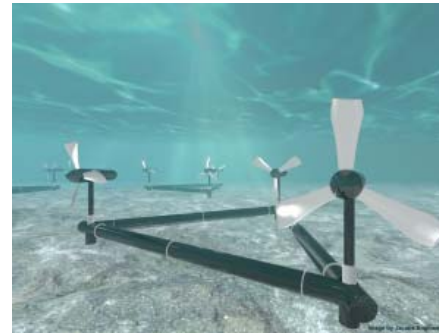


The majority of hydro schemes in Inverclyde are likely to be small 'run-of-the river' schemes where water is taken from a river from behind a low weir, with no facilities for water storage and returned to the same water course after passing through the turbine. These would be primarily for domestic/ individual landowner use with an output of under 100kW and Feed-In-Tariffs for any surplus sold back to the grid. There could be an impact on the natural and cultural heritage, water environment, fisheries, aquatic habitats and amenity, and relevant environmental and transport issues which would have to be addressed by the developer, but the Council is supportive of this type of scheme in the right location.

The Council has entered into a high level partnership with Scottish Water in order to bring forward proposals for further hydro development in Inverclyde. The Council and Scottish Water have jointly committed to partnership development of a hydro scheme at Hole Burn on Greenock Cut and a hydrology study and energy generation capability study are ongoing.

Tidal

Tidal power is a form of hydro power that converts the energy of tides into power – mainly electricity. Tides are more predictable than wind or solar power and have potential for future electricity generation. Any proposal for tidal power in Inverclyde will be considered on the basis of its impact on the river.



Micro wind

At a domestic or commercial level, small turbines can be mounted on buildings or free standing to provide electricity and where there is surplus production, it can be sold back to the grid under the Feed-In-Tariffs (FIT). Certain micro wind developments may be classed as Permitted Development. Where this is not the case, they will be determined through the submission of a planning application.



Solar/Photovoltaics

There are three ways in which to exploit solar power; firstly, through the installation of solar panels on buildings to harness energy for conversion into heat; secondly through photovoltaics which convert solar energy into electricity and finally passive solar gain through the orientation of buildings to make maximum use of the sun. These can be located in a variety of locations provided there is ample solar irradiation and electricity connection.

Inverclyde Council is supportive of the use of this technology in the correct location, having installed a number of photovoltaic arrays as part of the schools refurbishment and new build programme. Four high schools and five primary schools have done so, with two more schools due to have them installed when they are refurbished.



Biomass

Biomass is biological material which can be used to generate electricity. It can be either used directly as in combustion or converted in to fibres or chemicals such as biofuels. SPP advises that planning authorities should identify, through the development plan, where there are areas capable of accommodating new biomass plants with the location of large scale biomass plants determined by a number of factors including the economic costs of transporting fuel materials from source, the availability of feedstock during the year, the location of the end user and the scale of the plant.

The Supplementary Guidance on Local Development Frameworks identifies part of the Spango Major Area of Change for appropriate renewable energy uses, which has the potential to include biomass crops.

The Port Glasgow Community Campus heating system is primarily powered by a biomass boiler with back-up solar thermal and solar photovoltaic systems. Inverclyde Council will support this form of renewable energy in appropriate locations.

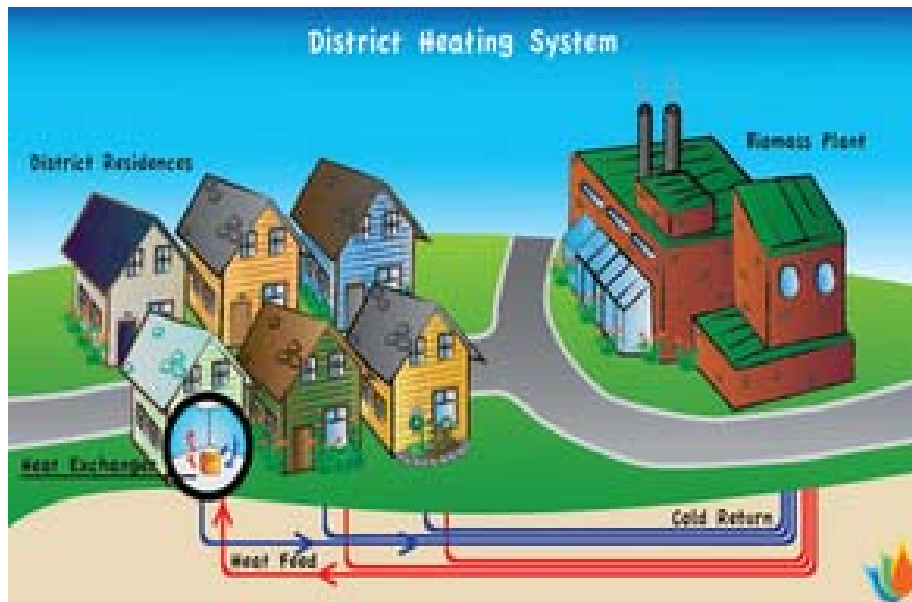


District Heat Network

A district heat network is a system for distributing heat generated in a centralised location for residential and commercial heating requirements such as space heating and water heating. District heat plants can provide higher efficiencies and better pollution control than localised boilers.

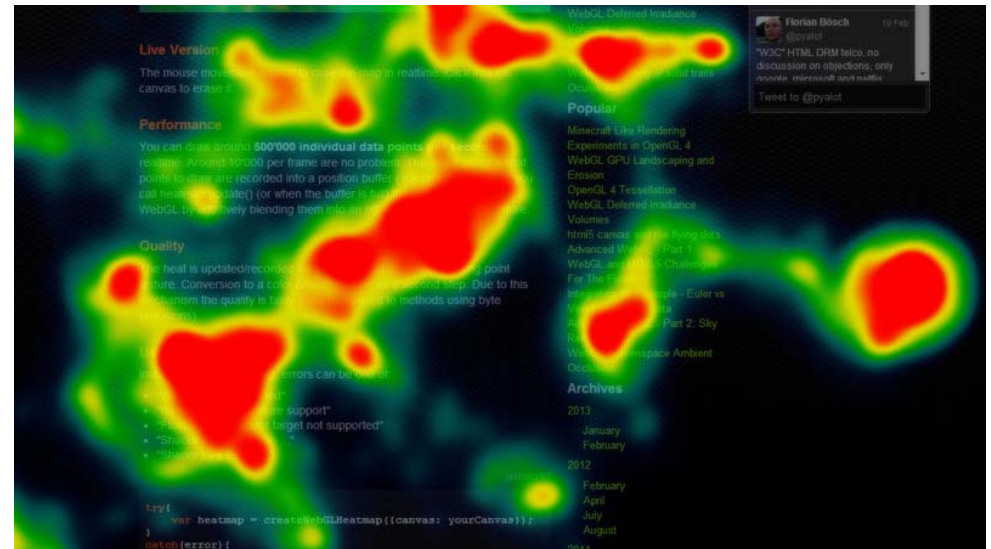
Inverclyde Council is supportive of proposals for district heating and combined heat and power (CHP) systems. While the Council has no housing stock, having been transferred to River Clyde Homes in 2007, it is supportive of the district heating system proposed at Broomhill in Greenock, as part of the RSL's regeneration plans. Following the issue of planning permission in May 2015, the success of this project will be monitored and if clearer direction on the Council's approach to this matter is required, it will be dealt with through the preparation of non-statutory planning guidance or through the review of the LDP in early 2016.

Useful link: <http://www.districtheatingscotland.com/content/planning>



Heat Mapping

Heat mapping is a means of assessing who needs heat (demand) and where sources of heat might come from (supply). The Scottish heat map (can be used to identify where there are opportunities for heat networks to assess heat density and proximity to heat sources.



The Council is a signatory to the Scottish Heat Map Framework Agreement and will continue to provide information on gas and electricity consumption from its corporate estate to transpose to the heat map for Inverclyde. Any opportunities that arise from the heat map in the identification of the co-location of heat supply and heat demand will be given full consideration, and any further guidance required, will be addressed in the review of the LDP, beginning in early 2016.

Useful links: <http://heatmap.scotland.gov.uk>
<http://www.gov.scot/Publications/2015/06/6679>

Ground Source Heat

Ground source heat pumps (GSHP) use pipes which are buried in the garden to extract heat from the ground. This can be used to heat radiators, underfloor or warm air heating systems and hot water in the home. There have been no GSHP developments in Inverclyde but they would be supported at suitable locations.



Energy from Waste

Energy from Waste systems either use a biological process including landfill gas, sewage gas or biogas from agricultural waste and digestible domestic or industrial waste or a thermal process such as incineration which tends to be on a larger industrial scale and requires careful siting. Location will be influenced by the source of the waste used with industrial sites with the potential for connection to the electricity grid or other possible users likely to be suitable locations for energy from waste plants.



Energy Storage

Energy storage entails the storage of energy generated during periods of low demand for use during periods of high demand. This not only helps overcome the problem of variable supply from renewable energy resources but also allows the grid to operate more efficiently and cost effectively.

Onshore Wind Energy

Wind energy developments are currently the most popular type of renewable energy proposals and this type of development is Scotland's fastest growing renewable energy source – a trend which is expected to continue. By the end of the first quarter of 2015 there was 5.13GW of installed onshore wind capacity in Scotland.

Wind energy developments are dealt with according to size:

Table 1: Determination of Wind Energy Applications

Scale	Determined By	Consultees
Up to 50MW	Inverclyde Council	Key Agencies
Over 50MW	Scottish Government	Inverclyde Council and Key Agencies

They can also be classified according to height to blade tip, as is the case in landscape capacity studies: The Landscape Capacity Study for Wind Turbine Development 2014 which was carried out in Inverclyde used the following categories:

- 15 – 30m **small**
- 31 – 50m **small/medium**
- 51 – 80m **medium**
- 81 – 120m **large**
- over 120m up to around 150m **very large**

Offshore Wind

Offshore wind, wave and tidal energy sources are increasing in importance in contributing to renewable energy targets.



Stronger wind speeds are available offshore compared to on land so the contribution of offshore wind farms in terms of electricity supplied is higher. Offshore includes inshore water areas such as lakes, fjords and sheltered coastal areas as well as deep water areas. The restrictions on the River Clyde, within Inverclyde, due to the Inner Clyde Estuary SPA and Ramsar site and the shipping channel make this type of development unlikely.

4.0 WIND ENERGY IN INVERCLYDE

The majority of applications received in Inverclyde to date have been for single or groups of 2-3 wind turbines under 80m high, due to the increasing interest in small scale wind turbine developments which attract a FIT payment.

Wind Energy

The SPP Spatial Framework for wind energy developments, described in section 3.0 above, is set out in more detail in Table 2.

Table 2: Spatial Framework

<p>Group 1: Areas where wind farms will not be acceptable:National Parks and National Scenic Areas.</p>		
<p>Group 2: Areas of significant protection:Recognising the need for significant protection, in these areas wind farms may be appropriate in some circumstances. Further consideration will be required to demonstrate that any significant effects on the qualities of these areas can be substantially overcome by siting, design or other mitigation.</p>		
<p>National and international designations:</p> <ul style="list-style-type: none"> World Heritage Sites; Natura 2000 and Ramsar sites; Sites of Special Scientific Interest; National Nature Reserves; Sites identified in theInventory of Gardens and Designed Landscapes; Sites identified in theInventory of HistoricBattlefields. 	<p>Other nationally important mapped environmental interests:</p> <ul style="list-style-type: none"> areas of wild land as shown on the 2014 SNH map of wild land areas; carbon rich soils, deep peat and priority peatland habitat. 	<p>Community separation for consideration of visual impact:</p> <ul style="list-style-type: none"> an area not exceeding 2km around cities, towns and villages identified on the local development plan with an identified settlement envelope or edge. The extent of the area will be determined by the planning authority based on landform and other features which restrict views out from the settlement.
<p>Group 3: Areas with potential for wind farm development: Beyond groups 1 and 2, wind farms are likely to be acceptable, subject to detailed consideration against identified policy criteria.</p>		

Those identified in blue in Group 2 are those that occur in Inverclyde.

In Inverclyde the Spatial Framework applies to one or more turbines 15-150m+ in height to blade tip and is as follows:

Group 1 areas where wind energy developments will not be acceptable. Inverclyde has no National Parks and no National Scenic Areas therefore there are no Group 1 areas in Inverclyde.

Group 2 areas where there is a need for significant protection but wind energy developments may be appropriate in some circumstances. These include one on-shore internationally designated Special Protection Area (SPA) and one located along the shoreline to the east, which is also a Ramsar site (1), along with 7 nationally designated Sites of Special Scientific Interest (SSSI) covering a combined area of 831ha. Three Gardens and Designed Landscapes and areas of peatland (2) to the south of the authority complete the designations falling within this category and a community separation distance of up to 2km. These are shown in Figure 1. The 2km separation distance does not represent a ban on wind energy developments in this area, as demonstrated by the turbines already granted within this location (Diagram 2).

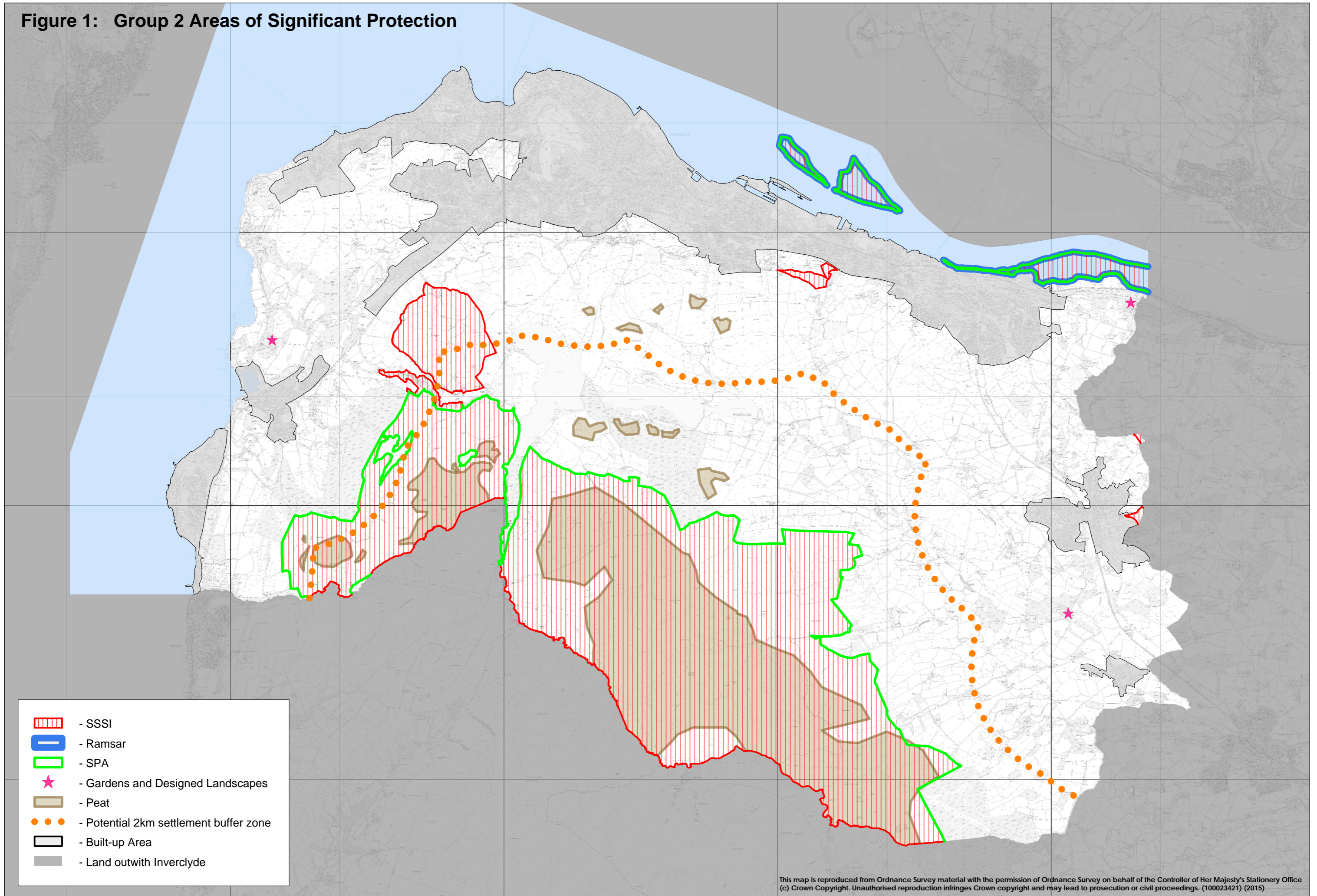
Group 3 where wind energy developments are likely to be acceptable subject to detailed consideration against policy criteria. This includes all other areas in Inverclyde not already included in Group 2.

Group 2 and Group 3 of the Spatial Framework are shown in Figure 2.

- (1) Any development for wind energy generation will only be permitted where it can be demonstrated that it will not have any adverse effect on the integrity of the Inner Clyde Estuary SPA/Ramsar site, the Renfrewshire Heights SPA or any other Natura site outwith Inverclyde where there is ecological connectivity.
- (2) SNH are due to publish definitive mapping for priority peatland, deep peat and carbon rich soils. When this data is available, it will replace the data currently in use.

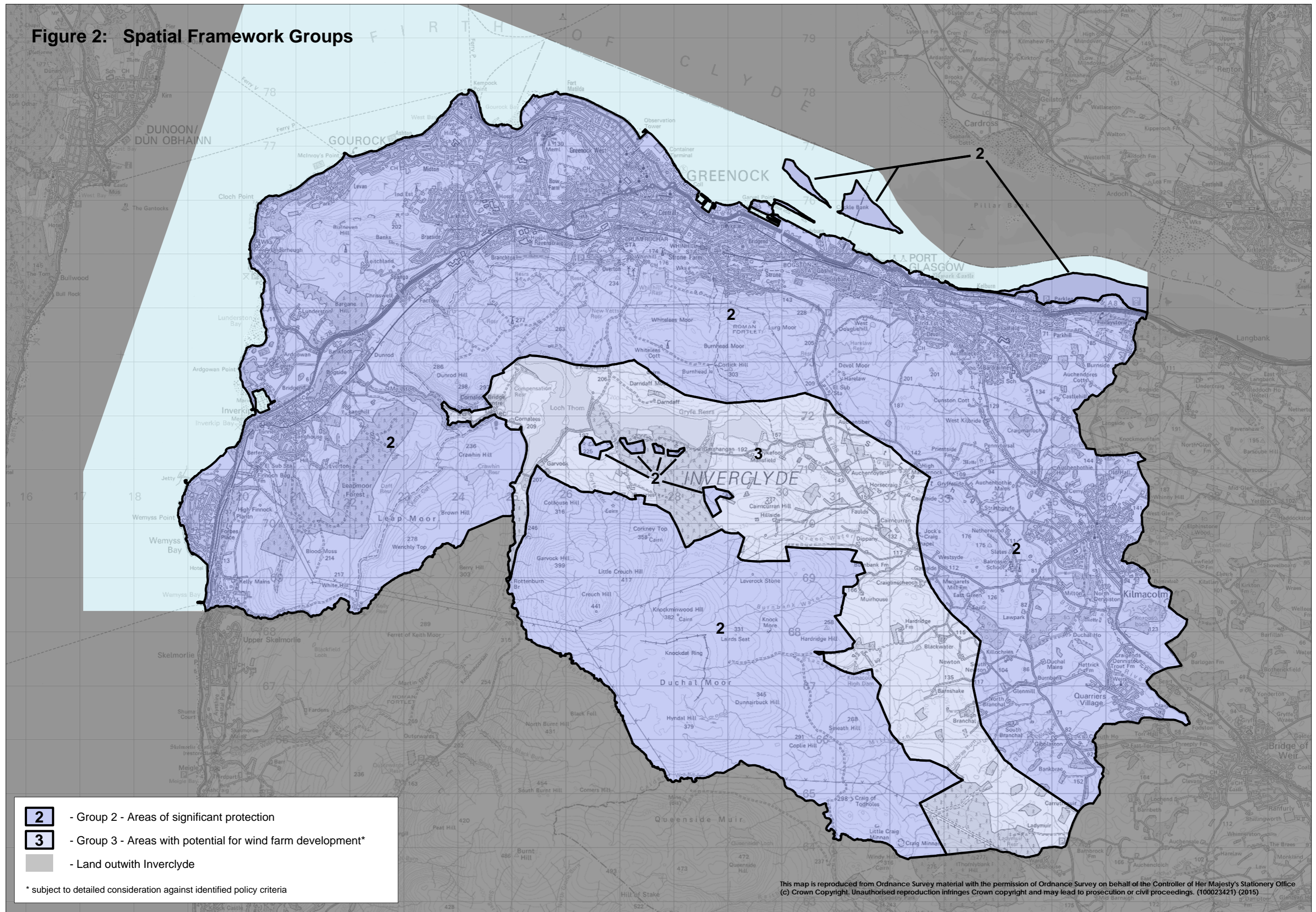
Note: A large amount of information as shown in Figure 1 and across Diagrams 1-4 of this Supplementary Guidance should be viewed as a whole when considering the location for wind energy proposals.

Figure 1: Group 2 Areas of Significant Protection



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Figure 2: Spatial Framework Groups



- 2** - Group 2 - Areas of significant protection
- 3** - Group 3 - Areas with potential for wind farm development*
- Land outwith Inverclyde

* subject to detailed consideration against identified policy criteria

SUPPLEMENTARY GUIDANCE - RENEWABLE ENERGY

Proposals for **all** types of renewable energy development, in both Group 2 and Group 3, will be assessed against **Policy INF1** of the Local Development Plan (LDP). In addition to Policy INF1, proposals will be assessed against a wide range of Development Management Considerations which complement the SPP spatial framework.

Policy INF1 states that the Council will support development required for the generation of energy from renewable sources unless any economic, environmental and social benefits of the proposal are outweighed by significant adverse effects upon the criteria shown below.

Table 3: Policy INF1 and SPP Development Management Considerations

Policy INF1 Criteria	SPP Development Management Considerations
(a) natural heritage designations (international and national designations should not be compromised);	effects on the natural heritage, including birds;
(b) the landscape and wider environment;	landscape and visual impacts, including effects on wild land, trees, forests and woodland;
(c) neighbouring settlements;	impacts on communities and individual dwellings, including visual impact, residential amenity, noise and shadow flicker;
(d) tourism, recreation and conservation matters;	impacts on tourism and recreation; public access, including impact on long distance walking and cycling routes
(e) the built heritage;	impacts on the historic environment, including scheduled monuments, listed buildings and other settings
(f) biodiversity and the water environment;	hydrology, water environment and flood risk;
(g) air quality;	not applicable
(h) road safety and service infrastructure; and	impacts on roads; impacts on adjacent trunk roads
(i) the cumulative effect of such proposals.	cumulative impacts – planning authorities should be clear about likely cumulative impacts arising from all of the considerations below, recognising that in some areas the cumulative impact of existing and consented energy development may limit the capacity for further development;
Note: Additional information to assist in submitting proposals is contained within the Supplementary Guidance on Renewable Energy.	net economic impact, including local and community socio-economic benefits such as employment, associated business and supply chain opportunities;
	the scale of contribution to renewable energy generation targets from output;
	effect on greenhouse gas emissions;

SUPPLEMENTARY GUIDANCE - RENEWABLE ENERGY

Policy INF1 Criteria

SPP Development Management Considerations
impacts on carbon rich soils, using the carbon calculator;
impacts on aviation and defence interests and seismological recording;
impacts on telecommunications and broadcasting installations, particularly ensuring that transmission links are not compromised;
the need for conditions relating to the decommissioning of developments, including ancillary infrastructure, and site restoration;
opportunities for energy storage; and
the need for a robust planning obligation to ensure that operators achieve site restoration.

Other considerations

In addition to areas of significant protection identified in the SPP spatial framework, other more localised factors which could affect the location of wind energy developments, require further consideration whilst recognising that they themselves cannot lead to blanket restrictions on development, and that applications will be determined on a case by case basis.

Green Belt

As stated in SPP, where planning authorities consider it appropriate, a Green Belt can be designated around a town to support the spatial strategy by:

- directing development to the most appropriate locations and supporting regeneration;
- protecting and enhancing the character, landscape setting and identity of the settlement; and
- protecting and providing access to open space

Being within the Glasgow and the Clyde Valley area with a Green Belt designated in the approved SDP 2012, Inverclyde, through its Local Development Plan 2014, has defined the boundaries of the inner and outer Green Belt within its authority.

Cumulative Impact

Cumulative impacts arising from the combined effect of the proposal with other existing or approved wind energy developments need to be considered. To date there are no strategic (20MW+) wind farms in Inverclyde, only a number of developments granted for between one and three turbines. The applications which have been granted are shown in **Diagram 2**.

Clyde Muirshiel Regional Park

An area of approximately 781 hectares within Inverclyde has been designated as the Clyde Muirshiel Regional Park (CMRP) while the regional designation of the West Renfrew Hills Scenic Area covers an area of 77 hectares and is largely contained within the Park. (See **Diagram 3**) While not afforded the same high protection as international and national designations, these areas are valued

for their scenic qualities and their recreational opportunities. The Park has its own Framework Guidance Document on wind farm development and proposals within the Park which considers in particular the landscape value and sensitivity. This can be accessed at <http://www.clydemuirshiel.co.uk/wp-content/uploads/2011/03/Framework-Guidance-for-Windfarms.pdf>. Reviewed in 2010, this document has been agreed by the Park Authority which incorporates the three local authorities covering the area, namely Inverclyde, Renfrewshire and North Ayrshire and takes account of new legislation, new designations and new pressures on the Park.

Local Designations

In addition to the regional designations, there are 52 Sites of Importance for Nature Conservation (SINC) (See **Diagram 3**). These are locally valued for their flora, fauna or wildlife habitats. While wind farm development could not be ruled out on or adjacent to these locations, strict criteria would have to be laid down to ensure that the impact on the interests for which these areas are designated would be addressed.

Birds

Onshore wind turbines can potentially have a detrimental impact on birds through death from collision with turbines, displacement from their normal migratory routes and breeding grounds or loss of habitat through formation of infrastructure. As all wild birds are protected under the Wildlife and Countryside Act, 1981, developers are required to quantify these risks through surveys at different times of the year. SNH provides guidance on its website regarding bird survey methods and assessments.

Historic Environment

In Inverclyde, there are a number of historic environment resources besides the Gardens and Designed Landscapes mentioned in SPP, including Listed Buildings and Scheduled Monuments. It is Council policy to prevent unacceptable impact on these sites by development which could compromise or destroy them and their settings. As a result development is normally permitted only where there is no adverse effect on the resource.

Community Benefits

Community benefits are those given by the developers to the communities in the vicinity of the proposed wind farm development on a voluntary basis.

These are generally not a planning consideration when dealing with the application unless they relate to something that meets the criteria of Circular 3/2012 'Planning Agreements'.

Aviation and Defence Interests

Where there is an airport nearby aviation and defence issues need to be considered. The proximity of Inverclyde to Glasgow International Airport raises the issue of safety where part of the airport safeguarding zone is identified on the eastern edge of the authority. (See **Diagram 4**). The impact of moving turbine blades on the effective operation of both civil and military radar installations at the airport must also be considered. Potential interference with radar at Glasgow International Airport has also been anticipated outwith the safeguarding zone. Without specific details of proposals however, it is difficult to determine the exact effect a wind farm development would have. Potential developers are therefore advised to undertake NATs pre-planning service on their website <http://www.nats.co.uk/windfarms> where self assessment maps can also be consulted, and to consult with the Civil Aviation Authority and MoD as part of the scoping exercise.

Water environment

Watercourses, lochs, wetlands and riparian areas, as well as sensitive ecosystems, are potential constraints for wind farm developments. SEPA's early input is therefore required on the potential impact of the location, layout and design of the proposed development.

Pollution risks during the construction of wind turbines and associated hardstanding are a major concern. Adequate measures to protect the water environment and prevent or mitigate potential impacts on water resources would be imperative at this stage and again at the decommissioning phase.

Further advice on the factors to be addressed when assessing a potential site can be obtained from <http://www.sepa.org.uk/regulations/water/>. Particular designated sites such as SPAs and SSSIs may also be dependent on the status of the water environment.

Woodland

There is a strong presumption in favour of protecting Scotland's woodland resource. Its removal should be allowed only where it would achieve significant and clearly defined additional public benefit. In some cases, a proposal for compensatory planting may be a condition of permission.

Broadcasting installations

As wind turbines can cause disruption to radio and television signals, it is important to know the location of such installations. While interference would not necessarily rule out the siting of a wind farm development, they would only be acceptable where the developer could either maintain the transmission or provide alternative arrangements at no cost to those whose service would likely be disrupted. In either case, early consultation with the relevant network provider would be expected.

Shadow flicker

When the sun passes behind the blade of a turbine, as the blades rotate it can cast a flickering shadow which can cause problems for neighbouring properties. It is possible, however, to calculate very precisely whether flicker will occur and for how many hours per year. Planning conditions can be applied to ensure the turbines do not operate at times when this problem would occur by means such as a system that can be installed to shut turbines down at these times.

Notifiable installations and exclusion zones

When locating wind farms attention must be paid to the proximity of turbines to notifiable installations and exclusion zones with consultation required with the Health and Safety Executive.

In Inverclyde there is a large gas transmission pipeline running from west to east and south east across a large part of the rural area with a consultation

zone of 22m on either side. A military technical site also runs north to south at Burnhead Moor with a consultation zone of 25m either side (See **Diagram 3**).

Decommissioning and Restoration

When the life span of the development is complete, or it is deemed no longer to be required, it is necessary to dismantle the equipment and remove it from the site prior to reinstating it fully to its former condition within six months of the end of the period for which planning permission has been granted. Decommissioning and restoration will take account of the main infrastructure of the site and the environmental features which will impact on the visual amenity and heritage of the site.

Landscape Capacity Study

In 2014, a Landscape Capacity Study for wind turbine development was carried out for Inverclyde in association with the local authorities in the Glasgow and the Clyde Valley SDP Authority to assess the capacity of the landscape to accommodate all sizes of wind energy.

This study has been treated as a background report which has informed but does not comprise part of this Supplementary Guidance. It should be read in conjunction with it when addressing the suitability of locations for wind turbine developments. This document can be accessed on the Council's website: <http://www.inverclyde.gov.uk/planning-and-the-environment/planning-policy/development-planning/ldp>

Sensitivity of the landscape to the various sizes of wind turbines has been assessed across the landscape characters within Inverclyde as identified in the Glasgow and the Clyde Valley Landscape Assessment 1999. Within Inverclyde, there are 4 landscape character types out of a total of 20:

- Raised Beach
- Rugged Upland Farmland
- Upland River Valley
- Rugged Moorland Hills

Details of how the landscape sensitivity was determined can be found in the Landscape Capacity Study for Wind Turbines.

Diagram 1 shows the sensitivity of the areas to each size of turbine. The sensitivity of the landscape to small, small-medium, medium, large and very large turbines within each landscape character typology is summarised in **Appendix 1**.

The Landscape Capacity Study will be used to direct turbine proposals to the most appropriate landscapes for their size and number (in terms of cumulative impact) and, where they are proposed in more sensitive locations, identify where mitigation would be required to ensure the proposed development does not impact negatively on the important elements of the area such as landscape, views, tourism, recreation and natural heritage designations.

The cumulative impact differs in each of the four landscape character typologies. Details can be found in paragraphs 5.10-5.11, 5.23 and 5.49-5.50 of the Landscape Capacity Study.

5.0 CONCLUSION

At present in Inverclyde, there is a preference amongst developers for small-scale wind energy developments of single or small groups of turbines which earn income from selling surplus electricity back to the grid. To date (August 2015) 19 applications have been granted for small scale turbines and micro-renewable developments across the authority and 9 have been refused, including two for strategic developments. More recent applications have been for larger turbines in the small-medium range while a cluster of one and two turbine development proposals is emerging within the Rugged Upland Farmland landscape typology.

To guide developers and inform communities on the most appropriate locations for wind energy developments Scottish Planning Policy has identified three groups which form a Spatial Framework. Inverclyde does not have any areas in Group 1 where wind energy developments will not be acceptable but it does have areas that fall within Groups 2 and 3 where there will be significant protection but opportunity for wind energy development in some circumstances and where there will be potential for wind energy development respectively.

Criteria against which applications will be assessed have been identified and the landscape sensitivity to different scales of development has been addressed through the Landscape Capacity Study. Other considerations including the potential impact of development on a variety of interests such as birds, historic buildings and designed landscapes, the community, aviation, broadcasting equipment, notifiable installations and the water environment will also be addressed.

When assessing a proposal for wind energy, all the elements that have to be considered can be summarised as follows:



When assessing a proposal for wind energy development, any or all of these elements may influence the determination of an application.

With the Scottish Government targets set for 2020, planning authorities are expected to support a wide variety of renewable energy technologies and guide them to the most appropriate locations by taking cognisance of issues that will affect this location. **Policy INF1** together with this Supplementary Guidance will be used to assess and determine planning applications for all types of renewable technologies, including all sizes of wind energy developments, on a case by case basis.

LIST OF FIGURES, TABLES, DIAGRAMS AND APPENDICES

- Table 1:** Determination of Wind Energy Applications
- Table 2:** Spatial Framework
- Figure 1:** Group 2 Areas of Significant Protection
- Figure 2:** Spatial Framework Groups
- Table 3:** Policy INF1 and SPP Development Management Considerations
- Diagram 1:** Turbine Size and Landscape Sensitivity
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- Diagram 4:** Glasgow Airport Safeguarding Zone

GLOSSARY

Carbon calculator – a computer program that calculates the approximate amount of carbon dioxide produced by an individual, business or organization compared to the average amount produced.

Feed-in-tariff (FIT) - a payment made to households or businesses generating their own electricity through the use of methods that do not contribute to the depletion of natural resources, proportional to the amount of power generated.

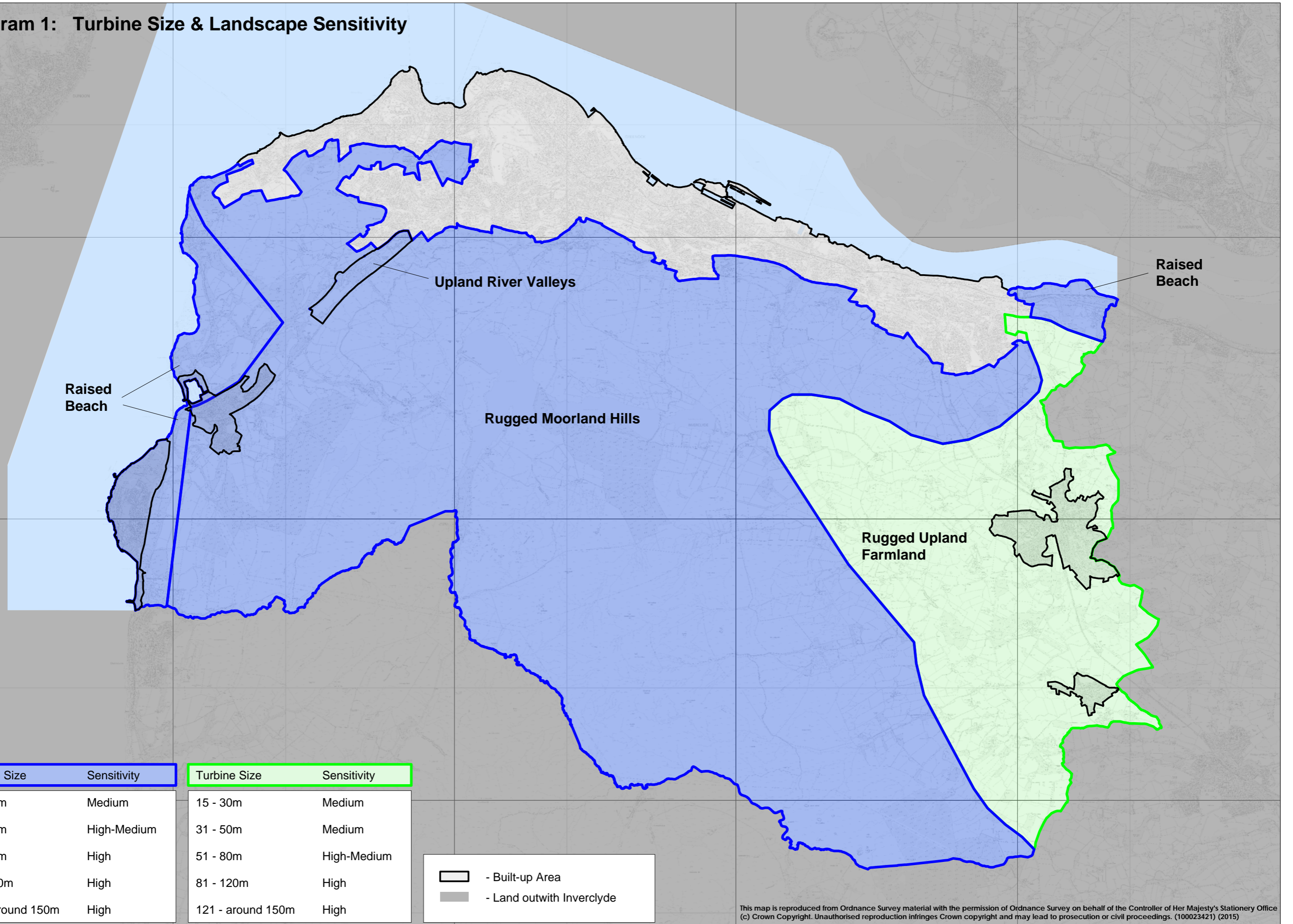
Geothermal energy – the power generated from natural steam; hot water; hot rocks or lava in the Earth's crust.

Photovoltaic – a material or device in which electricity is generated as a result of exposure to light.

Ramsar – a site proposed or designated as being wetland of international importance, especially as a waterfowl habitat, under the 1971 Ramsar Convention and ratified by the UK government in 1976.

Solar irradiation – the power produced by the sun in the form of electromagnetic radiation which is perceived by humans as sunlight.

Diagram 1: Turbine Size & Landscape Sensitivity



Turbine Size	Sensitivity
15 - 30m	Medium
31 - 50m	High-Medium
51 - 80m	High
81 - 120m	High
121 - around 150m	High

Turbine Size	Sensitivity
15 - 30m	Medium
31 - 50m	Medium
51 - 80m	High-Medium
81 - 120m	High
121 - around 150m	High

- Built-up Area
- Land outwith Inverclyde

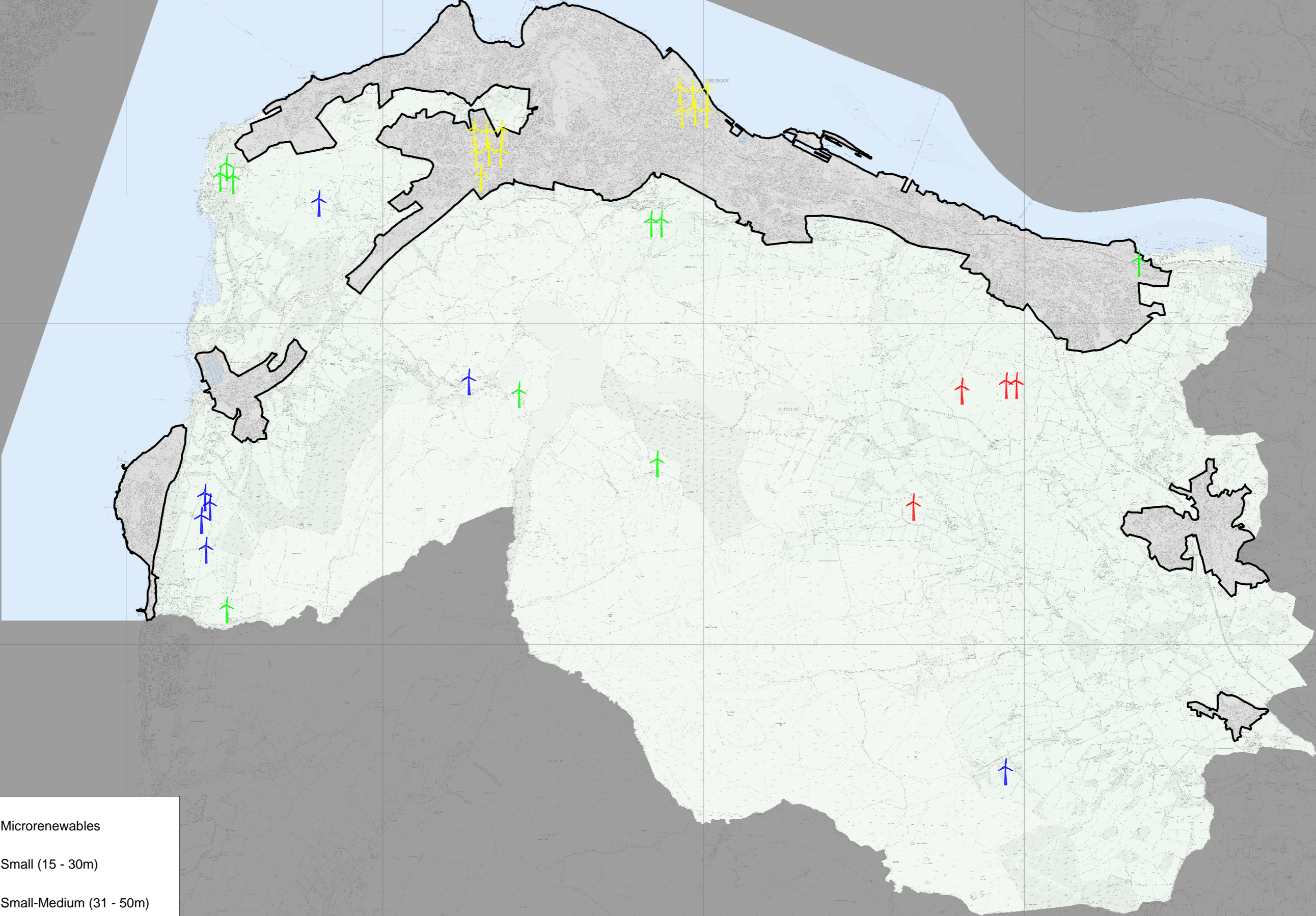
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APPENDIX 1 - Landscape Character Type, Turbine Size and Sensitivity

Landscape Character Type	Turbine Size (to blade tip)	Sensitivity
(1) Raised Beach	Small 15 – 30m	Medium
	Small – Medium 31 – 50m	High - Medium
	Medium 51 – 80m	High
	Large 81 – 120m	High
	Very Large over 120m ⇒150m	High
(6) Rugged Upland Farmland	Small 15 – 30m	Medium
	Small – Medium 31 – 50m	Medium
	Medium 51 – 80m	High - Medium
	Large 81 – 120m	High
	Very Large over 120m ⇒150m	High

Landscape Character Type	Turbine Size (to blade tip)	Sensitivity
(12) Upland River Valley	Small 15 – 30m	Medium
	Small – Medium 31 – 50m	High - Medium
	Medium 51 – 80m	High
	Large 81 – 120m	High
	Very Large over 120m ⇒150m	High
(20) Rugged Moorland Hills	Small 15 – 30m	Medium
	Small – Medium 31 – 50m	High - Medium
	Medium 51 – 80m	High
	Large 81 – 120m	High
	Very Large over 120m ⇒150m	High








Diagram 2: Wind Energy Applications Granted in Inverclyde



-  - Microrenewables
-  - Small (15 - 30m)
-  - Small-Medium (31 - 50m)
-  - Medium (51 - 80m)

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Diagram 3: Other Considerations

-  - Gas Transmission Pipeline
-  - MOD Consultation Zone
-  - SINC's
-  - Clyde Muirshiel Regional Park
-  - West Renfrew Hills Scenic Area
-  - Green Belt
-  - Countryside

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Diagram 4: Glasgow Airport Safeguarding Zone

