
Report To: Safe, Sustainable Communities Committee Date: 1 September 2009

Report By: Corporate Director, Environment and
Community Protection

Report No: ECP/Plann/
MP09/022

Contact Officer: Fergus J Macleod

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Subject: Inverclyde Local Plan 2005:
Proposed Supplementary Planning Guidance on Wind Farms

1.0 PURPOSE

- 1.1 To update Committee on the preparation of supplementary planning guidance on wind farm developments; and to seek endorsement of the consultative draft and approval of its publication for targeted consultation, in accordance with the Planning Act.

2.0 SUMMARY

- 2.1 Committee was previously made aware of the intention to prepare Supplementary Planning Guidance (SPG) on renewable energy, arising from the publication of Scottish Planning Policy 6 'Renewable Energy' (SPP6) 2007. Instructions and Planning Advice then followed from the Scottish Government that locational strategies for only wind farms were to be prepared in the form of SPG to provide policies against which applications for strategic wind farms (over 20MW) could be considered. **[Min Ref. 27/10/07; para 682; 06/03/08; para 175]**
- 2.2 A draft SPG for wind farms has now been prepared to provide interim guidance for use alongside the adopted Local Plan until a review is carried out as part of the Local Development Plan preparation. It contains a criteria-based policy against which to assess wind farm applications and from which observations can be made on applications determined by Scottish Government. It also addresses the three stages to be undertaken to identify where Broad Areas of Search (BAS) could be located for strategic wind farms within Inverclyde. The view has been taken that given the extent of natural heritage designations and constraints on the land available within Inverclyde, there would be no BAS identified unless under exceptional circumstances of national need.
- 2.3 It is proposed to put this draft SPG out for targeted consultation to key stakeholders and relevant community groups, thereafter to address representations and report back with a Finalised SPG for Committee approval at the March 2010 meeting.

3.0 RECOMMENDATIONS

- 3.1 That Committee:
- endorse the preparation of the consultative draft supplementary guidance; and
 - approve the publication of this guidance for targeted consultation.

Fraser K Williamson
Head of Planning and Housing

4.0 BACKGROUND

- 4.1 In March 2008 Committee was informed of the intention to prepare Supplementary Planning Guidance (SPG) on renewable energy following the publication of Scottish Planning Policy 6 'Renewable Energy' 2007 (SPP6). It was further the intention that this SPG would be augmented by the subsequent production of a Planning Practice Advice Note and a Building Standards Advice Note on renewable energy.
- 4.2 The SPG was to address all forms of renewable energy, however in September 2007 the Scottish Government indicated that due to the vital part wind energy plays in the generation of electricity from renewable sources, SPG addressing only the location of strategic wind farms (over 20 MW) was to be prepared which would meet the urgent need for up-to-date planning policies and spatial frameworks against which to fully consider specific applications. Planning Advice Note 45 Annex 2 – 'Spatial Frameworks and Supplementary Planning Guidance for Wind Farms' 2008 was produced to assist with the preparation of the SPG and consultants were appointed by Scottish Government to provide advice to planning authorities.
- 4.3 Since the instruction to prepare SPG came out from the Scottish Government, The Planning etc (Scotland) Act 2006 has also come into force (February 2009) meaning that SPG can now be incorporated into the preparation of the Local Development Plan (LDP) and go through the full consultation process to become a statutory document. However, as the first stage of the preparation of the LDP only began in March this year, publication of the Proposed Plan will not be until 2012 and adoption of the Plan won't be until 2014 at the earliest.
- 4.4 Pressure for wind farms has been relatively limited within Inverclyde and, where it has arisen, it has been resisted as in the case of the Corlic Hill appeal. However, a period of over 4 years would be too long without any SPG on wind farms given the importance of this industry's contribution to the government's renewable energy targets. Interim, non-statutory SPG for wind farms has therefore been prepared (refer to Annex 1) to provide additional guidance to be used alongside the adopted Local Plan until the Local Development Plan (LDP) is prepared, whereupon the SPG will be reviewed.
- 4.5 The SPG contains a criteria-based policy against which to decide wind farm applications and make observations on those determined by the Scottish Government. It also addresses the three stages to be completed to identify Broad Areas of Search (BAS) for strategic wind farms within Inverclyde. These are:
- Identifying areas which will be afforded significant protection;
 - Identifying other constraints and policy criteria; and
 - Refining remaining areas of no significant change
- 4.6 Maps 1-6 in Annex 1 show the potential constraints that would inhibit the identification of BAS in Inverclyde. These include natural and built heritage, Green Belt and Countryside designations, notifiable installations such as the gas transmission pipeline, and exclusion zones such as the Safeguarding Zone around Glasgow Airport and the 2km buffer zone recommended around settlements.
- 4.7 Due to the lack of specialist expertise within the Planning Service, a landscape capacity study to determine where wind turbines could possibly fit into the landscape has not been carried out. There may be opportunities to have such a study carried out by potential developers as part of the application process. However, given the extent of natural heritage designations and constraints on the land available within Inverclyde, the conclusion has been made that no BAS could be identified. As stated in SPP6 though, under exceptional circumstances, if a national need was identified for increased output targets to be met from renewable sources, the permitted development of strategic wind farms at locations within the Green Belt would have to be considered. Outwith these circumstances, should developers still wish to pursue an application for a wind farm

**[Min Ref.
27/10/07;
para 682;
06/03/08;
para 175]**

Annex 1

development; it would be assessed against the criteria-based policy provided in the SPG.

- 4.8 A screening exercise has been submitted to determine whether a Strategic Environmental Assessment (SEA) would require to be carried out for the SPG. It has been established that it would and this will be carried out at the appropriate stage in the preparation of the guidance.

5.0 PROPOSALS

- 5.1 It is proposed that targeted consultation on the draft SPG is undertaken with key stakeholders such as SNH, SEPA, Clyde Muirshiel Regional Park and the Civil Aviation Authority, and with the wider community through the Community Councils and other appropriate groups.
- 5.2 Copies of the SPG will be sent out to all parties with a deadline given for making representations. These representations will then be addressed, carrying out negotiations where necessary, before amending the SPG for further consideration by Committee.
- 5.3 It is intended that the presentation of the Finalised SPG to Committee would coincide with that of the Report of Engagement which will be made prior to the drafting of the Main Issues Report on the Local Development Plan. The proposed timetable for the progression of the SPG is detailed below.

Timetable for progression of the SPG

- * Targeted Consultation - Draft SPG out to relevant stakeholders and community groups on Friday 2 September 2009
- * Deadline for receipt of responses – Monday 2 November 2009
- * Consideration of representations/modifications to SPG - Nov 2009 to Feb 2010
- * Report to Committee with Finalised SPG – March 2010.

6.0 IMPLICATIONS

- 6.1 **Legal:** there are no direct legal implications arising from this report.
- 6.2 **Finance:** there are no 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

Financial implications – annually recurring costs/(savings)

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

- 6.3 **Personnel:** there are no personnel implications arising from this report.
- 6.4 **Equalities:** there are no implications arising from this report for the Council's Equalities Policy.

7.0 CONSULTATION

7.1 This report has been prepared with the assistance of Enviros Consultants, who are acting on behalf of the Scottish Government for the development of local authorities' policies on wind farms. There has been no specific requirement for the Chief Financial Officer, the Head of Legal and Administrative Services or the Head of Organisational Development and Human Resources to make comment.

8.0 CONCLUSION

8.1 The preparation of Supplementary Planning Guidance will provide interim policy and advice to augment the existing adopted Inverclyde Local Plan when determining wind farm applications until the preparation of the Local Development Plan provides the opportunity to produce a statutory SPG.

9.0 BACKGROUND PAPERS

- 9.1
- (1) Scottish Planning Policy 6 – 'Renewable Energy' 2007
 - (2) Planning Advice Note 45 Annex 2 – 'Spatial Frameworks and Supplementary Planning Guidance for Wind Farms' 2008
 - (3) Inverclyde Local Plan 2005, chapters 9 and 11.

ATTACHMENT

Annex 1 – Interim Supplementary Planning Guidance for Wind Farms (Draft)

Head of Planning and Housing
Cathcart House
6 Cathcart Square
Greenock

7th August 2009

SSC Cmtee 2009 SPG on Wind Farms (Sept 09)

Annex 1

INTERIM SUPPLEMENTARY PLANNING GUIDANCE FOR WIND FARMS (DRAFT)

PURPOSE OF THE SUPPLEMENTARY PLANNING GUIDANCE (SPG)

- To provide a non-statutory interim basis for decision making on wind farm applications until the Local Development Plan is prepared;
- To assist in the preparation of observations on applications to be determined by the Scottish Government (over 50 MW);
- To set out policies to assist in planning for wind farm developments; and
- To provide guidance on Broad Areas of Search for wind farms based on a landscape assessment of capacity.

WHO THE GUIDANCE IS AIMED AT

- Developers/Professionals considering new projects;
- Communities/Interest Groups considering the impact of a proposed wind farm; and
- Local authority Councillors and Officers considering planning applications.

INTRODUCTION

Over the last 100 years, the amount of carbon dioxide in the atmosphere has been rapidly increasing due to the burning of fossil fuels such as coal and oil. Scientists believe that this change in levels of CO₂ in the atmosphere is responsible for climate change.

There is concern that the increase in natural disasters across the world is linked to climate change and unless the way energy is generated is changed the problem may get worse, affecting the global economy and endangering lives in years to come.

In 2007 Inverclyde Council became a signatory of Scotland's Climate Change Declaration committing to a reduction in CO₂ emissions. This can be achieved through the reduction in energy consumption by means of better insulation in properties and through greater energy efficiency. Long-term, however, the solution depends on a move away from dependence on fossil fuels to renewable sources of energy which would also include the use of bio diesel, bio ethanol and other replacements for fossil derived transport fuels.

Renewable energy is generated from natural resources such as the sun, wind and water which are inexhaustible, but also includes energy from replenishable resources such as waste and biomass. Wind energy is the most well developed of the renewable resources and is the focus of this guidance.

CONTEXT

There is a commitment at UK and Scottish level to reduce CO2 emissions. Scottish Government's target of 18% of electricity being generated from renewable sources by 2010 has been met resulting in new targets of 31% being set for 2011 (around 5GW installed capacity) and 50% by 2020.

As yet these targets have not been taken down to local authority level but planning authorities are still required to deliver policies to encourage renewable energy developments through the development plan process. This, however, has to be done whilst taking into account all statutory obligations, technical considerations such as aviation safety, the views of those living in or using the area for recreational and tourism purposes and the impact any development would have on the landscapes and natural heritage.

Applications for wind farm developments are determined by the Scottish Government under Section 36 of the Electricity Act 1989 where there is an output of over 50 Mega Watts (MW) while the planning authority is responsible for determining applications which are below a generating capacity of 50MW in accordance with the development plan.

Inverclyde has a string of settlements squeezed between the Firth of Clyde and the Green Belt. Inland there are two further villages surrounded by Green Belt which extends towards Countryside to the south. The land is rural made up of farmland, hills and moors, a large part of which is contained within the Clyde Muirshiel Regional Park. Both in the Park and beyond there are a number of international, national regional and local natural heritage designations.

WIND ENERGY

The technology related to the generation of electricity from wind is well established and is anticipated as the renewable energy option most likely to be adopted whether on a domestic, community or commercial scale.

The most common type of wind turbines operate with rotor blades on a vertical plane, extending from the hub attached to the nacelle which houses a generator and is located at the top of a tower. These can be installed as domestic units for individual buildings, with a number of small scale turbines servicing a local area or on a commercial level in the form of wind farms.

It is anticipated that in the next 10-15 years wind turbines will continue to increase in size to provide outputs of around 8-10MW with rotor blade diameters of up to 200m. This drive for bigger turbines is motivated by the increased energy produced by bigger turbines and the fact that production costs actually decrease as turbine size increases. Currently, however, the parts, materials and design methods available are not capable of such increases in scale.

Within Inverclyde applications have been made to date for 3 individual turbines at a local high school, Inverclyde Royal Hospital and a light industrial unit and 2 wind farm developments within the Green Belt. All of the individual turbines were approved and 2 have subsequently been installed. The application for 10 x 3MW 125m high turbines at Leapmoor Forest was withdrawn in May 2009. The application at Corlic Hill for 22 x 2.5MW 100m high turbines was determined under the Electricity Act refused, appealed and refused after a Public Local Inquiry. Both of these developments would have provided over 20MW and would therefore have been classified as strategic.

Despite the positive aspects of renewable energy from wind turbines, they can have some negative impacts which have to be addressed when determining planning applications.

Visual impact is particularly significant. Due to the movement of the blades, wind turbines can be distracting to drivers, cyclists and pedestrians. Where possible the turbines should be sited to ensure this impact is minimised. This is also so in relation to the impact of turbines on the wider landscape. The greater the height of a turbine, the wider area it will have an impact upon, depending on topography and other features which may limit its visibility. This is particularly important the closer viewers are to the turbine as impact diminishes as the distance increases.

NATIONAL PLANNING CONTEXT

Scottish Planning Policy 6 (SPP6) - Renewable Energy (2007) favours a positive approach to renewable energy by planning authorities, instructing them to create policies to direct wind energy developments to the most appropriate locations. They are expected to ensure the environmental, economic and social benefits of renewable energy are afforded to the local community. At the same time the interests of the natural and built environment must be protected, through the international and national statutory designations, as well as those of the community, recreation and tourism and, where significant, aviation interests.

When determining suitable locations broad areas of search can be identified by taking account of all these factors. This, however, does not rule out the consideration of wind energy developments outside such an area if they meet the criteria clearly laid out by the planning authority.

Planning Advice Note 45 (PAN45) Renewable Energy Technologies (2002) supports the policies of SPP6 by providing detailed information and advice on best practice for renewable energy technologies.

PAN 45 Annex 1 Planning for Micro-renewables (2006) deals with the design, siting and permitted development rights of micro (small scale) renewable energy developments.

PAN 45 Annex 2 Spatial Frameworks and Supplementary Planning Guidance for Wind Farms (2008) provides planning authorities with guidance on the preparation of Supplementary Planning Guidance (SPG), such as this document, for strategic wind farms. In particular it focuses on the preparation of a spatial framework to identify a broad area of search in which strategic wind farms might be located.

DEVELOPMENT PLAN POLICY

The development plan for Inverclyde comprises 2 parts. Strategic policy is set out in the Glasgow and the Clyde Valley Structure Plan (2006) while detailed policies and proposals are laid out in the Inverclyde Local Plan (2005). In terms of wind farms, applications are deemed to be strategic when over 20MW.

Structure Plan policy comprises Strategic Policies 9B (iv) and 10A (v) and 10B (iii) (a).

(See schedules below.)

**Strategic Policy 9
Assessment of Development Proposals**

In order to accord with the Structure Plan, development proposals will require to satisfy the following criteria.

Any proposal which fails to meet these criteria will be regarded as a departure from the development plan and will be required to be justified against the criteria in **Strategic Policy 10**.

These criteria are complementary, and the fulfilment of one criterion does not over-ride the need to satisfy the others.

A That the case for any development which exceeds the thresholds set out in Schedule 9 has been established in the terms of:

- (i) the ten-year marketable land supply for industrial and business development;
- (ii) the assessment of housing proposals (except on urban brownfield sites) against the demand and effective supply of owner occupied housing land in the relevant housing market area, **Schedule 6(b)(i)**, and planned programmed output in the appropriate Sub-market or Housing Market Areas in **Schedule 6(b)(ii)**; or
- (iii) a requirement identified in a local plan (**Schedule 6(b)(iii)**) for affordable housing as defined and categorised in **PAN 74**; or
- (iv) the criteria set out in **Schedule 6(c)(i)** and the requirements identified in **Schedule 6(c)(iv)**; or
- (v) the assessment of aggregate mineral extraction proposals (except extensions to existing workings) against the ten-year supply and demand within the Structure Plan Area; or
- (vi) its relationship to the requirements for waste management facilities set out in the **Glasgow and Clyde Valley Area Waste Plan**.

B That the location of the development is appropriate in terms of the need to:

- (i) safeguard and avoid the diversion or displacement of investment from the development locations identified in **Strategic Policies 1, 5, 6 and 8**;
- (ii) promote Urban Regeneration by:
 - (a) giving preference to the use of brownfield urban land rather than greenfield land or open space;
 - (b) safeguarding the Glasgow and Clyde Valley Green Belt, **Strategic Policy 1**;
- (iii) safeguard and promote the vitality and viability of town centres identified in **Schedule 1(a)** by:
 - (a) locating major office development within or adjoining the Strategic Business Centres identified in **Schedule 5(a)**;
 - (b) taking a sequential approach to proposals for retail, office (Class 2), cultural and leisure development as set out in **Schedule 6(c)(ii)**;
- (iv) safeguard the environmental resources listed in **Schedule 7** or identified in local plans (including regard to landscape character and quality);
- (v) avoid isolated and sporadic development in the Green Belt and the wider countryside;
- (vi) promote Sustainable Transport by:
 - (a) the application of the Hierarchy of Accessibility as set out in **Schedule 3(a)(i)**;
 - (b) the application of criteria for sustainable locational choices as set out in **Schedule 3(a)(ii)**;
 - (c) the safeguarding of the routes for Strategic Transport Network development proposals (**Schedule 4**);
- (vii) implement the waste management hierarchy as defined in the National Waste Strategy and priorities identified in the Area Waste Plan;

- (viii) avoid the risk of flooding from all sources throughout the relevant water and drainage catchment area and safeguard the storage capacity of the functional flood plain;
- (ix) avoid negative impact upon Health and Safety;
- (x) contribute to the implementation of the Air Quality Strategy.

C That appropriate provision has been made by the developer for:

- (i) the infrastructure or facilities required to make the development acceptable;
- (ii) the implementation of appropriate transport measures for the minimisation and management of the future levels of traffic generated, including Green Transport Plans;
- (iii) remedial environmental action and maintenance of related greenspaces;
- (iv) the provision of sustainable urban drainage systems in accord with the relevant drainage strategy or assessment;
- (v) the provision of ICT network connections;
- (vi) arrangements for the maintenance of measures required under Criteria **C(i)** to **C(iv)** above;
- (vii) the excavation and recording of archaeological sites where preservation cannot be achieved;
- (viii) the requirements in the approved master plans for the Community Growth Areas set out in **paragraph 8.14**; and
- (ix) energy conservation in the layout and design of buildings.

Any proposal which fails to meet the relevant criteria in Strategic Policy 9 will be regarded as a departure from the Development Plan and consideration shall require to be given to the appropriateness of the development having regard to the following criteria:

A The justification for the development in terms of:

- (i) an updated assessment agreed by the Joint Committee of the supply and demand estimates used in the Plan;
- (ii) clear evidence of a shortfall in the existing and planned supply of land for:
 - industrial, business or aggregate mineral development within the Structure Plan area;
 - housing development within the appropriate Market Area; taking account of the need to provide for choice in terms of size and type of housing, or
 - retail development within the appropriate Retail Catchment Area;
- (iii) requirements for affordable (including social rented housing) identified in a Strategic Housing Agreements or Local Housing Strategy;
- (iv) the contribution the development would make to remedying any qualitative deficiencies in existing retail provision; or
- (v) specific locational need.

B The following criteria:

(i) Economic Benefit

- (a) the need to accommodate inward investment for industrial or business development that would otherwise be lost to the Structure Plan area or to Scotland;
- (b) the protection of existing jobs or the creation of a significant number of net additional permanent jobs to the Structure Plan area;

(ii) Social Benefit

- (a) assisting the urban renewal or rural regeneration of the Priority Areas identified in **Schedule 1(b)** and **1(d)**;
- (b) supporting or enhancing community facilities;
- (c) the capacity of the settlement and surrounding area to absorb further development;

(iii) Environmental Benefit

- (a) the protection and enhancement of environmental resources identified in **Schedule 7** or local plans;
- (b) the significant restoration of vacant or derelict land for environmental purposes;
- (c) improvement of air and water quality.

Technical Report TR8/06 – Renewable Wind Energy in Glasgow and the Clyde Valley is a non-statutory document which was compiled to provide detailed information in the preparation of the approved Structure Plan and is a material consideration. It identifies Potential Areas for wind farms, none of which are within Inverclyde as Diagram 22, from the approved Glasgow and the Clyde Valley Structure Plan indicates.

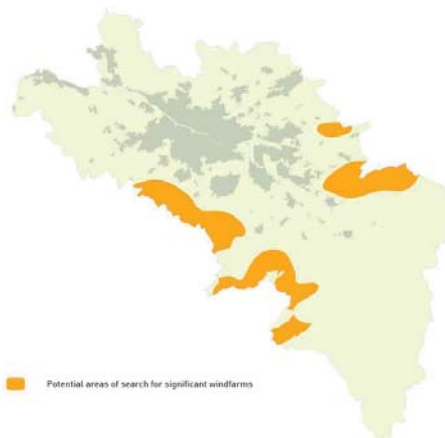


Diagram 22 Renewable Energy

A review of the Technical Report, in light of the approach to identifying broad areas of search required by SPP6, will be carried out as part of the preparation of the Main Issues Report for the Glasgow and Clyde Valley Strategic Development Plan which commenced in March 2009.

Local Plan policy comprises Local Plan Policy UT6

Policy UT6 Renewable Energy Infrastructure

In assessing proposals for renewable energy infrastructure, Inverclyde Council, as Planning Authority, will have regard to the impact on:

- (a) the natural environment and built heritage of the locality;*
- (b) the landscape, particularly when viewed from major transport corridors;*
- (c) residential amenity;*
- (d) tourism and leisure resources, particularly if within the Clyde Muirshiel Regional Park;*
and
- (e) the operation of aircraft and telecommunications equipment.*

This policy provides criteria against which wind farm proposals can be assessed but requires to be updated and expanded upon. This will be done through the SPG until the Local Development Plan is prepared. The time scale for this will be in tandem with the preparation of the Glasgow and Clyde Valley Strategic Development Plan.

In the case of both the Structure Plan and the Local Plan, the policies relating to renewable energy do not stand alone. The planning authority must find a balance between policy aims promoting new technologies and those which are in place to meet national guidance on other areas such as those relating to the natural environment which may appear to be in conflict.

IDENTIFYING A BROAD AREA OF SEARCH FOR WIND FARMS

SPP6 Annex A dealing with wind farms over 20MW states that *'development plan policies should be based on the principle that wind farms should be accommodated where technology can operate efficiently and environmental and cumulative impacts can be addressed satisfactorily.'*

Broad areas of search are areas where proposals are likely to be supported subject to specific matters addressing all other material considerations. These can guide developers on acceptable locations for wind farms, without ruling out other areas outside them that could still be considered in the context of specific applications.

Three stages have been completed in the identification of broad areas of search:

1. Identifying areas which will be afforded significant protection

These are areas that would have the original reason for their designation unacceptably compromised by the location of a wind farm and include areas with international and national natural heritage designations, Green Belts and areas where limits of cumulative impact have been reached.

International and national natural heritage designations

Inverclyde has one on-shore internationally designated Special Protection Area (SPA) and 7 nationally designated Sites of Special Scientific Interest (SSSI) covering a combined area of 831 hectares. (See Diagram 1) These areas require to be fully protected from all inappropriate development which would include strategic wind farms. Such development

should be directed away from these designated areas and any adjoining sites which might impact on them.

Green Belt

The Green Belt comprises the area immediately outside the existing urban area where development pressure is at its greatest. The more rural area beyond the outer edge of the Green Belt is designated as 'Countryside' (See Diagram 1). In the Green Belt, as covered by Policy DS8 in the adopted Local Plan the emphasis is on preventing development. In the Countryside covered by Policy DS10, the emphasis, however, is on controlling development. Wind farm development would, therefore, be more appropriately directed towards the Countryside but would only be acceptable if it could be accommodated within the context of all other designations and criteria.

It is necessary to remember, however, that in exceptional circumstances, development normally deemed inappropriate within the Green Belt might still be acceptable to meet an established need if no other site is available. (SPP21: Green Belts, 2006)

Cumulative Impact

To date there are no wind farm developments within Inverclyde (See Diagram 2) but the cumulative impact would have to be taken into consideration if development were to go ahead. It is difficult, however, to assess cumulative impact until the specific site locations of proposals are known. Should the need arise, cognisance will be taken of the relevant guidance from SNH and other bodies. At this time, however, cumulative impact is not a consideration in defining broad areas of search within Inverclyde.

2. Identifying other constraints and policy criteria

After areas afforded significant protection have been addressed, other potential constraints have to be identified which could affect the location of wind farm developments, whilst recognising that they themselves cannot lead to blanket restrictions on development.

Regional and local natural heritage designations

An area of approximately 781 hectares within Inverclyde has been designated as Clyde Muirshiel Regional Park (CMRP) while the regional designation of the West Renfrew Hills Scenic Area covers an area of 77 hectares which is largely contained within the Park. While not afforded the same high protection as international and national designations, these areas are valued for their scenic qualities and as an outdoor recreational resource which would be diminished by the development of strategic wind farms. The Park has its own Framework Guidance Document on wind farm development and proposals within the Park which looks at landscape value and sensitivity. This has been agreed by the Park Authority which incorporates the three local authorities covering the area, namely Inverclyde, Renfrewshire and North Ayrshire and states that 'it is difficult to envisage a wind farm development that would not have significant adverse impact on the values that make the Park distinct...It is for the developer to show that this is not the case.' Prepared in 2005, a review of this is imminent to take account of new legislation and new pressures on the Park.

In addition to the regional designations, there are 52 locally designated Sites of Importance for Nature Conservation (SINC) which 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 conditions would have to be laid down on a case by case basis to ensure that the impact on the interests for which these areas are designated would be addressed.

Built Heritage and Designed Landscapes

In Inverclyde, there are a number of built heritage resources including Historic Gardens and Designed Landscapes, Scheduled Ancient Monuments and Archaeological Sites (See Diagram 3). It is Council policy to prevent unacceptable impact on these sites and their settings which could be compromised or destroyed. Only where steps could be taken to mitigate any impact on the resource, would wind farm development be considered.

In addition to the identification of these land designations, a physical study of the capacity and suitability of the landscape to accommodate wind farms would be beneficial. Unfortunately, it has not been possible to carry out this work. The Glasgow and the Clyde Valley Landscape Assessment may be of some use but it is now 10 years old and wind farm technology has moved on apace since that described in this document.

Impact on Communities/Buffer Zones

Wherever strategic wind farms are located in Inverclyde, they would have some impact on the local communities and the character of the rural landscape around them. The extent of this impact would be dependent on the size of the development and the ability of the topography to screen developments. While a 3km buffer around the edge of communities provides enough distance within which turbines can merge with the landscape, this is likely to be unnecessary in many cases as the topography will reduce the impact.

A 2km buffer (See Diagram 4) around Inverclyde communities would eliminate the direct impact of turbine noise. Beyond this buffer zone, subject to other designations and constraints, there would normally be scope for broad areas of search for strategic wind farms. In Inverclyde, however, there is limited land beyond this buffer for such an area. Within the buffer zone proposals for wind farm developments would be determined on a case-by-case basis and assessed against criteria.

Aviation and defence interests

Where there is an airport nearby aviation and defence issues need to be considered. The proximity of Inverclyde to Glasgow Airport raises the issue of safety where part of the airport safeguarding zone is identified on the eastern edge of the authority (See Diagram 5). 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 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. It is therefore necessary to consult with the relevant bodies when dealing with developments on a case by case basis.

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 was disrupted. In either case, early consultation with the relevant network provider would be expected.

3. Refining remaining areas of no significant constraint

In some areas there may be scope to further refine the areas based on a number of factors in order to identify where wind farm development would be most appropriately directed. This would involve taking account of factors such as:

Wind speed/Grid connection

Wind speed is a primary determinant of where wind farms can go. If there is no consistent exposure to prevailing winds there is no point in locating a wind farm. Erection of an anemometer will provide developers with the relevant data.

Shadow flicker

When the sun passes behind the blade and casts a shadow it can cause problems for neighbouring properties. This can, however, be calculated and planning conditions applied to ensure the turbines do not operate at times when this problem would occur.

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).

CONCLUSIONS ON OPPORTUNITIES FOR STRATEGIC WIND FARMS

There are a number of constraints which have to be taken into consideration when attempting to identify possible broad areas of search. Diagram 6 shows all of the constraints and designations combined on one map. The three stages outlined in PAN 45 Annex 2 to identify broad areas of search for strategic wind farms lead to the conclusion of the Structure Plan Technical Report that there are no Potential Areas or broad areas of search in Inverclyde.

The sensitivity of the international and national designations rules them out of the broad areas of search completely while policy preventing development in the Green Belt removes this area from consideration unless under exceptional circumstances dictated by government. Potential wind farm development could be directed to the Countryside but in these areas other designations and constraints restrict opportunities. Although regional designations, and therefore of less importance, Clyde Muirshiel Regional Park and West Renfrew Hills are of such landscape and recreational importance that they too are excluded as the siting of large wind farm developments within these areas would not be conducive to their positive strategic functions.

Outwith these areas other locations could potentially accommodate wind farms were it not for a further plethora of local natural heritage designations and constraints that would diminish development opportunities. Interference with aviation and broadcasting systems, technical considerations such as noise and shadow flicker from turbines and installations unconnected

to the wind farm such as the major gas transmission pipeline across a large swathe of Inverclyde's rural area all combine to reduce development opportunities. Given the confined nature of Inverclyde's landscape, a lot of the aforementioned restrictions do overlap thus strengthening the argument against wind farm development at these locations.

When all these limitations are taken into consideration, there are only relatively small areas remaining. In these locations, the impact on adjacent areas would still have to be taken into account and they would be unlikely to be sufficient to accommodate strategic wind farms comprising, turbine, ancillary development and access tracks.

POLICIES

Strategic wind farms (>20MW)

While not identifying any broad areas of search within Inverclyde, it is still necessary to have policies detailing the criteria that would have to be met when assessing proposals for both strategic wind farm developments (>20MW) and non-strategic (<20MW) on a case by case basis. In keeping with SPP6 the wording of the proposed policy is more positive than previously where it now states that developments will be supported in the appropriate areas, provided they meet the relevant criteria.

Policy UT6A: Wind Farms of 20MW and Above

Wind farms with an output of 20MW and over will be supported where they:

- a) do not have a detrimental impact on international and national natural heritage designations;***
- b) do not have a detrimental impact on the positive strategic functions of Clyde Muirshiel Regional Park and the West Renfrew Hills such as:***
 - i. visual landscape;***
 - ii. tourism; and***
 - iii. recreation***
- c) are sited within the landform to ensure they do not have a detrimental effect on the landscape and wider environment:***
 - i. including green belt; and***
 - ii. particularly from major transport corridors;***
- d) do not have a significant detrimental effect on the built heritage;***
- e) do not have a significant detrimental effect on the amenity of local residents by reason of visual impact, noise or shadow flicker;***
- f) do not lead to unacceptable cumulative impacts on the landscape or the local community;***
- g) do not adversely affect civil and military aviation operations;***
- h) do not adversely affect notifiable installations and exclusion zones; and***

i) do not cause significant interference to broadcasting installations, which cannot be overcome.

Note (1) These criteria would also apply to smaller scale wind farms (<20MW) which can often be more easily accommodated in the landscape therefore some of the areas that are not suitable for strategic wind farms could be acceptable. It would still be necessary to protect the environmental and built heritage resources and the local community by ensuring they were designed and sited correctly to incur minimum impact. Given the variety of combinations and sizes of turbines that could be used to produce an output up to 20MW, it is likely that it will only be possible to determine what is appropriate when specific applications are assessed.

REFERENCES

Adopted Inverclyde Local Plan 2005

Inverclyde Planning and Building Standards Handbook 2008

Approved Glasgow and the Clyde Valley Structure Plan 2006

SPP6: Renewable Energy 2007

PAN45: Renewable Energy Technologies 2006

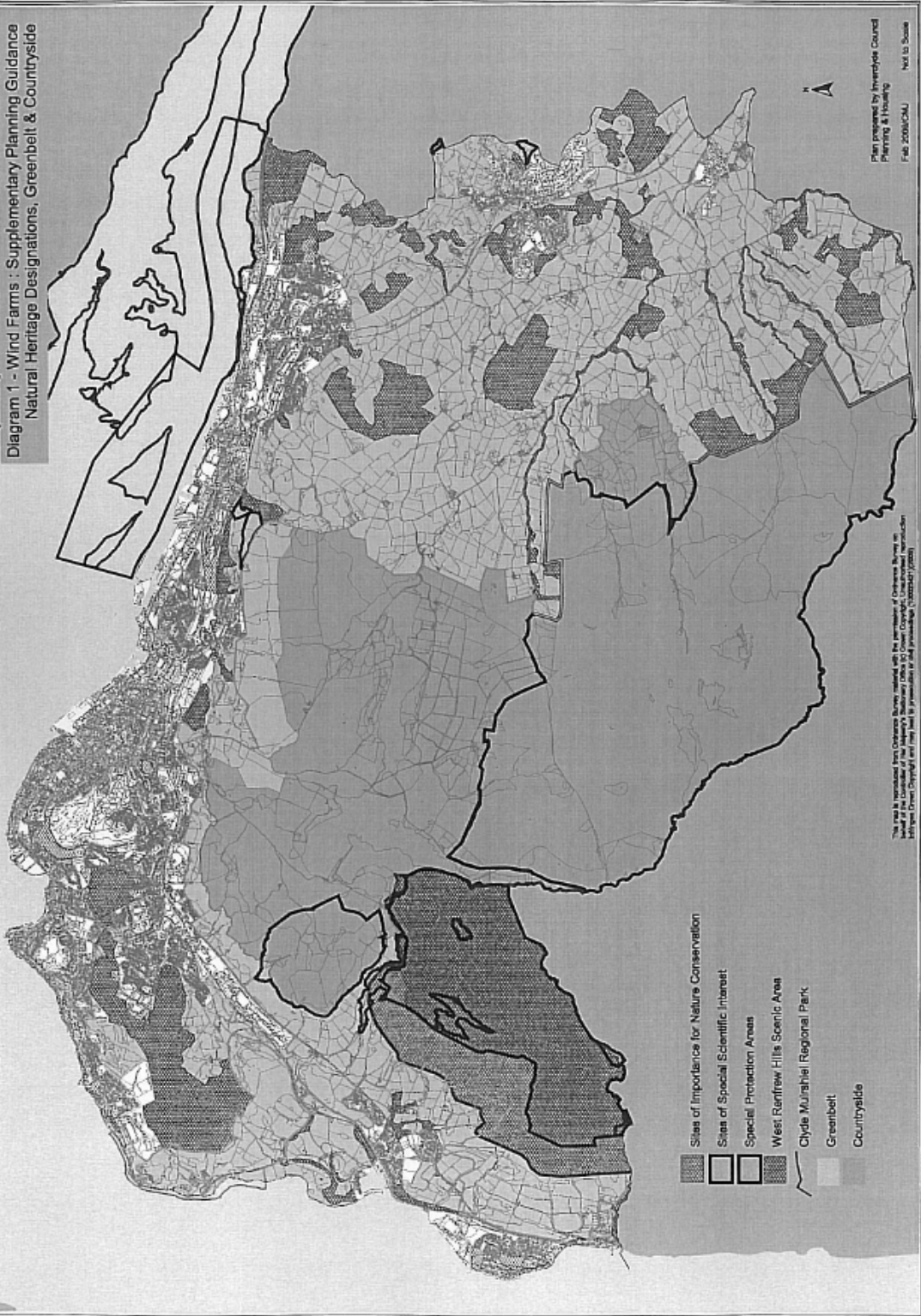
PAN45 Annex 1: Microrenewables 2006

PAN45 Annex 2: Spatial Frameworks and Supplementary Planning Guidance for
Wind Farms 2008

Framework Guidance Document on Windfarm Development Proposals Affecting Clyde
Muirshiel Regional Park 2005

'Wind Turbines: The Bigger the Better?' – Ole Thybo Thomsen, Aalborg University 2009

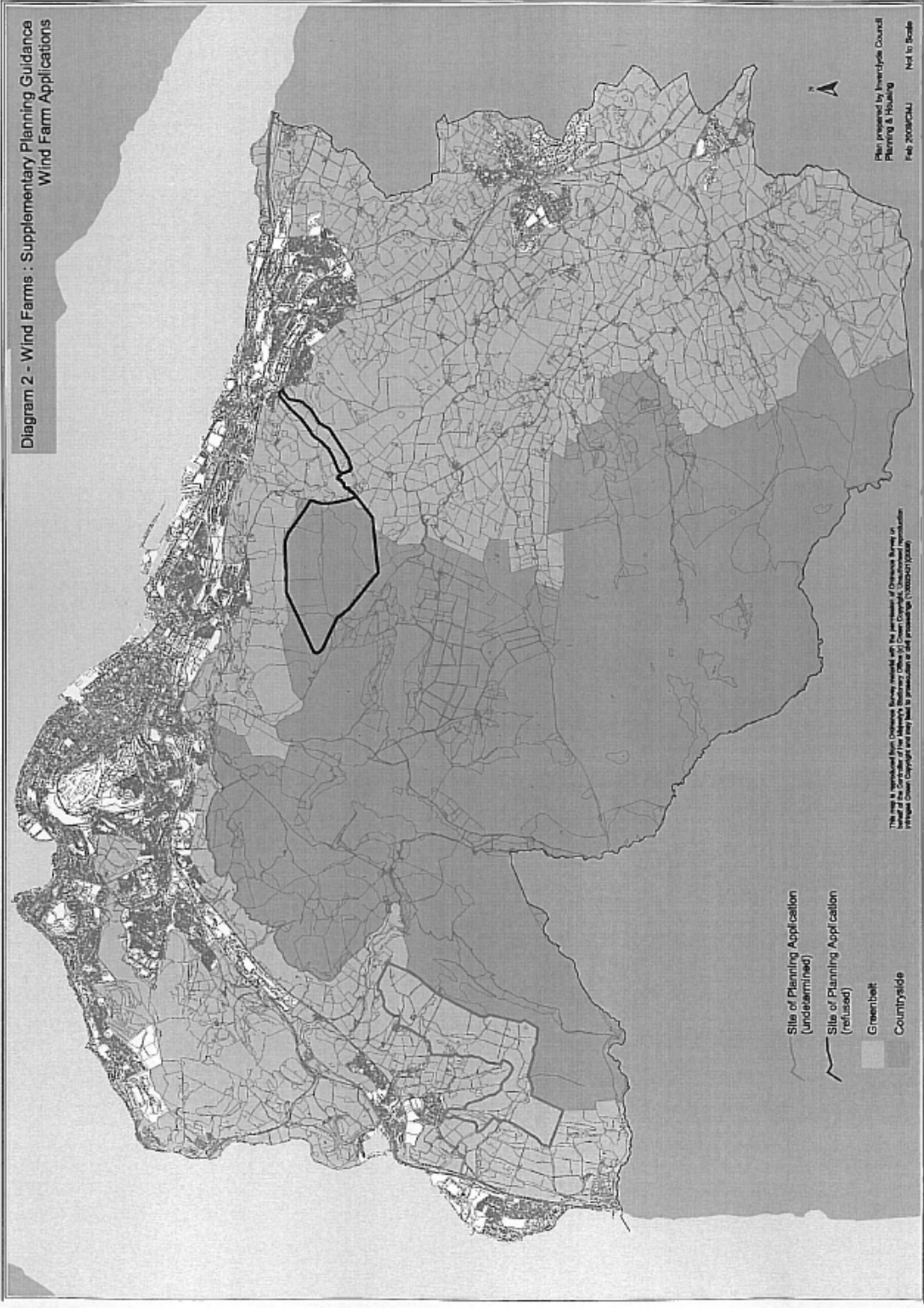
Diagram 1 - Wind Farms : Supplementary Planning Guidance
 Natural Heritage Designations, Greenbelt & Countryside



Plan prepared by Inverclyde Council
 Planning & Housing
 Feb 2006/IC/4
 Not to Scale

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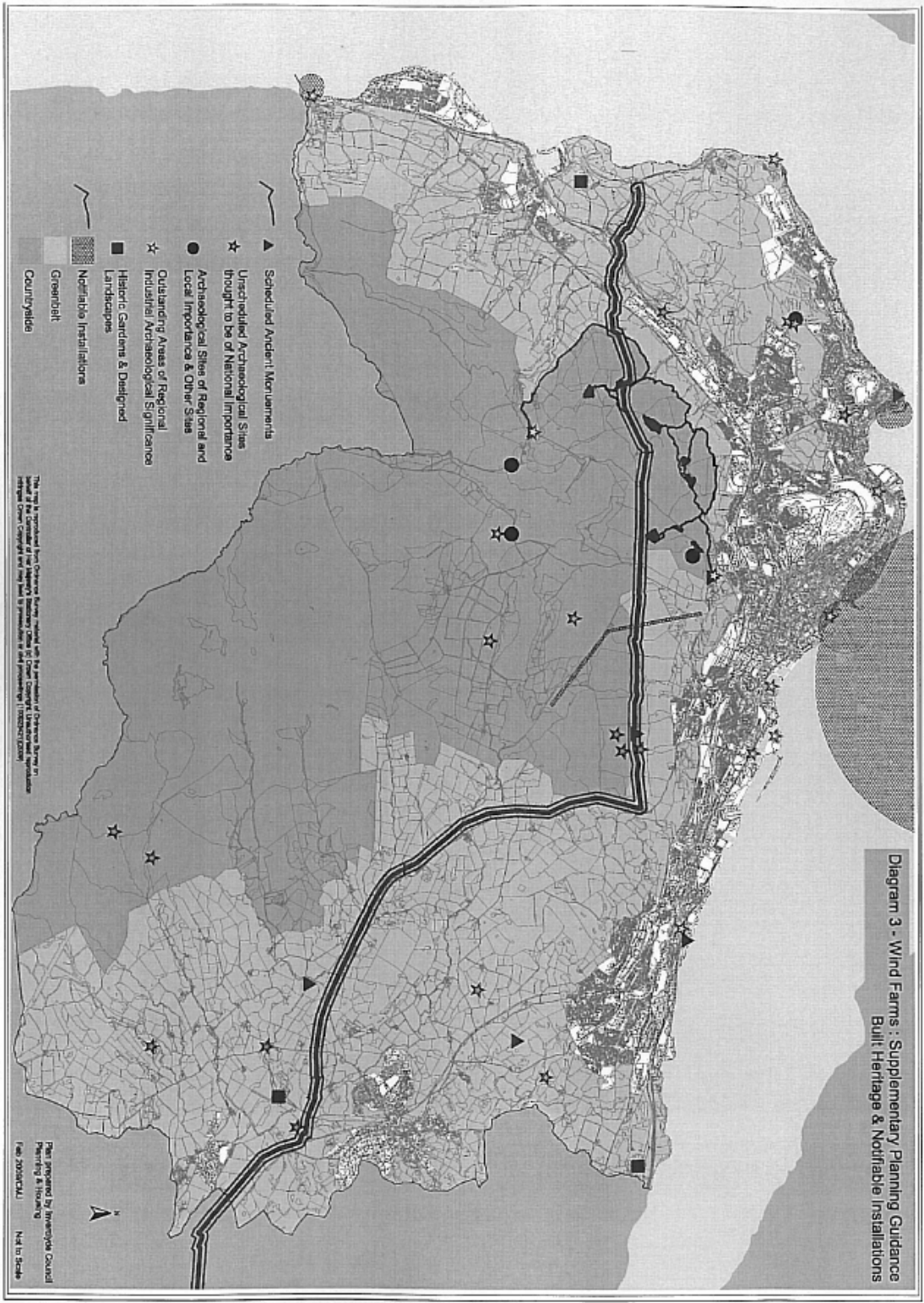
Diagram 2 - Wind Farms : Supplementary Planning Guidance
Wind Farm Applications



Plan prepared by Inverclyde Council
Planning & Housing
Feb 2008(CLU) Not to Scale

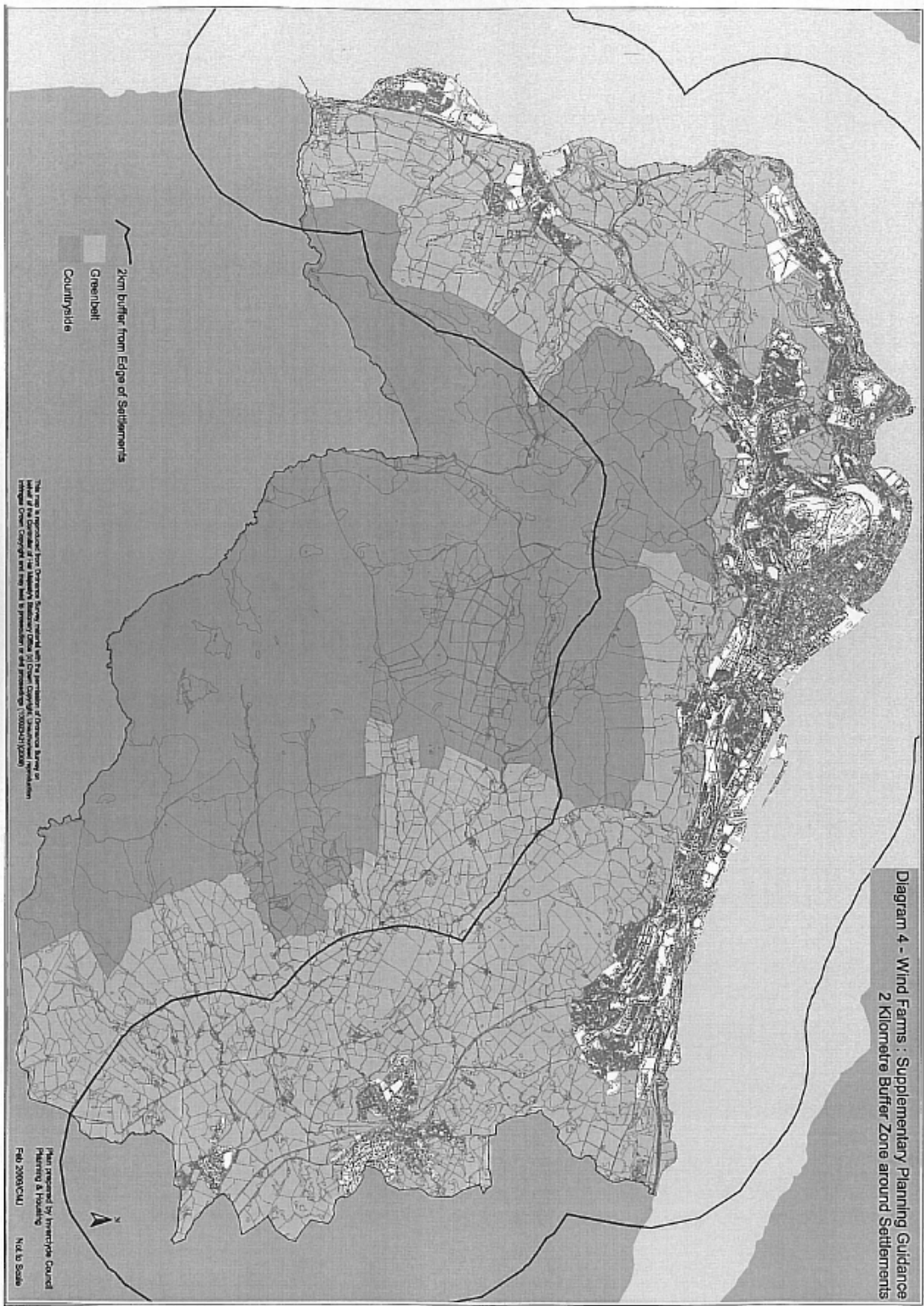
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Diagram 3 - Wind Farms : Supplementary Planning Guidance
Built Heritage & Notifiable Installations



The built heritage sites shown on this map are included in the Inventory of National Historic Monuments of the County of Wick. The Inventory is available on the County Council's website at www.wickcoco.ie. The County Council is responsible for the protection and preservation of the County's built heritage.

Prepared by Wick County Council
Planning & Building
Feb 2008 (v1.1)



Glasgow Airport Safeguarding Zone

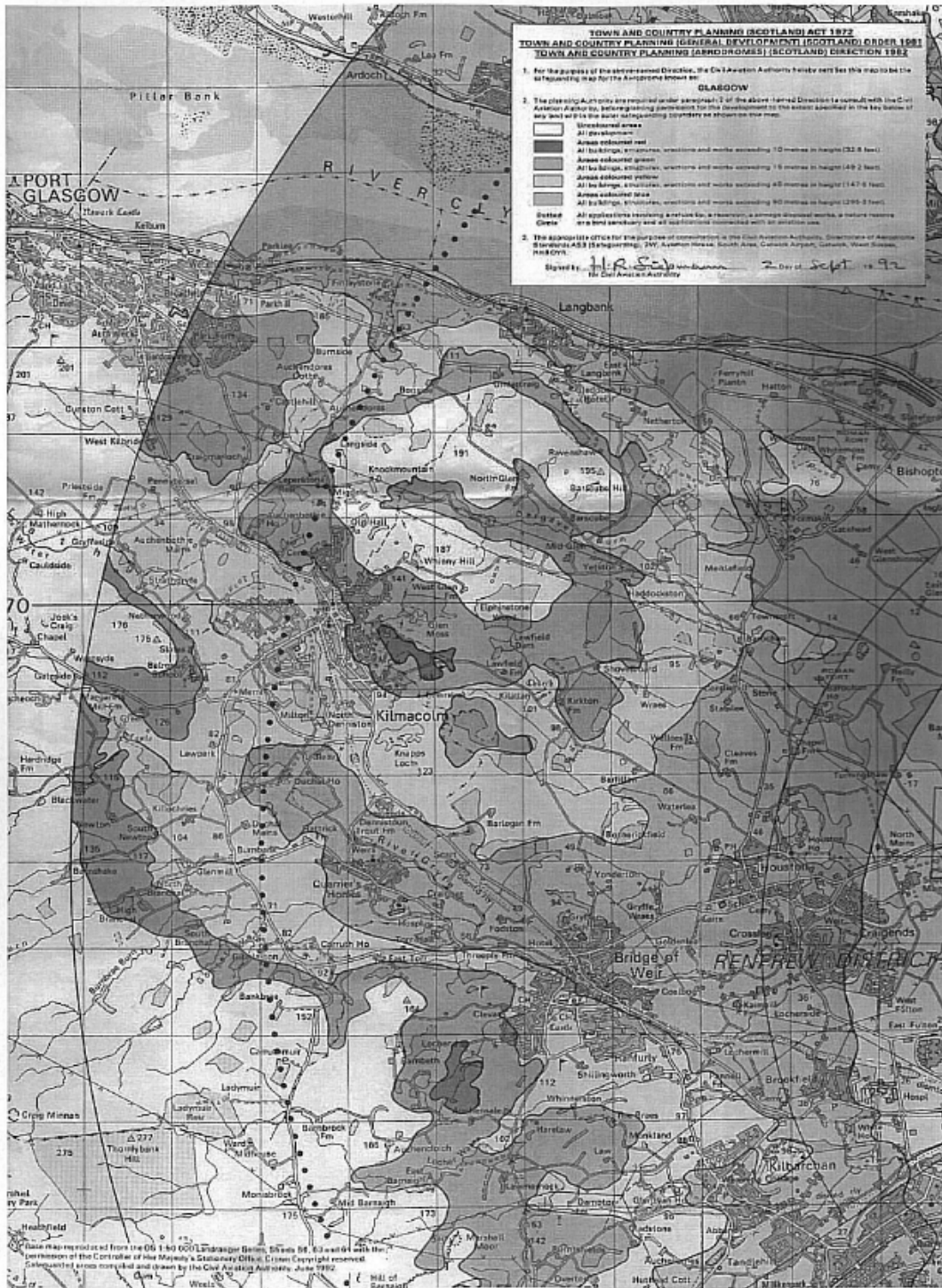


Diagram 6 - Wind Farms - Supplementary Planning Guidance
Amalgamated Potential Constraints

